

Research Report

Households, governments, and corporations as economic actors: A pilot project on inequality in the circumpolar Arctic

Karen Everett under the direction of Gérard Duhaime



The Canada Research Chair on Comparative Aboriginal Condition is affiliated with the Interuniversity Centre for Aboriginal Studies and Research (CIÉRA) and the Faculty of Social Sciences of Université Laval.

CANADA RESEARCH CHAIR
ON COMPARATIVE ABORIGINAL CONDITION
Pavillon Charles-De Koninck
1030 Des Sciences-Humaines Avenue
Québec (Québec) G1V 0A6
CANADA

418 656-7596
chaireconditionautochtone@fss.ulaval.ca
chaireconditionautochtone.fss.ulaval.ca

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TO CONTACT THE AUTHORS
karen.everett.1@ulaval.ca
Gerard.Duhaime@soc.ulaval.ca

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ABBREVIATIONS

AHDR – Arctic Human Development Report	NUTS – Nomenclature of Territorial Units for Statistics
APF – Alaska Permanent Fund	OECD – Organisation for Economic Co-operation and Development
AZRF – Arctic Zone of the Russian Federation	PPP – Purchasing Power Parity
BEA – Bureau of Economic Analysis	RAIPON – Russian Association of Indigenous Peoples of the North
ECONOR – Economy of the North	SSHRC – Social Sciences and Humanities Research Council of Canada
ESA – European System of Accounts	STiK – Social Transfers in Kind
EU – European Union	SNA – System of National Accounts
GDP – Gross Domestic Product	USA – United States of America
GRP – Gross Regional Product	
NIPA – National Income and Production Accounts	
NPISH – Non-Profit Institutions Serving Households	

EXECUTIVE SUMMARY

This study is the pilot project for the WAGE Circumpolar Partnership, a SSHRC funded project, the objective of which is to better understand social and economic inequalities across the circumpolar Arctic. In particular, this research seeks to identify the income composition of households, governments, and corporations at the subnational level across the circumpolar region.

The chapter on households identifies similarities and differences of income composition for individuals on a per capita basis. Data was collected from the national and regional accounts of the relevant national statistics agencies for five indicators: primary income, total transfers received, total income, total transfers paid, and disposable income in order to identify areas of income inequality. The data shows that, on average, individuals in the North American North earn the most income, followed by individuals residing in the northern Nordic regions and then in northern Russia, although there are variations within the regional blocs. For example, the average disposable income per capita for Greenland is closer to that found in Russia, while the average disposable income per capita in Yamal Nenets is similar to that in the Nordic regions. Moreover, the amount of transfers paid and received varies from one region to another and often plays an important role in reducing inequalities between regions within a country.

Data for governments and corporations was harder to obtain. For governments, comparable data is not publicly available for all regions, meaning that a circumpolar comparison is not possible. For corporations, data at the regional level is also not available due to the tax location of many larger corporations and the need for such data to remain anonymous. The chapters on governments and corporations therefore suggest areas for future research.

The disparities in data between the three actors/sectors constitute a challenge if we hope to achieve a fuller understanding of income composition and how this affects inequality. As such, future research will need to consider different methodological approaches to perform analyses in these areas. For example, researchers will likely need to develop relationships with the national statistics agencies in order to gain access to data that is not publicly available, while case studies can be used to obtain a better understanding of the corporation sector.

INTRODUCTION

1.1. INTRODUCTION

Economic activity in the circumpolar Arctic is diverse. According to the first *Arctic Human Development Report* (AHDR), there are three key forms of economic activity: resource extraction, harvesting activities, and “transfer payments to regional governments and individuals from central governments” (Duhaime, 2004, pp. 69-70). Although this definition remains valid more than fifteen years later (Larsen, 2013; Larsen & Huskey, 2010; Larsen & Petrov, 2020), there are regional differences in economic activity, meaning that the “Arctic economy is not a single integrated economy but a set of interdependent economies linked by their similarity of environment and location” (Larsen & Huskey, 2015, p. 161). This has clearly been demonstrated in the *Economy of the North* (ECONOR) reports (Glomsrød & Aslaksen, 2006; Glomsrød & Aslaksen, 2009; Glomsrød, Duhaime, & Aslaksen, 2017; Glomsrød, Duhaime, & Aslaksen, 2021), which also identify income inequalities across the circumpolar region, including at the subnational level.

The Gross Domestic Product (GDP) / Gross Regional Product (GRP) is often the go-to unit of economic analysis for international economic comparisons. In the Arctic, research shows that the North American regions have the highest GRP, followed by the Nordic regions, although the GRP in some Russian regions exceeds those in North America, or is similar to or falls just below the Nordic regions (Duhaime et al., 2017; Duhaime et al., 2021). Yet solely relying on the GRP to understand the realities of the different circumpolar economies can be problematic. To be sure, not all wealth generated in the Arctic remains in the region or with Arctic households, nor does GRP provide a clear picture of income equality and well-being (Duhaime, 2004; Grunfelder, 2020; Huskey, Mäenpää, & Pelyasov, 2014). Thus, a different way to understand economic inequality is needed.

This study constitutes the pilot project for the WAGE Circumpolar Partnership and contributes to knowledge generation in the partnership’s first area, which focuses on income and wealth distribution. More specifically, this research report is a first attempt to compile and analyze data on the income composition for the three economic actors/sectors (households, governments, corporations) across the circumpolar Arctic and at the subnational level. Understanding income composition can provide insights into the social, economic, and political relationships that shape the lives of northerners. However, data for households is much more extensive and internationally comparable than it is for governments and corporations. The main focus of this report, therefore, is on households and personal income, although possibilities for future research in the government and corporation sectors are also discussed.

The report begins with a detailed chapter on methodology which discusses the ability to compare international data, the extent of data availability for the three economic agents for this project, and various limitations and challenges. This is followed by the chapter on households which examines per capita income composition which is the primary component of the report. What emerges from the analysis is that income values differ in North America, the Nordic countries, and in the Russian Federation (hereafter Russia), as well as within these regional blocs and within individual countries. Transfers received and paid by individuals also play an important role in minimizing income inequalities, although they are not the main source of individual income. Income composition is further shaped by local economic activity, politics and policies, as well as by ideology.

Next is the government chapter. Data in this sector is difficult to obtain for international comparisons. As a result, this brief chapter is limited to illustrating the kinds of analyses that are possible with existing and comparable data, while suggesting how future research might address data gaps. The corporation chapter follows, and like the chapter on the government sector, it is brief. In particular, it offers suggestions for future research through case studies to compensate for the absence of data. Finally, the conclusion brings together the key findings and offers suggestions for future research.

1.2.

WAGE CIRCUMPOLAR PARTNERSHIP: PILOT PROJECT

The WAGE Circumpolar Partnership seeks to illuminate different aspects of economic and social experiences across the circumpolar region. Led by Dr. Gérard Duhaime at Université Laval, WAGE is a five-year project (2021-2026) funded by SSHRC. It brings together researchers, practitioners, and institutions to achieve a better understanding of the economic and social inequalities found in the Arctic, and especially those experienced by Indigenous Peoples. Research activities seek to answer questions in three key areas: 1) the current state of income and wealth distribution; 2) social transitions and trends in the distribution of wealth; and 3) how to move towards a more equitable distribution of wealth. The goal is to understand the processes that shape inequalities and mobilize knowledge so that research findings can have an impact on the policies that affect the daily lives of northerners.

METHODOLOGY

2.1. INTRODUCTION

Previous studies, such as *The Economy of the North* (2006; 2009; 2017; 2021), have discussed regional income inequality in the Arctic through the lens of the GRP. This is useful to “[describe] real change in the amount produced as well as changes in the prices for the resources, goods, and services produced” (Huskey et al., 2014, p. 155), but it also has its drawbacks. For example, Huskey et al. explain that “for the North, GRP overestimates the material well-being because much of the income produced in the North leaves the region through rents, taxes, and wages paid to owners of resources in other regions”, and that it “underestimates well-being because it does not include transfers that do not create jobs; transfers that provide services or income directly are not part of the GRP” (p. 57). In other words, the GRP has important inherent limitations in the study of economic inequalities. Therefore, a detailed look at the international System of National Accounts (SNA), to which the GRP/GDP belongs, is used here to gain a more nuanced understanding of personal income inequality across the circumpolar Arctic at the subnational, or regional level.

This chapter begins with an overview of the SNA and the justification for its use. Next, we provide an explanation of the research process, including how the data was collected and employed. Finally, the challenges of using data from national statistics agencies are discussed.

2.2. COMPARING INTERNATIONAL STATISTICS

International and regional economic comparisons are possible by drawing on publicly available national and regional data that generally conform to the principles of the international System of National Accounts 2008. The following section discusses relevant components of the SNA and how the data was used in this project.

2.2.1. NATIONAL AND REGIONAL ACCOUNTS

Keeping track of national economic activity can be difficult. However, this process is made easier through the SNA, which “is the internationally agreed standard set of recommendations on how to compile measures of economic activity in accordance with strict accounting conventions based on economic principles” (World Bank, 2009, p. 1). The most recent version of this standard was released in 2008. The European Union

(EU) uses its own compatible system called the European System of Accounts (ESA) (Eurostat, 2014) that was most recently updated in 2010. Both systems follow a sequence of accounts to explain the annual economy through “three categories: current accounts, accumulation accounts and balance sheets” (World Bank, 2009, p. 24). The current accounts focus on “production, the generation, distribution, and use of income” (World Bank, 2009, p. 24), with distribution of income being central to our study. The national accounts in the USA are organized differently, with the National Income Product Accounts (NIPAs) being used for this study (Bureau of Economic Analysis, 2017).

The distribution process is further divided into different accounts, four of which we examined for this study. These are the:

1. Generation of Income Account (primary distribution): this account shows how “value added is distributed to labour (compensation of employees), capital and government (taxes on production and imports less subsidies as far as they are included in the valuation of output).” The balancing item is operating surplus and/or mixed income (World Bank, 2009, p. 25).
2. Allocation of Primary Income Account (primary distribution): this account “contains operating surplus or mixed income as a resource. It records, for each sector, property income receivable and payable, and compensation of employees and taxes, less subsidies, on production and imports receivable by households and government, respectively.” The balancing item is primary income (World Bank, 2009, p. 25).
3. Secondary Distribution of Income Account: this account “records as resources, in addition to balance of primary incomes, current taxes on income, wealth, etc. and other current transfers except social transfers in kind. On the uses side, the same types of transfers are also recorded” and the balancing item is disposable income (World Bank, 2009, p. 25).
4. Redistribution of Income in Kind Account: this account “records social transfers in kind as resources for households and uses of government and NPISHs” and the balancing item is adjusted disposable income (World Bank, 2009, p. 26).

The remaining income distribution accounts are the Use of Disposable Income and the Use of Adjusted Disposable Income, which show “final consumption and saving” (World Bank, 2009, p. 26). These accounts are not included in this study because they show how income is used rather than how income is distributed.

The four accounts and their disaggregated data offer a detailed breakdown of the different sources of income and expenses for “institutional units” for the total economy, different sectors, or the rest of the world. The economic activities of resident units¹ are assigned to one of the five sectors, which include households, non-profit institutions serving households (NPISHs), the general government, financial corporations, and non-financial corporations.

The SNA 2008 describes the sectors as follows:²

- Households: These include individuals that are economic actors as employees or entrepreneurs, and who spend money (World Bank, 2009). The SNA identifies this sector with code S14.
- NPISH: These are usually organizations that provide services to households (World Bank, 2009). The SNA identifies this sector with code S15.
- General Government: These are governments that also provide services and “redistribute income and wealth” (World Bank, 2009, p. 17). The SNA identifies this sector with code S13.
- Non-Financial Corporations: These are businesses that are non-financial in nature (World Bank, 2009, p. 17). The SNA identifies this sector with code S11.
- Financial Corporations: These are businesses that are financial in nature (World Bank, 2009, p. 17). The SNA identifies this sector with code S12.

Each sector is comprised of different subsectors in order to provide more detailed information on transactions within the sectors (see: World Bank, 2009, pp. 546-549). Individual states may also include their own sub-sectors to account

for important aspects of their economy. For example, Canada created an Aboriginal General Government subsector, although “the designation of this subsector is not yet fully articulated as the transition of the Aboriginal general government to a more independent form of government is still in process” (Statistics Canada, n.d.-a). As well, Sweden created a NPISH subsector for the Church of Sweden (1521) in order to maintain consistency “after the Swedish Church was separated from Government in 2000” (Statistics Sweden, 2014, p. 58; see also: p. 83).

These accounting practices are also performed at the subnational level through regional accounts. The regional accounts follow the same overall structure, using the same aggregate headings as the national accounts, but they do not always provide the same level of detail (Eurostat, 2014). Although regional accounts are not as detailed, the SNA 2008 explains that “regional accounts are of special importance when there are important disparities between the economic and social development of the various regions of a country” (World Bank, 2009, p. 399). Seeing that they generally provide information on the main sources of income and expenditures, they are useful for our study in identifying and comparing sources of income across the circumpolar North and they therefore form the basis of our statistical analysis.

2.3. FINDING AND AGGREGATING THE STATISTICS

The following paragraphs explain how the research was conducted. We begin with an overview of the research process, including how the regional boundaries were determined and how the data was collected and managed. Next is an explanation of some of the differences between states with regards to their approaches to different concepts. Finally, opportunities and challenges for the three sectors (household, government, corporate) are discussed.

¹ The SNA 2008 explains that “the residence of each institutional unit is the economic territory with which it has the strongest connection, in other words, its centre of predominant economic interest” (World Bank, 2009, p. 62, emphasis original).

² For more detailed definitions, see section 2.17 of the SNA (World Bank, 2009, p. 17).

2.3.1. THE PROCESS

There were two key stages involved in carrying out this research: 1) defining the “Arctic” and its regional boundaries; and 2) data collection and data management.

Setting the boundaries

As the purpose of this study is to compare income and expenditures at the regional level across the circumpolar Arctic, identifying these boundaries is important. Although there are different definitions of the Arctic,³ the use of official statistical data determined the regional boundaries we employed in this study; these are based on how data is collected and presented by national statistics agencies. Every attempt was made to keep geographical boundaries in-line with the *Economy of the North 2015* report (Glomsrød et al., 2017) in order to contribute to the growing literature that examines inequality across the circumpolar Arctic at the subnational level.

North America: boundaries were determined based on state and territorial boundaries.

USA: Alaska is the only state (region) located in the Arctic and the Bureau of Economic Analysis (BEA) provides statistical data at this level. Additionally, Alaska was used in the ECONOR report.

Canada: Northwest Territories, Nunavut, and the Yukon are the three regions included in this study, as Statistics Canada provides data at the territorial and provincial level. These regions were also used in the ECONOR report. The Canadian North, however, is more than the territories and includes the provincial norths of Manitoba, Québec, and Newfoundland and Labrador, as indicated in Canada’s *Arctic and Northern Policy Framework* (see: Government of Canada, 2019.). Inuit Nunangat is also part of the Canadian North and includes four regions: Inuvialuit (northern Yukon), Nunavut, Nunavik (northern Québec), and Nunatsiavut (northern Labrador) (Inuit Tapiriit Kanatami, 2018). However, obtaining data for these regions is more difficult.

Nordic countries: Regions were determined based on the Nomenclature of Territorial Units for Statistics (NUTS) and the ECONOR definition. The NUTS allow for statistical data collection at different levels within a country to provide for more detailed economic analyses. The NUTS 2 level is “basic regions for the application of regional policies” while the NUTS 3 level is “small regions for specific diagnoses” (Eurostat, n.d.-b). As such, NUTS 3 regions are used for this study. Moreover, this decision generally aligns with the geographical boundaries used in the ECONOR report. While the NUTS are an EU system, this approach to regional designation is also used in some non-EU European countries.

Denmark: The Faroe Islands and Greenland are officially the two northern regions in the Danish Realm that are analyzed in this study. Although part of the Danish Realm, the Faroe Islands and Greenland are not included in Denmark’s NUTS system (see: Eurostat, 2018, p. 27) and they produce their own national accounts.

Iceland: NUTS 3 regions are identified for Iceland (Rispling, 2017).⁴ However, for the purpose of this pilot project, the entirety of Iceland is considered as one region because of its size and location. This decision also aligns with the boundaries in the ECONOR report.

Norway: The NUTS 3 regions included in this study are Finnmark, Nordland, and Troms⁵ (Nordregio, n.d.; Norsk Senter for forskningsdata, n.d.). This aligns with the regions in the ECONOR report.

Sweden: The two northernmost NUTS 3 regions in Sweden are Norrbottens län (hereafter Norrbotten) and Västerbottens län (hereafter Västerbotten) (see: Eurostat, 2018, p. 127) and are used for this study. These two regions also correspond with the ECONOR boundaries.

³ For example, scientific definitions can include “the tree line; the 10 degrees Celsius isotherm, and the Arctic Circle” (National Snow & Ice Data Centre, n.d.), while the *Arctic Human Development Report* (AHDR) adopts a different definition based on “the location of jurisdictional or administrative boundaries and the availability of data” (Young & Einarsson, 2004, p. 17).

⁴ In light of our decision to include the entirety of Iceland, this map shows the Nordic NUTS 3 regions for reference purposes only (Rispling, 2017).

⁵ On January 1, 2020, there were a number of internal boundary changes in Norway, including the merger of the Troms and Finnmark counties which is now called “Troms and Finnmark” (Statistics Norway, 2012). Since the merger took place in 2020, it does not impact the regional boundaries for this study. Svalbard is not included because data for household income is not available, although it is provided in the context of production.

Finland: Kainuu, Lappi (hereafter Lapland), and Pohjois-Pohjanmaa (hereafter Northern Ostrobothnia)⁶ are the most northern NUTS 3 regions in Finland and are used for this study (see: Eurostat, 2018, p. 126). These regions also correspond to the ECONOR boundaries.

Russia: there are numerous political structures within the country, which made it more difficult to determine which regions to include for this study.

Russia: The ECONOR report was our starting point to identify regional boundaries, since the boundaries it defines align with regional statistics available through the government. The following northern regions are included in this study: Arkhangelsk, Chukotka, Karelia, Khanty-Mansii, Komi, Krasnoyarsk, Magadan, Murmansk, Nenets Autonomous, Sakha, and Yamal-Nenets. Taimyr and Evenk are also in northern Russia, but data is not available for them individually; instead, data for the entire Krasnoyarsk region is used, even though it extends much further south (see: Duhaime et al., 2017, p. 13). In contrast to ECONOR, data for Nenets Autonomous is presented independently of Arkhangelsk in this study.

The regions of the Arctic Zone of the Russian Federation (AZRF) were not selected for this study because they include part, but not all, of some of the regions mentioned above. There have been some expansions of the AZRF, such as in Sakha (2019) and Krasnoyarsk (2020), as well as potential expansion in areas of Karelia and Komi (The Arctic, 2020, February 20, July 15; The Northern Forum, 2019, May 29). However, the expansion does not cover the entire region identified in ECONOR and so the data would not be comparable.

Considering the number of regions analyzed in this study, data on population and total area are provided in the household chapter for contextual purposes. Total area, rather than land area, is used because certain economic activities may be conducted on water. Total area, therefore, is also used to calculate population density. Data for land area is used for the USA/Alaska and Russia, as total area data is not available.

Collecting and managing the data

The national statistics agency websites provide open access to both national and regional⁷ accounts, although the amount of data varies by location. The statistics agencies are:

- USA: Bureau of Economic Analysis
- Canada: Statistics Canada
- Denmark: Statistics Denmark (Danmarks Statistik)
- Faroe Islands: Statistics Faroe Islands (Hagstova Føroya)
- Greenland: Statistics Greenland (Naatsorsueqqissaartarfik)
- Iceland: Statistics Iceland (Hagstofa Islands)
- Norway: Statistics Norway (Statistisk Sentralbyrå)
- Sweden: Statistics Sweden (Statistikmyndigheten SCB)
- Finland: Statistics Finland (Tilastokeskus)
- Russia: Federal State Statistic Service (Федеральная служба государственной статистики)

To keep track of the different categories of income and expenditures, including sub-categories, an existing SNA Excel table that follows the sequence of accounts (see: United Nations, n.d.) was adopted and modified to record the data for the different sectors and regions.

This study focuses on the sources of income for the three economic actors: households, governments, and corporations (for example, see: Finch, 2007, p. 127). The household sector therefore includes the households and NPISH; government includes the general government; and corporations include both financial and non-financial corporations. The Excel spreadsheet was adapted to reflect these decisions.

An initial data inventory was conducted to determine the most recent year with available data from the official statistics agency websites and 2017 was selected as the year of analysis, although some data was preliminary at the time of data collection. Statistics Norway was scheduled to update their household data at the end of 2019; however, the update was delayed and 2016 data was used instead. To ensure consistency across countries and regions, data was identified according

⁶ Northern Ostrobothnia was referred to as Oulu in the 2015 ECONOR report (see: Duhaime et al., 2017, p. 30).

⁷ The term "regional accounts" is not used for the USA and Canada, which provide statistics at the state and territorial/provincial levels, respectively.

to the SNA D-Codes. In some cases, data that did not use the D-Codes or had slightly different wording was added separately to the table for further concordance with the SNA.⁸

Initial data searches were performed on the English version of the websites, and if data was missing searches were performed in the original language using the Google Translate Chrome plugin for translation. Translation was not possible for the Faroese website; therefore, only the English version of the website was used. For Russia, the required data was not available in English and the Google Translate plugin was unable to translate the pages needed. Thus, text data was copied and pasted into DeepL for translation. To ensure that all publicly available data was located, questions about data availability were emailed to the different statistics agencies. In the case of Russia, a research partner from Russia provided assistance.

Next, the values for 2017 were entered into the spreadsheet and any extra lines were removed to determine what data and level of detail were available for the different countries and regions. Based on this, the major sources of income and expenditures at the aggregate level were determined for use in the final tables for each sector.

2.3.2. OPERATIONAL DIFFERENCES

Differences in national and regional account practices of the different Arctic countries were identified during the data collection phase, particularly with regard to the operationalization of certain concepts.

The first difference has to do with quasi-corporations. The SNA explains that unincorporated enterprises which behave as corporations in all but name⁹ are treated as corporations. However, “It is when this separation [of owner from business] is not possible that an unincorporated enterprise exists within the government unit, household or NPISH” (World Bank, 2009, p. 87). This suggests that quasi-corporation data may straddle the different sectors, based on the type of the enterprise and level of documentation available. However, not all countries are able to make this distinction. For example, Canada’s *User Guide: Canadian System of*

Macroeconomic Accounts recognizes this distinction but explains that they have not been able to do so (Statistics Canada, 2016a). The USA treats quasi-corporations differently than the SNA and Canada. The BEA explains that “the income of all unincorporated enterprises is included in the household sector” (McCulla, Moses, & Moulton, 2015, p. 5), while production is associated with the corporate sector (McCulla et al., 2015, pp. 6-7). Iceland takes an even different approach from Canada and the USA: their “unincorporated enterprises with two or more persons are included in the non-financial sector, less than two in the household sector” (Statistics Iceland, 2014, p. 10).

The second difference is how the USA defines corporations. In particular:

“In the NIPAs, “corporations” refers solely to those entities legally identified as such; however, in the SNA, “corporations” refers not only to legally constituted corporations but also to other enterprises that behave like corporations in that they charge economically significant prices, keep separate accounts from their owners, have limited liability, and are able to act autonomously. Examples of enterprises that are classified as noncorporate business in the NIPAs but that might be classified as corporations in the SNA include cooperatives, limited liability partnerships, and government-owned or -controlled enterprises, that are engaged in market production, such as the Postal Service” (McCulla et al., 2015, p. 4).

⁸ A research partner at Statistics Canada consulted, when necessary, to ensure proper concordance of both Canadian and international data.

⁹ For further information on quasi-corporations, see section 4.42 of the SNA manual (World Bank, 2009).

This difference in definition has implications for how certain income is recorded. The SNA's definition suggests that businesses it deems to be corporations will be accounted for in one of the two corporation sectors (S.11 and S.12). For the NIPAs, however, similar businesses in the USA are accounted for in the household sector (S.13). To be sure, under the NIPAs, "all other U.S. unincorporated private businesses – tax-exempt cooperatives providing utility services and farm marketing and purchasing services" are included in non-farm proprietors' income along with income from other sole proprietorships, as well as "taxable income from entities otherwise classified as nonprofits" (Bureau of Economic Analysis, 2017, p. 11-3).

The third difference concerns the treatment of state-owned businesses in the general government sector for Russia and the USA. For the SNA, state-owned businesses that are market producers are accounted for in the business sector (World Bank, 2009, p. 80). While Russia tends to adhere to this categorization, "the indicators of the general government sector, starting with the data for 2010, include revenue-generating activities of budgetary institutions"^{10,11} (Federal State Statistics Service, n.d.-b). For the USA, state-owned businesses "are treated as quasi-corporations and are classified in the corporation sector as long as they meet several criteria" (McCulla et al., 2015, p. 9). However, this means that their accounts are included in both the corporate and government sectors, depending on the transaction (McCulla et al., 2015).

Finally, mixed income is addressed differently in the Canadian household sector. For the SNA, this income comes from "unincorporated enterprises owned by households" and it "excludes the operating surplus coming from owner-occupied dwellings" (Lequiller & Blades, 2014, p. 510). Canada includes the "rental income of households" in their mixed income data, while other countries capture this in their operating surplus. However, for this pilot project, this small difference is negligible, since the mixed income and operating surplus values are provided together in one column.

With the exception of mixed income for Canada, much of the available data is not disaggregated enough to allow for manual adjustments to account for these differences. Therefore, this need to be kept in mind when interpreting the data. Notwithstanding these differences, SNA data by and large remains internationally comparable (World Bank, 2009).

2.3.3. THE SECTORS

Household sector

Income and expenses data for the household sector came from a number of tables available through the different national statistics agencies (see Table 2.1). In some cases, such as with the USA, Canada, Denmark, and Iceland, multiple tables provided similar data; in these instances, the data were cross referenced for accuracy, and discrepancies were addressed with the respective statistics agency. National and regional level data was collected between September 2019 and July 2020. National level data for the USA, Canada, Norway, Sweden, Finland, and Russia was collected through the regional data sources to ensure data consistency, and national accounts were used for Denmark, Iceland, Faroe Islands, and Greenland. Data for the redistribution of income in kind was not always available in the household regional accounts and was therefore not included in the analysis.

¹⁰ This was translated from Russian via the Chrome Google Translate plug-in. The original text states "В состав показателей сектора государственного управления, начиная с данных за 2010 год, включена приносящая доход деятельность бюджетных учреждений" (Federal State Statistics Service, n.d.-b).

¹¹ For example, "The sector also includes the state corporation Rusnano, the Housing and Public Utilities Reformation Assistance Fund state corporation and the Russian Highways state company" (Bank of Russia, n.d., p. 9).

TABLE 2.1

HOUSEHOLD SECTOR DATA SOURCES

COUNTRY	TABLE
USA	SAINC1 Personal income summary: Personal income, population, per capita personal income
	SAINC5N Personal income by major component and earnings by NAICS industry
	SAINC6N Compensation of employees by NAICS industry
	SAINC30 Economic profile
	SAINC35 Personal current transfer receipts
	SAINC40 Property income
	SAINC50 Personal current taxes
Canada	SAINC51 Disposable personal income summary: Disposable personal income, population, and per capita disposable personal income
	Table 36-10-0224-01 Household sector, current accounts, provincial and territorial, annual
	Table 36-10-0482-01 Property income of households, provincial and territorial
Denmark	Table 36-10-0613-01 Production, income and outlay accounts of non-profit institutions
	NASD21: 2.1.2 Allocation of primary income (full sequence) by transaction and sector
Faroe Islands	NASD22: 2.2 Secondary distribution of income (full sequence) by transaction and sector
	IP01035 Income and taxes by municipality, deciles and averages (2009-2018)
Greenland	Average personal income by municipalities [INEP1]
Iceland ¹²	Non-financial institutional sector accounts 2000-2017
	Allocation of primary income account 2000-2017
Norway	Secondary distribution of income account 2000-2017
Sweden	09797: Households' income, by region, contents and year
Finland	Disposable income of households (ESA2010), current prices, million SEK by region, transaction item and year
Russia	12bf -- Household income and expenditure by area, annually, 2000-2017
	Level and structure of household cash income in 2017 across federal entities (Уровень и структура денежных доходов домашних хозяйств в 2017 году), data for: On average per household member, per month, rubles (В среднем на члена домохозяйства, в месяц, рублей)

¹² The household and NPISH sectors were selected for each table.

This study includes the NPISH (S15) in the household (S14) sector. The Excel data sheet was designed to capture the income and expenditure values for both households and NPISH separately; we manually combined this data based on how the data was presented by the different countries. Not all countries, however, provide NPISH data in their regional accounts, meaning there may be some overestimations in the household analysis for the countries where this data is available (Canada, Denmark nationally, and Iceland).

The majority of statistics agencies provided household data in millions of local currencies, while the USA uses thousands of dollars. All values were converted into millions to make the data comparable across countries, and the OECD conversion factor for Household Final Consumption/Private Consumption for 2017 (2016 for Norway) was used to calculate the Purchasing Power Parities (PPP). This factor “covers the expenditure by households on individual consumption of goods and services, including those sold at prices that are not economically significant” (OECD, n.d.-b). The OECD conversion factors for 2017 are as follows (OECD, n.d.-a):

- USA - 1
- Canada - 1.297426
- Denmark/Faroe Islands/ Greenland - 7.934565
- Iceland - 155.934346
- Norway - 10.686921 (2016)
- Sweden - 9.245722
- Finland - 0.939019
- Russia - 25.654093

Following the PPP conversions, all values were changed to per capita. As a result of the different conversions, rounding errors may be present in some of the final numbers presented in this report.

There were other challenges with data collection. Income obtained through compensation of employees is attributed to residents living in the regions. For the USA/Alaska, however, this data comes from compensation paid by employers within a certain territory and does not necessarily reflect the income that stays with households or individuals in the given territory.

There is also limited publicly available data for Greenland and the Faroe Islands. For Greenland, data is available for the “average personal income” for gross (total) income and after-tax (disposable) income, meaning that data for compensation of employees and transfers received is missing. Transfers paid was calculated by subtracting the after-tax income from the gross income. For the Faroe Islands, similar data to Greenland was available for average gross (total) income, taxes, and net (disposable) income. The data for both locations is also different from the other regions because it is for people 15 years of age and older. To align the data, the average per capita values were multiplied by the population 15 years and older and then divided by one million to find the overall personal income in local currencies.¹³ This number was divided by the total population to calculate the per capita values, as was done for the other countries and regions.

For Russia, monthly data was obtained “on average per household member” but does not indicate the population size. Therefore, the values were multiplied by 12 to get the yearly per capita amount, which was then multiplied by the total population for each region to obtain the overall personal income in local currency. The source data is not clear if “income from work” includes self-employed income or if it only accounts for compensation of employees. However, the “money income – in total” value includes income from work, property, and transfers received, indicating that income from work does include self-employed income.

The data is presented on a per capita basis, meaning it shows personal income structures rather than income per household. The rationale for per capita rather than per household is that the average household size can vary across regions, making a proper comparison impossible. To calculate the per capita values, population counts were obtained from the national statistics agency websites, and in the case of Russia data from the regional statistical agencies was used. A problem is that not all countries calculate their populations at the same time in the year. For example, the USA and Canada determine their population mid-year, while Denmark, the Faroe Islands, Greenland, Iceland, Norway, and Russia determine theirs at the start of the year on January 1. In contrast, Sweden and Finland use the end of the year on

¹³ Although the calculated values reflect the income and transfers paid to those over 15 years of age, unlike for the other locations where this data is for the entire population, it is unlikely there are many people under 15 years of age in the workforce.

December 31. To account for this, 2017 mid-year population estimates were used for the USA and Canada; the December 31, 2017 populations were used for Sweden and Finland; and the January 1, 2018 populations were used for the remaining countries. The rationale is that with the exception of the USA and Canada, the populations were taken at the end of 2017, which aligns with end of year household income and expense data. Denmark's population was rounded to the nearest thousand rather than as a whole number, therefore, we used the population from the Nordic Statistics database as it was available as a whole number.

Data on the size of national and regional total areas was collected from a number of sources, such as annual publications produced by the various national statistical agencies, to calculate the population density. Regional data for Finland and Sweden was obtained from Eurostat while national data for Sweden was obtained from the Nordic Statistics database.

The data sources for population and total area are provided in the household chapter.

Any conversion and calculation errors are the responsibility of the authors and not the data sources (ex. national statistics offices, Eurostat, Nordic Statistics database, OECD, World Bank, etc.)

Government sector

Data for the government sector is available at different levels, including general government (a compilation of all levels of governments), central government, state government (regional), local government, and social security funds (see: World Bank, 2009, pp. 65, 80, 81, 82). Countries can also include other levels of government according to their own government structures. However, data for each level of government is not always provided by each country through the national or regional accounts.

For this pilot study, the general government level was selected even though it includes federal level government finances within the various regions, since data for this level is the most widely available. However, there are challenges accessing this data at the regional level, as it may not be available in regional accounts, or if it is, the data may be limited. Other data sources, such as public finances records, proved to be the most comprehensive data source.

Due to limited data, a comprehensive international comparison was not possible for all locations in this sector. For this pilot study, the focus was on locations where more complete general government data is available and comparable through the public finance records. This includes Canada, Faroe Islands, Greenland, and Iceland. Table 2.2 provides the data sources with comparable data in the general government sector. The data was collected from the national statistics agencies in February and March, 2020.

TABLE 2.2
GENERAL GOVERNMENT SECTOR SOURCES

COUNTRY	TABLE
Canada	Table 36-10-0450-01 Revenue, expenditure and budgetary balance – General governments, provincial and territorial economic accounts
Faroe Islands	LK01010 General government, revenue and expenditure (1998-2018)
Greenland	Revenue of general government by sector, transaction and time (OFEREAI)
Iceland	General government receipts, outlays and finance accounts 1998-2018

Corporation sector

The SNA defines the types of organizations in the corporate (or business) sector. In particular, the SNA states that “*the term corporation covers legally constituted corporations and also cooperatives, limited liability partnerships, notional [sic] resident units and quasi-corporations*” (World Bank, 2009, p. 61, emphasis in the original). Businesses that fall under this definition are then categorized as either non-financial corporations (S11) or financial corporations (S12). Both sectors include non-profit institutions that are “engaged in the market production of goods” (World Bank, 2009, p. 65). National accounts, including data on sub-sectors, are provided for both the financial and non-financial corporations (see: World Bank, 2009, pp. 546-547).

The goal for this pilot study was to combine the two sectors and create a super-sector that include all market producers in the different Arctic regions. However, the statistics agencies do not keep data for the corporation sectors at the regional level, as it is difficult to attribute the distribution of income, transfers, and the like to corporations that operate in more than one jurisdiction within a country (see: Eurostat, 2014; Federal State Statistics Service, n.d.-a; Statistics Canada, 2016b; World Bank, 2009). Partial data from the generation of income account is available for the Faroe Islands, but this does not contain all sources of income for the sector(s). Similarly, the Statistics Greenland website does not contain tables with this data. S11 and S12 data is available for both Iceland and Denmark, since the national accounts would be used in these cases.

Given the lack of data, the chapter on corporations focuses on how research could be carried out in this sector through case studies.

2.4.

LIMITATIONS AND CHALLENGES

It follows from the above explanations that data collection for this pilot project is not without its challenges, particularly with regard to data availability, data quality, and comparability.

2.4.1. DATA AVAILABILITY

Regional accounts are generally not as detailed as national accounts and not all publicly available data from the various national statistics agencies contains the same amount of detail. As will be seen later in the report, there are some substantial data gaps in the household sector for the Faroe Islands and Greenland. Moreover, regional data for NPISH organizations was not available for the most part. Similarly, there are data gaps in the government sector, where Canada, Faroe Islands, Greenland, and Iceland provide the most data.

Another problem is that national and regional accounts provide data for the entire population, but statistics agencies do not always provide data for indicators that would contribute to the robustness of the analysis. For example, population data on the size and location of Indigenous communities is limited, and there are challenges in determining the value and extent of customary activities (see: Inuit Circumpolar Council et al., 2021; Young & Bjerregaard, 2019). This makes it difficult to provide a deeper analysis on the extent to which Indigenous Peoples in the North experience income inequality.

2.4.2. DATA QUALITY

Overall, the data quality is good. Yet, this does not mean errors are not possible when data is inputted into the statistical databanks. A few small errors were identified during manual calculations on the data collection table and these were clarified with the respective statistics agencies prior to data analysis.

¹³ Although the calculated values reflect the income and transfers paid to those over 15 years of age, unlike for the other locations where this data is for the entire population, it is unlikely there are many people under 15 years of age in the workforce.

2.4.3. DATA COMPARABILITY

The SNA is designed to allow for international comparisons; however, the USA's data does not follow the same accounting structure. Nevertheless, data can be compared, although there are some differences to take into consideration. For example, data in the NIPA's compensation of employees (found under personal income) is provided as compensation paid by resident companies rather than compensation received by resident households, as is done in the allocation of primary income account in the SNA. An additional and perhaps more important problem is the USA's treatment of social transfers in kind (STiK) in comparison to the SNA. STiK in the SNA constitute a separate transaction in the redistribution of income in kind account, whereas "the NIPAs do not distinguish in-kind transfers from cash transfers, and both are treated the same way. They are recorded as [...] receipts (of government social benefits) by households" (McCulla et al., 2015, p. 12). In other words, social benefits in the USA are treated the same, whereas they are separated into different accounts for other countries, following the SNA. This means the American data for social benefits is skewed and may appear higher in comparison.

Despite these limitations and challenges, this pilot project contributes significantly to the advancement of knowledge. In particular, it illustrates the challenges of working with publicly available data from different statistics agencies. Indeed, not all countries provide the same level of detail and international comparisons may require extra steps, if comparisons are to be possible. Moreover, to our knowledge, this study is the first attempt to bring together this kind of data for the different regions in the circumpolar Arctic. As such, it provides a starting point for further analysis on the sources of income and expenditures for households, governments, and corporations in the region and the effects these have on regional income inequality.

HOUSEHOLD SECTOR

3.1. INTRODUCTION

The circumpolar economy is not homogenous and the GDP/GRP is not always the best indicator of inequality. A more thorough approach to understanding the economic situation of individuals in the Arctic is to examine personal and disposable income. While this includes government transfers to individuals, it does not take subsistence activities without monetary value into account (Larsen & Huskey, 2010). There are numerous research studies that examine well-being in different regions in the circumpolar Arctic, many of which include an indicator on disposable household income (e.g. Glomsrød & Aslaksen, 2006; Glomsrød & Aslaksen, 2009; Glomsrød et al., 2017; Glomsrød, Duhaime, et al., 2021; Jungsberg et al., 2019; Schmidt, Aanesen, Klokov, Khrutshev, & Hausner, 2015; Vylegzhanina, 2017). While Schmidt et al. (2015) include average income in their analysis, there is a dearth of studies that consider the role of personal transfers to and from the government as part of their analysis. This study constitutes a first step to address this gap.

We begin our analysis of personal income composition per capita at the circumpolar level by comparing the various regional blocs (North America, Nordic countries, Russia) and the countries and subnational regions within them. As

background, the analysis for each country is preceded with additional information about population and area size. A summary overview for each regional bloc is also provided to situate the regions in the context of their regional bloc and the circumpolar Arctic. Although this is not an exhaustive analysis of income equality, the aim of this study is to uncover similarities and differences within and between countries, identify why these differences exist, and better understand what this means for inequality.

3.2. THE CIRCUMPOLAR ARCTIC, REGIONAL BLOCS, AND ARCTIC COUNTRIES

Previous research has shown that there are general similarities between the northern regions within North America, the Nordic countries, and Russia (Duhaime et al., 2017; Duhaime et al., 2021). We take this as the starting point for our analysis and compare the regional bloc and circumpolar averages for personal income and expenses, as shown in Table 3.1. The circumpolar average is the average of all subnational Arctic regions and Iceland, while the regional bloc averages are calculated using the regional data (plus Iceland) for the countries within each bloc.

¹³ Although the calculated values reflect the income and transfers paid to those over 15 years of age, unlike for the other locations where this data is for the entire population, it is unlikely there are many people under 15 years of age in the workforce.

TABLE 3.1

CIRCUMPOLAR AND REGIONAL BLOC AVERAGES PER CAPITA, 2017

Location	Primary income	Total transfers received	Total income	Total transfers paid	Disposable income
USD PPP					
Circumpolar	22 033	6 540	28 421	7 499	20 922
North America	40 634	9 421	50 055	15 161	34 893
Nordic	23 916	8 804	31 606	10 473	21 133
Russia	13 729	3 640	17 369	1 740	15 630
%					
Circumpolar	78	23	100	26	74
North America	81	19	100	30	70
Nordic	76	28	100	33	67
Russia	79	21	100	10	90

Note: The primary income and total transfers received values for the circumpolar and Nordic averages do not sum to the total income values due to missing data for the Faroe Islands and Greenland.

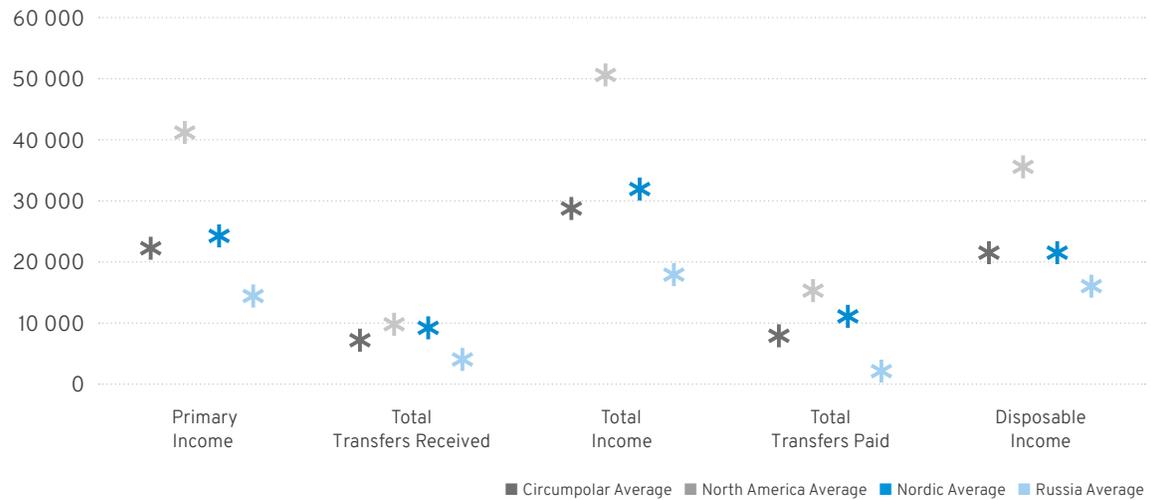
Table 3.1 shows the differences between the circumpolar and regional bloc averages in USD PPP and the proportion of income and transfers as a percentage of total income. The value of incomes in the Nordic bloc are slightly above the circumpolar average and also the closest to it, while incomes are below the circumpolar average in Russia and well above the circumpolar average in North America. Considering that the northern regions in North America and Russia have similar industrial structures (see: Huskey et al., 2014), the difference between the value of personal incomes between the two is a noteworthy finding. Moreover, the lower value of disposable income in relation to GRP also supports Grunfelder's (2014) assertion that a "high GRP does not necessarily translate to high household income as not all income generated by regional economic activity goes directly to households" (p. 92). Both the value and percentage data also show that with the exception of Russia, more

transfers are paid by individuals than are received, with individuals in the North American Arctic paying the most as a value.

Figure 3.1 presents the value of the income data in graphic form and shows important patterns in the overall personal economic structure in the circumpolar Arctic. In particular, the grouping of each regional bloc is rather spread out, except when it comes to the value of transfers received (although Russia diverges from the group). In other words, there is income inequality between regional blocs, although the gap between the blocs narrows after transfer payments are made. However, this does not provide a nuanced understanding of the situation within regional blocs and individual countries. For as we shall see, the economic portrait of personal income and expenses can vary within regional blocs.

FIGURE 3.1

CIRCUMPOLAR AND REGIONAL BLOC AVERAGES FOR PERSONAL INCOME AND COMPOSITION PER CAPITA, 2017 (USD PPP)



3.2.1. NORTH AMERICA

The North American Arctic surpasses the other regional blocs in terms of the value of primary, total, and disposable income. However, the situations in the American and Canadian North are not the same. The dispersed groupings in Figure 3.2 show that the average primary, total, and disposable income in northern Canada falls below both the regional bloc average

as well as that of Alaska. Moreover, the gap between northern Canada and Alaska's disposable income is substantial, indicating income inequality between the northern regions in the two countries. Indeed, it is Alaska's income that is responsible for the regional bloc's high-income levels.

FIGURE 3.2

NORTH AMERICA REGIONAL AVERAGES FOR PERSONAL INCOME AND COMPOSITION PER CAPITA, 2017 (USD PPP)



Figure 3.2 also shows that while individuals in northern Canada and the USA receive similar amounts of transfers, they pay substantially more in northern Canada than in Alaska. The divergence in transfers received and paid further widens the income gap between the Canadian and American North.

United States of America

Alaska accounts for 16% of the USA's land area, as shown in Table 3.2. While the size of Alaska is quite large, it has a relatively small population that accounts for only 0.23% of the USA's total population, based on 2017 mid-year estimates. In other words, there is a low population density in the American Arctic (see Appendix A to compare the size and population of each circumpolar region).

TABLE 3.2

POPULATION AND SIZE OF THE USA AND ALASKA

Location	Population	Land area: Km ²	Population: % of national population	Land area: % of national area	Population density per Km ²
USA	325 147 121	9 147 600	100.00	100.00	35.54
Alaska	739 786	1 477 954	0.23	16.16	0.50

Note 1: Population as of mid year 2017 and land area as of 2010. Percentages and population density calculated by the author.

Note 2: The land area was used since total area was not available. It was provided in square miles and the author made the conversion to square kilometers by multiplying the square miles values by 2.58999, as indicated in the source material.

Sources: (Bureau of Economic Analysis, n.d.; US Census Bureau, n.d.).

In terms of income and its composition, Table 3.3 shows the structure of income per capita nationally and for Alaska as both a dollar amount and as a percentage of total income (see Appendix B for a complete regional list in dollar amounts and Appendix C for a complete regional list of percentages). The value of Alaska's primary income is higher than the national average and individuals in Alaska also receive

slightly more in transfers and pay slightly less than the national average. When looking at the income components as percentages, the income structure is similar for primary income and total transfers received; however, Alaskans retain slightly more of their income as disposable income than the national average.

TABLE 3.3

PERSONAL INCOME AND COMPOSITION PER CAPITA, USA AND ALASKA, 2017

Location	Primary income	Total transfers received	Total income	Total transfers paid	Disposable income
USD PPP					
USA	47 108	8 768	55 875	10 277	45 598
Alaska	51 933	9 016	60 948	9 197	51 751
%					
USA	84	16	100	18	82
Alaska	85	15	100	15	85

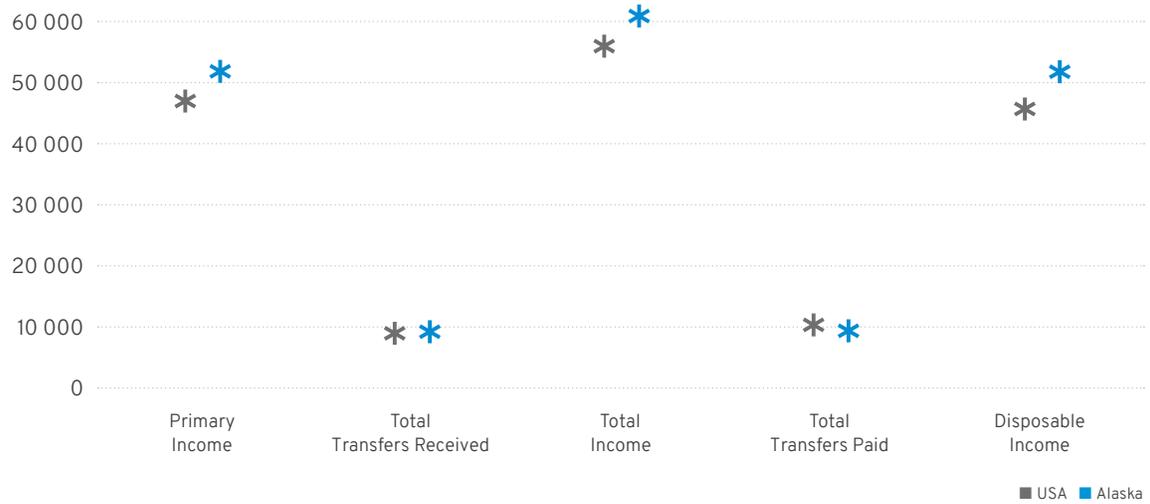
Note: the primary income and total transfers received do not sum to the total income due to rounding errors.

Figure 3.3 presents income values in graphic form; the groupings for primary, total, and disposable income illustrate the differences in income value between Alaska and the national average. The figure shows that both transfers received and paid nationally and in Alaska are of similar

value, as indicated by the tight grouping. This consequently has little effect on the size of Alaska's personal disposable income, which is higher than the national average. The main finding, therefore, is that Alaskans generally have a higher income than the national average.

FIGURE 3.3

USA AND ALASKA PERSONAL INCOME AND COMPOSITION PER CAPITA BY SOURCE, 2017 (USD PPP)



Canada

The regions in northern Canada account for almost 40% of Canada's total area, as shown in Table 3.4. Yet, despite their vast size, their populations are rather small, especially in relation to the national population. Indeed, the combined population of the three regions accounts for only 0.3% of

Canada's total population. Table 3.4 also shows that although the regions have similar sized populations, the size of their total areas are very different. Thus, the population density differs across the North and is much lower than the national average.

TABLE 3.4
POPULATION AND SIZE OF CANADA AND NORTHERN REGIONS

Location	Population	Total area: Km ²	Population: % of national population	Total area: % of national area	Population density per Km ²
Canada	36 543 321	9 984 670	100.00	100.00	3.66
Northwest Territories	44 908	1 346 106	0.12	13.48	0.03
Nunavut	37 559	2 093 190	0.10	20.96	0.02
Yukon	39 690	482 443	0.11	4.83	0.08

Note: Population as of July 1, 2017 and total area as of 2016. Percentages and population density calculated by the author.
Sources: (Statistics Canada, n.d.-b, n.d.-c).

Table 3.5 presents the income composition nationally and for the three regions both as a dollar amount and as a percentage of total income. Primary and disposable incomes in the Northwest Territories and the Yukon have a higher value than the regional and national averages. In contrast, primary and disposable incomes in Nunavut are just shy of the national average and much lower than the other regions, meaning that individuals there experience income inequality not just regionally, but nationally as well. As for the composition

of primary income as a percentage of total income, it is similar in the regions when compared the national average. However, there are some differences with the portion of income that is retained as disposable income, particularly for the Northwest Territories and Nunavut, which is lower than the Yukon and the national average. As such, individuals in the Northwest Territories and Nunavut retain less of their income as disposable income than individuals in the Yukon and nationally.

TABLE 3.5

PERSONAL INCOME AND COMPOSITION PER CAPITA, CANADA AND NORTHERN REGIONS, 2017

Location	Primary income	Total transfers received	Total income	Total transfers paid	Disposable income
USD PPP					
Canada	30 011	7 702	37 713	12 550	25 163
Northwest Territories	41 895	10 727	52 622	20 613	32 009
Nunavut	29 345	8 250	37 595	14 426	23 168
Yukon	39 363	9 690	49 053	16 409	32 644
%					
Canada	80	20	100	33	67
Northwest Territories	80	20	100	39	61
Nunavut	78	22	100	38	62
Yukon	80	20	100	33	67

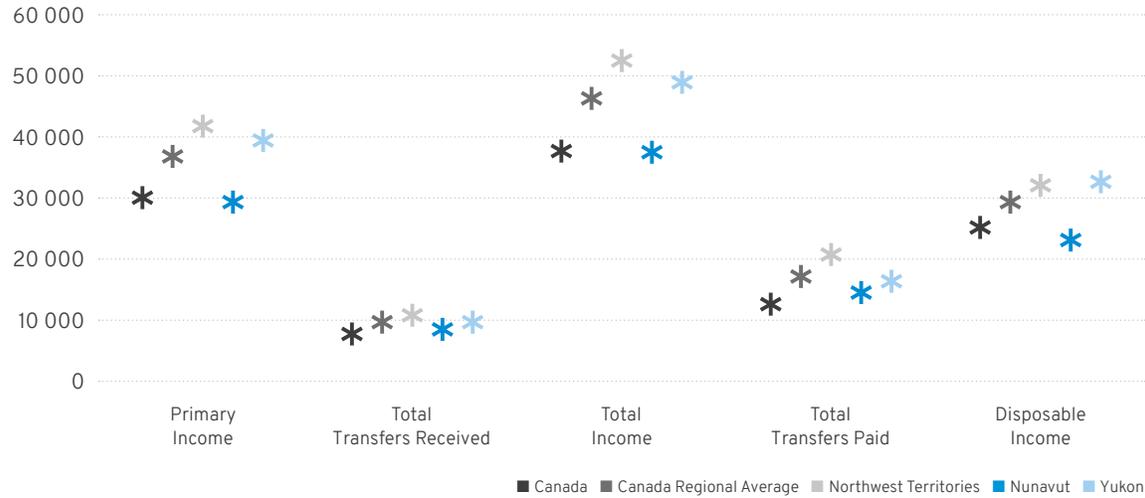
Note: the total transfers paid and disposable income for Nunavut do not sum to the total income due to rounding errors.

In terms of transfers, the value of transfers received is higher in the regions than it is at the national level. Although each region receives different amounts, Figure 3.4 shows that the difference is not major, as the plots are grouped relatively close together. The Northwest Territories receives the most, followed by the Yukon and then Nunavut. As for transfers paid, the regions also pay more than at the national level,

with the Northwest Territories paying the most, followed by the Yukon and Nunavut. There is also a greater difference between the regions in the amount paid as compared to the amounts received (the plots, notice, are more scattered). The effect of transfers paid therefore narrows the primary income gap between the regions when it comes to disposable income.

FIGURE 3.4

CANADA AND NORTHERN REGIONS PERSONAL INCOME AND COMPOSITION PER CAPITA BY SOURCE, 2017 (USD PPP)



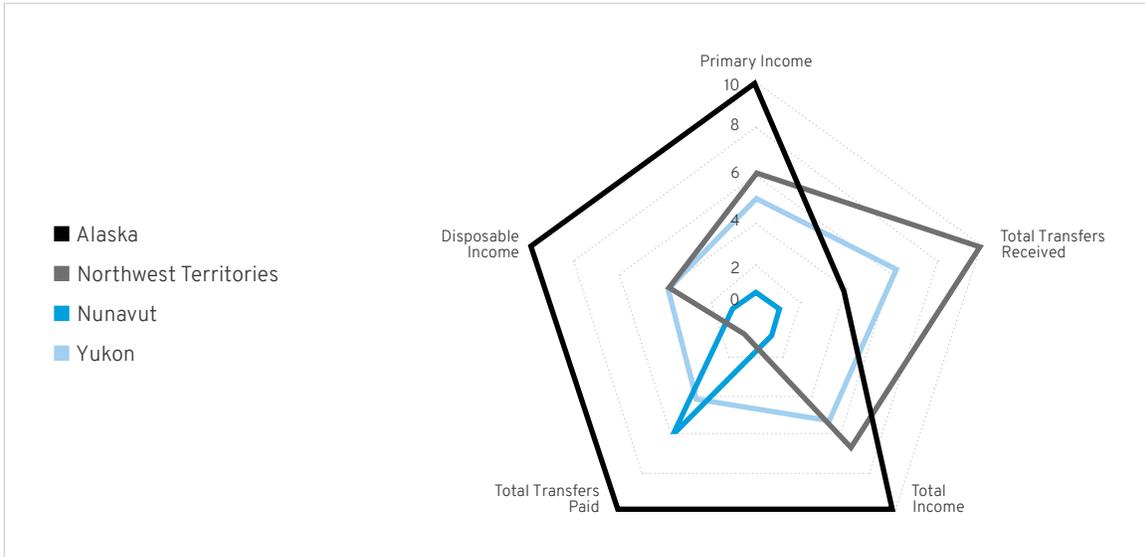
North America summary

Figure 3.5 provides an overview of the economic situation for the regions in North America when compared to one another. Regions that cover more space in the diagram are indicative of more favourable economic outcomes for individuals. Certainly, no clear pattern emerges, indicating there are substantial economic disparities within the regional

bloc. The most visible difference is the contrast between Alaska and Nunavut in all categories. The Yukon and the Northwest Territories are in the middle, and although there are some observed differences, there are similar outcomes for disposable income.

FIGURE 3.5

NORTH AMERICAN NORTHERN REGIONS IN A NORTH AMERICAN CONTEXT

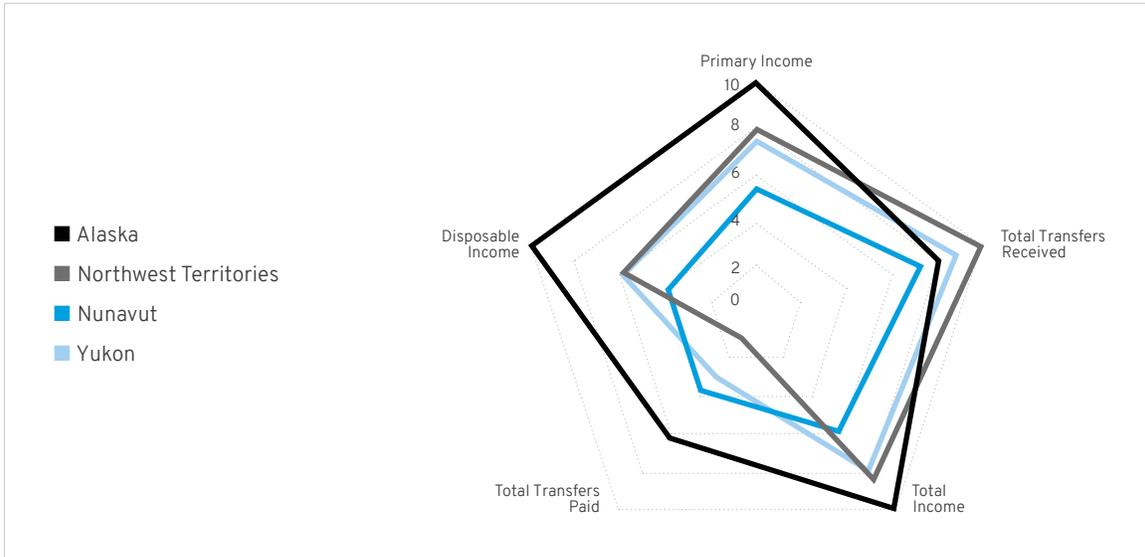


However, when the North American regions are placed in a circumpolar context, there is a change to the pattern as the regions start to converge, as shown in Figure 3.6. In this larger context, the North American regions can generally

be described as a bloc with high primary income earned through employment and high disposable income following the payment of transfers. Yet, despite this convergence, there are still visible differences between the regions.

FIGURE 3.6

NORTH AMERICAN NORTHERN REGIONS IN A CIRCUMPOLAR CONTEXT



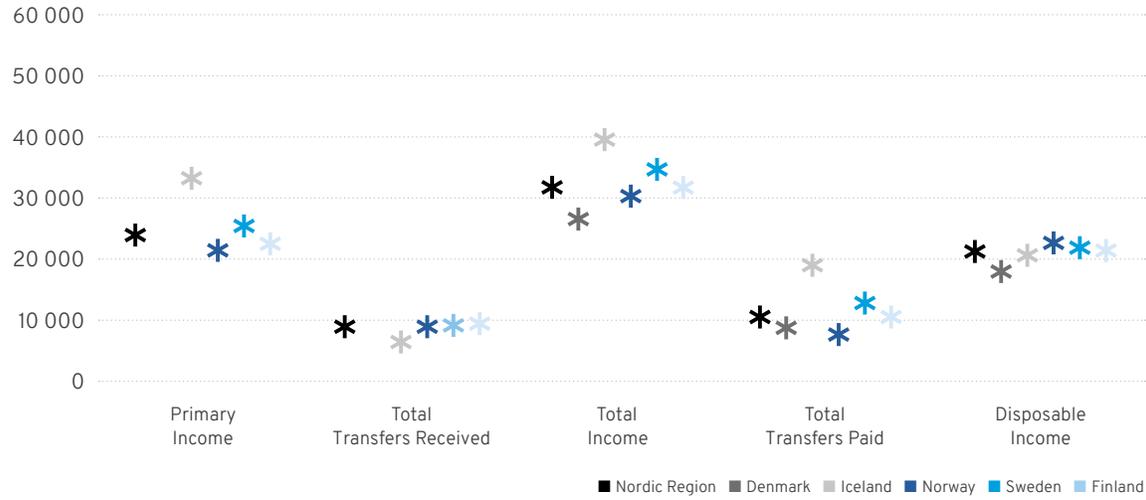
3.2.2. NORDIC COUNTRIES

Turning now to the northern regions of the Nordic countries, there are more similarities within this bloc than there are differences when compared to North America. For example, Figure 3.7 shows that the northern regional average for each Nordic country has lower primary, total, and disposable

incomes than in North America, although the countries are grouped more closely, especially when it comes disposable income. As with North America, the Nordic regions tend to receive similar amounts of transfers, while paying a little more than they receive.

FIGURE 3.7

NORDIC COUNTRY REGIONAL AVERAGES FOR PERSONAL INCOME AND COMPOSITION PER CAPITA, 2017 (USD PPP)



Note: The primary income and total transfers received values are not available for the Faroe Islands and Greenland; consequently, this data is missing from the Denmark regional average.

Faroe Islands and Greenland (Denmark)

The populations of the Faroe Islands and Greenland are substantially smaller than the population of Denmark, as shown in Table 3.6. Similarly, the total area of the Faroe Islands is much smaller when compared to Denmark, while

the size of Greenland is approximately 50 times the size of Denmark. The Faroe Islands and Greenland share similar population sizes, but the total area of Greenland is substantially larger and thus its population density is substantially lower.

TABLE 3.6

POPULATION AND SIZE OF DENMARK, FAROE ISLANDS, AND GREENLAND

Location	Population	Total area: Km ²	Population: % relative to Denmark	Total area: % relative to Denmark	Population density per Km ²
Denmark	5 781 190	42 934	100.00	100.00	134.65
Faroe Islands	50 481	1 396	0.87	3.25	36.16
Greenland	55 877	2 166 086	0.97	5045.15	0.03

Note 1: The population and total area for the Faroe Islands and Greenland are not included in the numbers for Denmark, which is why the population and size of the Faroe Islands and Greenland are presented here in relation to the population and size of Denmark.

Note 2: Population as of January 1, 2018. Total area Denmark and Greenland as of 2018 and Faroe Islands as of 2019. Percentages and population density calculated by the author.

Sources: (Nordic Statistics Database, n.d.-b; Statistics Denmark, 2018; Statistics Faroe Islands, 2019, n.d.; Statistics Greenland, 2018, n.d.).

Data is not available for the breakdown of primary income and transfers received for the Faroe Islands and Greenland. Thus, comparisons can only be made for total income, transfers paid, and disposable income. Table 3.7 provides the income composition as a dollar amount and as a percentage of total income. Although the primary income and transfers received in the Faroe Islands and Greenland are unavailable, the data shows that Denmark has a much higher value of total income than the Faroe Islands and Greenland.

For transfers paid, individuals in both the Faroe Islands and Greenland pay substantially less than in Denmark, which narrows the income gap between the three locations when comparing the value of total and disposable incomes. As for the percentage of total income, the Faroe Islands and Greenland pay a similar portion of transfers, which is lower than the Danish average. As such, more of their income is retained as disposable income than in Denmark.

TABLE 3.7

PERSONAL INCOME AND COMPOSITION PER CAPITA, DENMARK, FAROE ISLANDS, AND GREENLAND, 2017

Location	Primary income	Total transfers received	Total income	Total transfers paid	Disposable income
USD PPP					
Denmark	28 208	11 063	39 271	17 541	21 730
Faroe Islands			29 870	9 721	20 149
Greenland			23 319	7 429	15 891
%					
Denmark	72	28	100	45	55
Faroe Islands			100	33	67
Greenland			100	32	68

Note1: The primary income and total transfers received values are not available for the Faroe Islands and Greenland.

Note 2: The total of transfers paid and disposable income for Greenland does not sum to the total income due to rounding errors.

Figure 3.8 presents the income values in graphic form and shows that the difference between total income and the amount of transfers paid in Denmark are both higher than in the Faroe Islands and Greenland. Despite the smoothing effect of trans-

ferred paid, as shown by the closer grouping for disposable income, disposable income in Greenland is substantially lower than in both Denmark and the Faroe Islands, thus putting it closer to the disposable incomes observed in Russia.

FIGURE 3.8

DENMARK, FAROE ISLANDS, AND GREENLAND PERSONAL INCOME AND COMPOSITION PER CAPITA BY SOURCE, 2017 (USD PPP)



Iceland

The population, total area, and population density of Iceland are presented in Table 3.8. Due to the size and geographical location of Iceland, it is treated as both an Arctic country

and a region, and is considered to be 100% in the North. Moreover, the income data presented below are not available at the regional level.

TABLE 3.8

POPULATION AND SIZE OF ICELAND

Location	Population	Total area: Km ²	Population density per Km ²
Iceland	348 450	103 000	3.38

Note: The population is for January 1, 2018 and the area is for an unknown year. Population density calculated by author.
Sources: (Statistics Iceland, 2018, n.d.)

Table 3.9 shows the income structure in Iceland as both a dollar amount and as a percentage of total income. In particular, individuals there receive very little in the way of transfers while they pay substantially more. The effect of

transfers paid is that individuals in Iceland retain 52% of their total income as disposable income, which is similar to the situation in Denmark at the national level.

TABLE 3.9

PERSONAL INCOME AND COMPOSITION PER CAPITA, ICELAND, 2017

Location	Primary income	Total transfers received	Total income	Total transfers paid	Disposable income
USD PPP					
Iceland	33 114	6 359	39 474	18 921	20 553
%					
Iceland	84	16	100	48	52

Note: the primary income and total transfers received do not sum to the total income due to rounding errors.

Figure 3.9 presents the income values in graphic form. The effect of the total transfers paid is very noticeable on the value of disposable income.

FIGURE 3.9

ICELAND PERSONAL INCOME AND COMPOSITION PER CAPITA BY SOURCE, 2017 (USD PPP)



Norway

The regions in northern Norway account for 30% of the country's total area, but only 9% of the total population, as shown in Table 3.10. The regions vary in size, with Finnmark being almost twice the size of Troms. Yet, the population in

Troms is more than double of that in Finnmark. In fact, the largest populations are found further south and in smaller areas, as indicated by the population density.

TABLE 3.10

POPULATION AND SIZE OF NORWAY AND NORTHERN REGIONS

Location	Population	Total area: Km ²	Population: % of national population	Total area: % of national area	Population density per Km ²
Norway	5 295 619	385 203	100.00	100.00	13.75
Finnmark	76 167	48 631	1.44	12.62	1.57
Nordland	243 335	38 475	4.60	9.99	6.32
Troms	166 499	25 877	3.14	6.72	6.43

Note: Population as of January 1, 2018 and total area as of 2017. Percentages and population density calculated by the author.

Sources: (Statistics Norway, n.d.-a, n.d.-b).

Table 3.11 shows the income composition at the national level and for the three regions, as both a dollar amount and as a percentage of total income. Primary incomes are similar in value, although the regional values fall short of the national average. As for transfers received, individuals in the regions receive similar amounts that are higher than the national average, with individuals in Nordland receiving the most. Individuals in the different regions also pay less in transfers than the national average, and they all pay less than they receive. Disposable incomes in Nordland and Finnmark fall shy of the national average, while the disposable income in

Troms is just \$2 (USD PPP) above the national average. There is little difference between the regions and the national average, in part due to the role of transfers. This suggests a degree of income equality among the northern regions and with the rest of the country. The proportion of primary income for the three regions is lower than the national average; however, the proportion of income retained as disposable income in the three regions is higher than the national average, meaning northerners keep more of their income after transfers paid.

TABLE 3.11

PERSONAL INCOME AND COMPOSITION PER CAPITA, NORWAY AND NORTHERN REGIONS, 2016

Location	Primary income	Total transfers received	Total income	Total transfers paid	Disposable income
USD PPP					
Norway	23 482	8 270	31 752	8 719	23 033
Finnmark	21 017	8 778	29 795	7 096	22 699
Nordland	20 668	9 285	29 953	7 758	22 195
Troms	22 500	8 612	31 112	8 077	23 035
%					
Norway	74	26	100	27	73
Finnmark	71	29	100	24	76
Nordland	69	31	100	26	74
Troms	72	28	100	26	74

Figure 3.10 presents the income values in graphic form. The grouping observed in Norway is much closer for all categories of income and transfers than it is for Canada, the Faroe Islands, Greenland, and Denmark. This suggests a certain

amount of income equality within Norway from the start, although the value of the national average of transfers received and paid does bring the regional disposable income closer to that of the national average.

FIGURE 3.10

NORWAY AND NORTHERN REGIONS PERSONAL INCOME AND COMPOSITION PER CAPITA BY SOURCE, 2016 (USD PPP)



Sweden

The northern regions in Sweden account for approximately 37% of Sweden's total area, but only 5% of the total population (Table 3.12), which is similar to Norway. Norrbotten, the

most northerly region, is substantially larger in size than Västerbotten, yet both regions have similar population sizes. These differences are reflected in the population density.

TABLE 3.12

POPULATION AND SIZE OF SWEDEN AND NORTHERN REGIONS

Location	Population	Total area: Km ²	Population: % of national population	Total area: % of national area	Population density per Km ²
Sweden	10 120 242	447 435	100.00	100.00	22.62
Norrbotten	251 295	105 208	2.48	23.51	2.39
Västerbotten	268 465	58 875	2.65	13.16	4.56

Note: Population as of December 31, 2017, national total area as of 2017, and regional total area as of 2016. Percentages and population density calculated by the author.

Sources: (Eurostat, n.d.-a; Nordic Statistics Database, n.d.-a; Statistics Sweden, n.d.).

Table 3.13 shows the income composition for the national level and the two northerly regions as a dollar amount and a percentage of total income. Regional primary incomes in northern Sweden are below the national average, which is similar to the situation in Norway. As for transfers, individuals in both regions receive more than the national average, with individuals living in Norrbotten receiving a little more than individuals in Västerbotten. Both regions also pay similar amounts in transfers, which have a lower dollar value than

the national average. As fewer transfers are received and more are paid at the national level, this narrows the income gap between the national average and the regions for disposable income. As for the proportion of income, the regions overall have a higher proportion of their income coming from transfers than at the national level, although similar amounts of transfers are paid at all levels. As such, individuals in Norrbotten retain slightly more of their income as disposable income than in Västerbotten or nationally.

TABLE 3.13

PERSONAL INCOME AND COMPOSITION PER CAPITA, SWEDEN AND NORTHERN REGIONS, 2017

Location	Primary income	Total transfers received	Total income	Total transfers paid	Disposable income
USD PPP					
Sweden	28 016	8 545	36 560	13 531	23 029
Norrbottnen	25 776	9 608	35 384	12 874	22 510
Västerbotten	24 979	8 741	33 720	12 534	21 186
%					
Sweden	77	23	100	37	63
Norrbottnen	73	27	100	36	64
Västerbotten	74	26	100	37	63

Note: the primary income and total transfers received for Sweden do not sum the total income due to rounding errors.

Figure 3.11 presents the income values in graphic form. As in Norway, the groupings in each category are close together, indicating greater income equality between regions and the national average, as compared to the observed pattern in

Canada, for example. The figure also illustrates the smoothing effect of transfers received and paid, as the grouping for disposable income is closer than it is for primary income.

FIGURE 3.11

SWEDEN AND NORTHERN REGIONS PERSONAL INCOME AND COMPOSITION PER CAPITA BY SOURCE, 2017 (USD PPP)



Finland

The northern regions in Finland account for approximately 47% of Finland's total area, yet only 11% of the country's population, as shown in Table 3.14. The regions also vary in both size and population, with the highest population density

observed in Northern Ostrobothnia. Lapland is the most northerly region and has the largest geographical size but not the smallest population, although it does have the lowest population density.

TABLE 3.14
POPULATION AND SIZE OF FINLAND AND NORTHERN REGIONS

Location	Population	Total area: Km ²	Population: % of national population	Total area: % of national area	Population density per Km ²
Finland	5 513 130	338 452	100.00	100.00	16.29
Kainuu	73 959	22 688	1.34	6.70	3.26
Lapland	179 223	98 983	3.25	29.25	1.81
Northern Ostrobothnia	411 856	39 150	7.47	11.57	10.52

Note: Population as of the end of 2017, total area for Finland as of 2018 and 2016 for the regions. Percentages and population density calculated by the author.

Sources: (Eurostat, n.d.-a; Statistics Finland, 2018, n.d.).

Table 3.15 shows the income composition as both a dollar amount and as a percentage of total income for Finland and the northern regions. All regions have primary incomes with similar values that are less than the national average, as in Norway and Sweden. The regions also receive similar amounts of transfers, with individuals in Lapland and Kainuu receiving more than the national average. Northern Ostrobothnia is an outlier, as individuals there receive less than the national average and less than the other regions. As for transfers paid, all regions pay less than the national average, and

individuals in Kainuu pay the least. Kainuu is also the only region where more in transfers are received than paid, although the difference is marginal. Nevertheless, the value of transfers paid has an effect on disposable income. There are differences among the regions in terms of the proportion of income coming from primary sources and transfers. There are also slight differences in the proportion of income that is retained as disposable income, with individuals in the regions retaining more than at the national level.

TABLE 3.15

PERSONAL INCOME COMPOSITION PER CAPITA, FINLAND AND NORTHERN REGIONS, 2017

Location	Primary income	Total transfers received	Total income	Total transfers paid	Disposable income
USD PPP					
Finland	25 896	8 928	34 824	12 034	22 791
Kainuu	21 599	9 935	31 534	9 835	21 699
Lapland	22 764	9 691	32 455	10 428	22 027
Northern Ostrobothnia	22 824	8 223	31 047	10 526	20 523
%					
Finland	74	26	100	35	65
Kainuu	68	32	100	31	69
Lapland	70	30	100	32	68
Northern Ostrobothnia	74	26	100	34	66

Note: the total of transfers paid and disposable income does not sum to the total income for Finland and Northern Ostrobothnia due to rounding errors.

Figure 3.12 presents the income values in graphic form and shows the national average for disposable income to be slightly higher than in the regions, but within a closer range than with the primary income. This means that the higher amount of transfers paid at the national level lessened the income gap between the regions and the national average. As well, because individuals living in Kainuu received more and paid less in transfers than the other regions, they went

from having the lowest primary income to a middle level of disposable income. Individuals in Northern Ostrobothnia received the least amount of transfers but paid the most, resulting in the lowest regional disposable income. Despite these differences, Figure 3.12 also shows that there is little deviation between the regions, suggesting there is minimal income inequality in the North compared to the national average, and between the regions themselves.

FIGURE 3.12

FINLAND AND NORTHERN REGIONS PERSONAL INCOME AND COMPOSITION PER CAPITA BY SOURCE, 2017 (USD PPP)



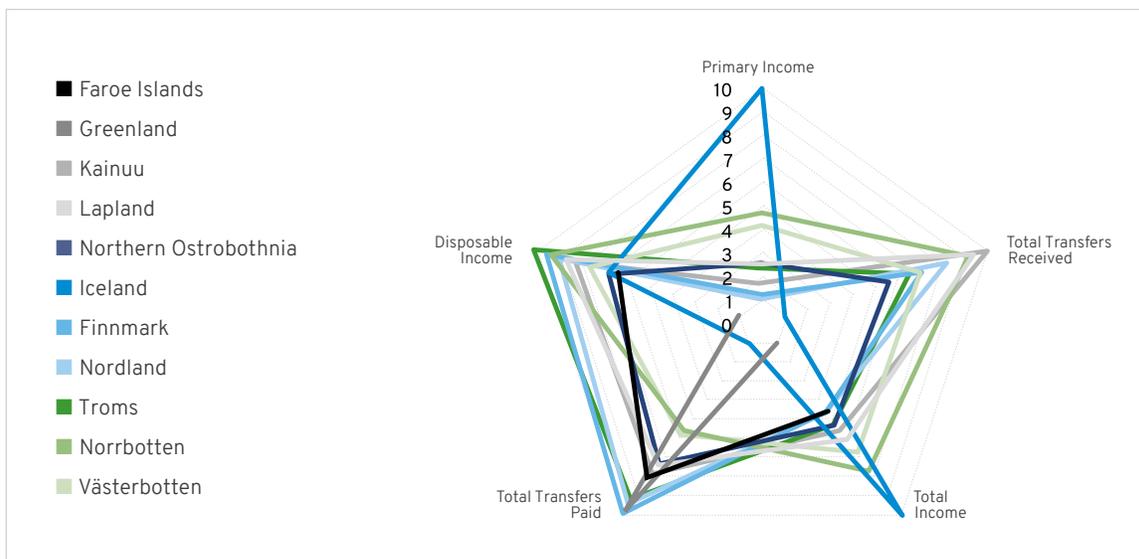
Nordic country summary

Figure 3.13 provides a visual overview of the situation of the Nordic regions when compared to one another. Overall, there is a consistent pattern that shows similarities among the regions, suggesting there is a certain degree of equality among the regions even though individuals in some regions earn more than in others. That said, the figure shows two outliers. The first is Iceland, which differs from the other

regions in all categories, except for disposable income. The second is Greenland. Although some data is missing for Greenland, the pattern for total and disposable income is substantially different than the other regions. Some data for the Faroe Islands is also missing; however, Figure 3.13 shows that the pattern for total income, transfers paid, and disposable income is similar to the other regions.

FIGURE 3.13

NORDIC NORTHERN REGIONS IN A NORDIC CONTEXT

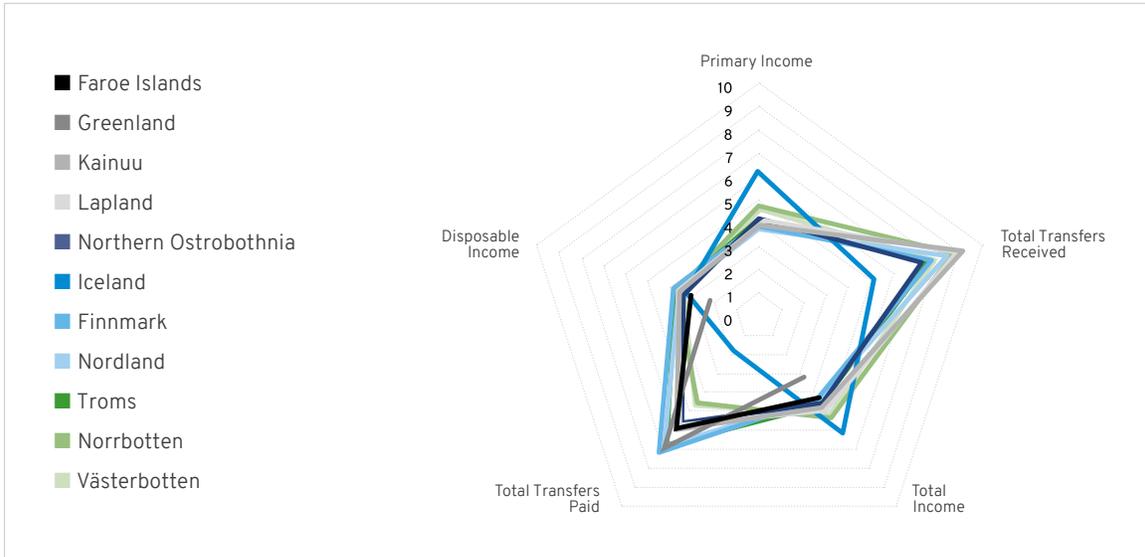


When the Nordic regions are placed into a circumpolar context, there is a change to the pattern although not to the tight grouping of the regions themselves, as demonstrated in Figure 3.14. The economic situation for individuals residing in the northern Nordic regions can generally be described as a bloc with similar primary and disposable incomes, although these values are lower than in North America.

Individuals in these regions also pay the highest percentage of their income in transfers, and pay more than they receive. Although there are many similarities among the regions, Iceland and Greenland are again the outliers, but this time with less pronounced differences than when observed solely in a Nordic context.

FIGURE 3.14

NORDIC NORTHERN REGIONS IN A CIRCUMPOLAR CONTEXT



3.2.3. RUSSIA

The regions in northern Russia account for 53% of Russia's land area, as shown in Table 3.16. However, when the regions are examined individually, they each represent a relatively small percentage of Russia's land area, with the exception of Sakha and Krasnoyarsk, which stretches far south. Despite

some of their sizes, the northern regions have small populations and account for just under 7% of Russia's total population. Their population density is lower than the national level and varies by region, with the highest density observed in Murmansk and the lowest in Chukotka.

TABLE 3.16

POPULATION AND SIZE OF RUSSIA AND NORTHERN REGIONS

Location	Population	Land area: Km ²	Population: % of national population	Land area: % of national area	Population density per Km ²
Russia	144 478 050	17 125 000	100.00	100.00	8.44
Arkhangelsk	1 111 031	413 100	0.77	0.77	2.69
Chukotka	49 348	721 500	0.03	4.21	0.07
Karelia	622 500	180 500	0.43	1.05	3.45
Khanty-Mansii	1 659 435	534 800	1.15	3.12	3.10
Komi	840 873	416 800	0.58	2.43	2.02
Krasnoyarsk	2 876 497	2 366 800	1.99	13.82	1.22
Magadan	144 091	462 500	0.10	2.70	0.31
Murmansk	753 557	144 900	0.52	0.85	5.20
Nenets Autonomous	43 997	176 800	0.03	1.03	0.25
Sakha	964 300	3 083 500	0.67	18.01	0.31
Yamal-Nenets	540 013	769 300	0.37	4.49	0.70

Note 1: Population is as of January 1, 2018. The population for Russia has been updated on the World Bank website after data collection.

Note 2: Land area is used, since total area was not available. The national area was converted from hectares to square km by the author and is for 2017 (Rosstat, 2018), while the area for the regions is for 2018. The official data for Arkhangelsk included the data for Nenets Autonomous therefore, the Arkhangelsk area was calculated by the author by subtracting the Nenets Autonomous data (Rosstat, 2019, pp. 186, 199).

Note 3: Percentages and population density calculated by the author.

Sources: (World Bank, 2018; Rosstat, 2018, 2019; Rosstat Regional Office of Arkhangelsk Region and Nenets Autonomous Area, n.d.-a, n.d.-b; Rosstat Regional office of Khabarovsk Territory, n.d.-a, n.d.-b; Rosstat Regional Office of Komi Republic, n.d.; Rosstat Regional Office of Krasnoyarsk Territory, n.d.; Rosstat Regional Office of Murmansk Region, n.d.; Rosstat Regional Office of Republic of Karelia, n.d.; Rosstat Regional Office of Republic of Sakha (Yakutia), n.d.; Rosstat Regional Office of Tyumen Region, n.d.-a, n.d.-b).

Table 3.17 shows the income composition as both a dollar amount and as a percentage of total income in Russia and the northern regions. Unlike the North American and Nordic regions, there is more variation in terms of both the value and proportion of primary income and transfers received. The table also shows that while the proportion of transfers received by individuals varies in terms of the percentage of income, the value is similar across the regions. As well, the value of transfers paid is quite low. Yet, the value of disposable income is also low, and is lower than in North America and the Nordic countries overall. This suggests that transfers

do not reduce income inequality for the Russian regions at the circumpolar level, although they do reduce the inequality for some regions in the national context. That said, there are some exceptions, as disposable incomes in Yamal-Nenets, Chukotka, and Magadan are closer in value to the disposable incomes found in many of the Nordic regions. Another observation is that individuals nationally and at the regional level retain at least 88% of their income as disposable income – this is the highest amongst all the circumpolar regions, including Alaska.

TABLE 3.17

PERSONAL INCOME AND COMPOSITION PER CAPITA, RUSSIA AND NORTHERN REGIONS, 2017

Location	Primary income	Total transfers received	Total income	Total transfers paid	Disposable income
USD PPP					
Russia	9 678	2 820	12 497	1 240	11 258
Arkhangelsk	9 342	3 446	12 788	1 173	11 614
Chukotka	19 723	3 344	23 067	2 443	20 624
Karelia	6 868	4 181	11 049	842	10 207
Khanty-Mansii	14 804	2 681	17 485	2 036	15 449
Komi	9 219	4 010	13 229	1 207	12 022
Krasnoyarsk	8 781	2 788	11 568	1 055	10 513
Magadan	18 341	4 064	22 404	2 195	20 209
Murmansk	12 518	3 881	16 398	1 626	14 772
Nenets Autonomous	15 747	5 459	21 206	2 086	19 121
Sakha	12 191	3 691	15 882	1 487	14 395
Yamal-Nenets	23 486	2 501	25 988	2 989	22 999
%					
Russia	77	23	100	10	90
Arkhangelsk	73	27	100	9	91
Chukotka	86	14	100	11	89
Karelia	62	38	100	8	92
Khanty-Mansii	85	15	100	12	88
Komi	70	30	100	9	91
Krasnoyarsk	76	24	100	9	91
Magadan	82	18	100	10	90
Murmansk	76	24	100	10	90
Nenets Autonomous	74	26	100	10	90
Sakha	77	23	100	9	91
Yamal-Nenets	90	10	100	12	88

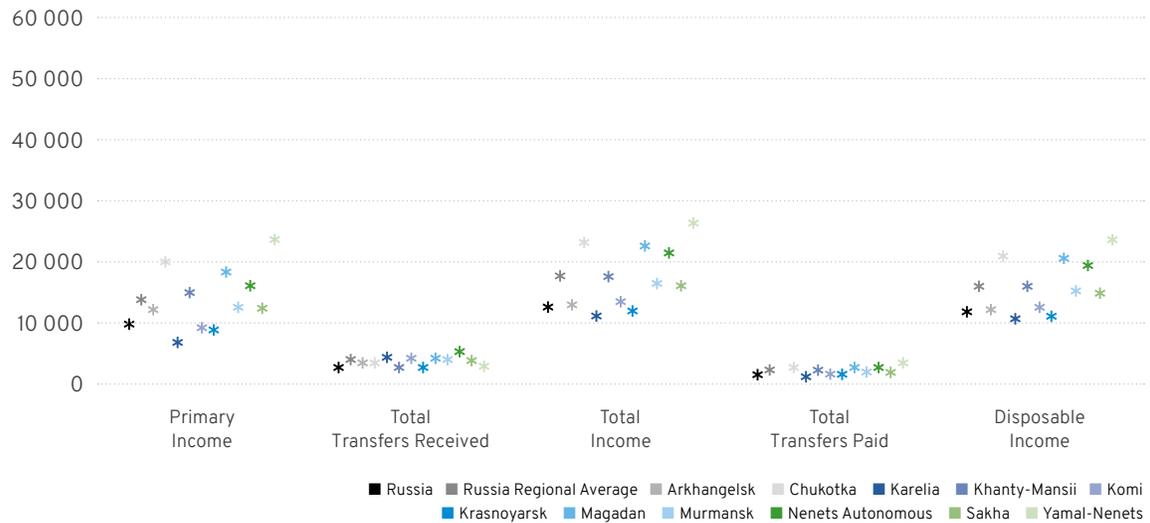
Note: the primary income and total transferred received for Russia, Krasnoyarsk, Magadan, Murmansk, and Yamal-Nenets, and the total transfers paid and disposable income for Russia, Arkhangelsk, Nenets Autonomous do not sum to the total income due to rounding errors.

Figure 3.15 presents the income values in graphic form. Clearly, the regions are not homogenous in terms of their income value, as the plots are fairly scattered. In contrast, the plots for transfers received and paid are more closely grouped, indicating that individuals receive similar amounts

in transfers regardless of the economic situation in each region. As well, six regions have primary and disposable income that is lower than the national average: Arkhangelsk, Karelia, Komi, Krasnoyarsk, Murmansk, and Sakha.

FIGURE 3.15

RUSSIA AND NORTHERN REGIONS PERSONAL INCOME AND COMPOSITION PER CAPITA BY SOURCE, 2017 (USD PPP)



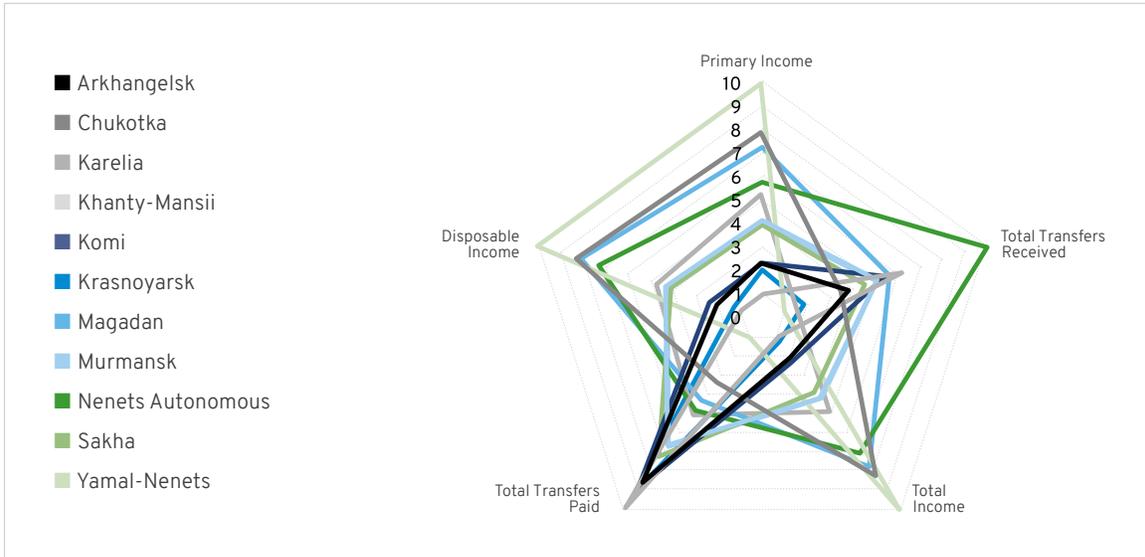
Russia summary

Figure 3.16 provides an overview of the northern regions in Russia in the context of the country as a whole. As with North America, there is no cohesive pattern, although there are similarities among some regions in most of the categories.

Nevertheless, the pattern suggests a strong degree of economic disparities within the bloc, particularly with regard to Yamal-Nenets and its disposable income, and Nenets Autonomous and transfers received.

FIGURE 3.16

RUSSIAN NORTHERN REGIONS IN A RUSSIAN CONTEXT



The economic portrait of the northern regions in Russia changes, however, when placed in a circumpolar context; as Figure 3.17 shows, there is considerable pattern convergence in all categories. While there are differences in the value of primary and disposable incomes across the Russian North, the value of primary and disposable incomes is low when compared to their North American and Nordic neighbours.

Individuals also receive the least in transfers in the circumpolar Arctic. In contrast to the other blocs, however, they also pay the least in transfers and thus retain most of their primary income as disposable income. This pattern is similar to Nunavut's pattern in the North American context. Moreover, if a complete data set were available for Greenland, it too might well align with the pattern found in Figure 3.17.

FIGURE 3.17

RUSSIAN NORTHERN REGIONS IN A CIRCUMPOLAR CONTEXT



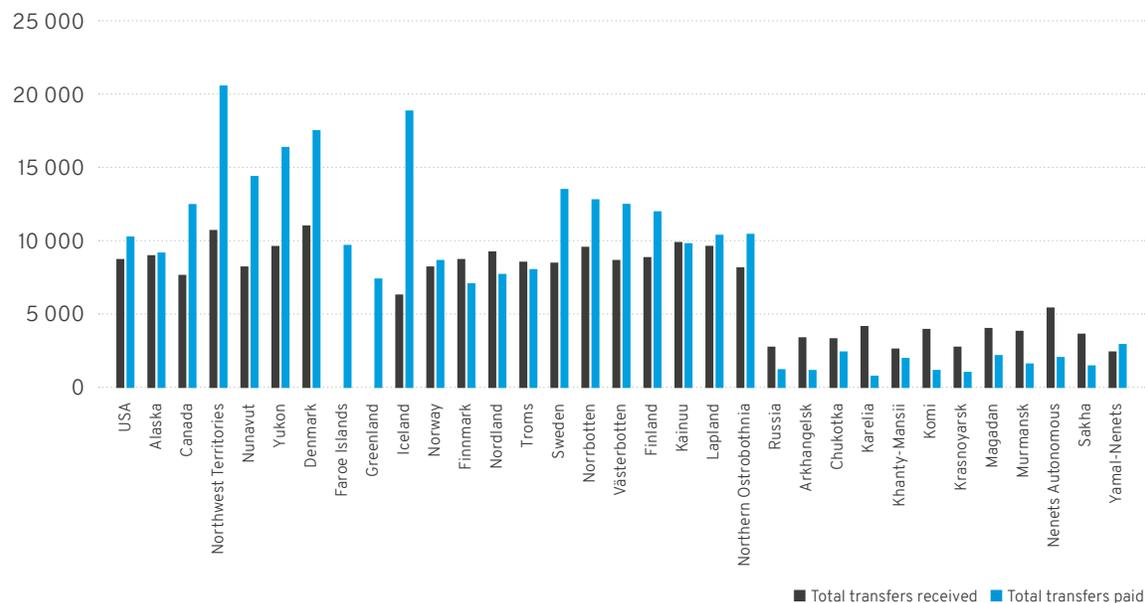
3.2.4. THE ROLE OF TRANSFERS

As demonstrated above, transfers can play an important role in reducing income inequality, and in this regard, we have observed some interesting trends (see Tables D1 and D2 in Appendix D for a complete breakdown of the transfers). First, as Figure 3.18 shows, there is a wide range in dollar

values of transfers received and paid, both nationally and regionally. Second, on average at the regional level, regions in North America receive and pay more in transfers than the Nordic regions. Third, in terms of dollar value, regions in Russia receive and pay the least.

FIGURE 3.18

NATIONAL AND REGIONAL TRANSFERS RECEIVED AND PAID PER CAPITA, 2017 (USD PPP)



Note: Data for transfers received in the Faroe Islands and Greenland is not available.

There are also differences within some countries relating to the value of transfers received. Regions in Canada, Finland, and Russia have sizeable differences in the dollar value of received transfers within the same country. For example, individuals in Nunavut and Northern Ostrobothnia receive approximately \$1,500 (USD PPP) less than the Yukon and Lapland, respectively. Khanty-Mansii, Yamal-Nenets, and Krasnoyarsk also receive less than other regions in Russia. In contrast, individuals in northern Norway receive transfers of similar values.

As for transfers paid, regions in Canada show sizeable differences, suggesting there is inequality between the regions in terms of how much individuals pay. For example, individuals in Nunavut pay approximately \$6,000 (USD PPP) less than individuals living in the Northwest Territories. In contrast, the regions in Sweden and Finland have the smallest differences between the amount of transfers paid, suggesting

there is greater equality between the regions in these countries. The data also shows that individuals in northern Canada and northern Russia on average pay more in transfers than at the national level, whereas individuals in Greenland, the Faroe Islands, and the northern regions in Finland, Norway, Sweden, and the USA on average pay less than the national amount.

There are also some trends with the difference in value between transfers received and paid. Individuals in most of the North American and Nordic regions pay more than they receive, while individuals living in most of northern Russia receive more than they pay (see Table 3.18). The exceptions are in Norway, where individuals living in all regions receive more in transfers than they pay; in Kainuu, which is the only region within Finland where individuals receive more in transfers than they pay; and in Yamal-Nenets where individuals pay more in transfers than they receive.

TABLE 3.18

THE DIFFERENCE BETWEEN TRANSFERS RECEIVED AND PAID PER CAPITA, 2017 (USD PPP)

Location	Total transfers received	Total transfers paid	\$ difference between transfers received and paid	% difference between transfers received and paid
USA	8 768	10 277	-1 509	-17.2
Alaska	9 016	9 197	-182	-2.0
Canada	7 702	12 550	-4 847	-62.9
Northwest Territories	10 727	20 613	-9 886	-92.2
Nunavut	8 250	14 426	-6 177	-74.9
Yukon	9 690	16 409	-6 719	-69.3
Denmark	11 063	17 541	-6 478	-58.6
Faroe Islands		9 721		
Greenland		7 429		
Iceland	6 359	18 921	-12 562	-197.5
Norway	8 270	8 719	-449	-5.4
Finmark	8 778	7 096	1 682	19.2
Nordland	9 285	7 758	1 527	16.4
Troms	8 612	8 077	535	6.2
Sweden	8 545	13 531	-4 987	-58.4
Norrbottnen	9 608	12 874	-3 266	-34.0
Västerbottnen	8 741	12 534	-3 793	-43.4
Finland	8 928	12 034	-3 106	-34.8
Kainuu	9 935	9 835	101	1.0
Lapland	9 691	10 428	-737	-7.6
Northern Ostrobothnia	8 223	10 526	-2 304	-28.0
Russia	2 820	1 240	1 580	56.0
Arkhangelsk	3 446	1 173	2 272	65.9
Chukotka	3 344	2 443	901	26.9
Karelia	4 181	842	3 339	79.9
Khanty-Mansii	2 681	2 036	645	24.0
Komi	4 010	1 207	2 802	69.9
Krasnoyarsk	2 788	1 055	1 732	62.1
Magadan	4 064	2 195	1 869	46.0
Murmansk	3 881	1 626	2 255	58.1
Nenets Autonomous	5 459	2 086	3 373	61.8
Sakha	3 691	1 487	2 204	59.7
Yamal-Nenets	2 501	2 989	-488	-19.5

Note: Data for transfers received in the Faroe Islands and Greenland is not available.

For regions where individuals pay more than they receive in transfers, Icelanders pay the most, followed by individuals living in northern Canada, Sweden, Finland, and the USA. Moreover, the difference in some of these regions is substantially more than in others; this is the case of the Northwest Territories in Canada and Northern Ostrobothnia in Finland. As for Norway and Russia, where individuals in the regions pay less in transfers than they receive, those in Russia generally retain more than individuals living in northern Norway, although some regions retain more than others. What this shows is that some regions benefit from transfers more than others and that this can have an effect on the value of income that individuals retain as disposable income.

3.3. THEORETICAL CONSIDERATIONS

Systemic structures and local contexts across the circumpolar Arctic influence the size and structure of incomes. Indeed, Larsen et al. (2019) explain that economic activity occurs at different scales and that understanding the “institutional context and the social, cultural, and environmental context” (p. 691) can address risk and contribute to policy development. Moreover, McMullin (2010) explains that a number of social factors, such as “class, age, gender, ethnicity, and race” (p. 5), contribute to personal economic outcomes and inequality. Certainly, a number of factors directly affect life outcomes.

Grabb (2007) brings these factors together in a theoretical approach that looks at different intersections of power and identity. Power, in particular, is exerted with the ability to influence and make decisions. In this regard, Grabb (2007) identifies three kinds of power related to the “control of material resources, of people, and of ideas” that align with “economic, political, and ideological structures” (Grabb, 2007, p. 211). These sources of power then interact with various social factors and identities, as well as with things like where one lives and one’s personal political views, all of which can have an effect on the life outcomes of different groups of people.

The following sections delve further into the three types of power that Grabb identifies. This will then help frame and organize the attempt to understand the main characteristics that we discovered while analyzing the five income variables.

3.3.1. ECONOMY

Despite some similarities across regions, there is not a singular circumpolar economic structure (Huskey et al., 2014, p. 151). Indeed, as Larsen (2013) explains, there are differences between the northern regional economies, including “by type, quality, and quantity of industrial resources produced; by the share of the indigenous population and the size and importance of the local economy; as well as by the different national economic and political systems” (p. 221). Despite these differences, Larsen (2016) also posits important similarities in “associated challenges – e.g. small size, remote locality and high costs, – their significant resource constraints, market volatility and the many and diverse interests of different actors and stakeholders” (p. 1). Some of these similarities and differences are identifiable by geographic location.

The public sector and the natural resources sectors are the main economic activities in the North American Arctic (Glomsrød, Wei, et al., 2021). In the Canadian North, for example, employment in the public sector comes with higher wages, although this is often to the detriment of other, smaller sectors that cannot offer comparable wages (Exner-Pirot, 2019). As for the Nordic regions, economic activity is more diversified. Fishing and related industries are key to the economies of the Faroe Islands, Greenland, Iceland, and northern Norway, while manufacturing is significant in northern Sweden and northern Finland. Tourism is also important to some regional economies, particularly in Iceland (Glomsrød, Wei, et al., 2021). Some industries are in decline while others are growing (Glomsrød, Wei, et al., 2021), suggesting that the economic landscape in some locations may look different in the future. As for oil in Norway, it is an important economic resource. Although income from the sector is not attributed to the GRP (Lindholt & Glomsrød, 2017), employment in this sector may have an impact on personal incomes. Oil and gas are by far the main economic activities in northern Russia, although oil production primarily takes place in Khanty-Mansii and gas production primarily in Yamal-Nenets (Glomsrød, Wei, et al., 2021). Mining is also an important economic activity that occurs in number of locations across the Russian North (see: Tiainen, Sairinen, & Sidorenko, 2015).

In addition to the aforementioned industries, mixed economies with customary activities are also widespread across the Arctic. These activities are important, as they help maintain Indigenous cultures and contribute to local economies. More specifically, “land and natural resources, human capital, physical capital, and knowledge are not exchanged in the same way; decisions are made using different processes; and profit is shared based on other principles” (Larsen et al., 2019, p. 689). Here, it could be argued that control of the economy does not lie solely with big corporations. Moreover, participation in mixed economies, as well as access to government transfers can improve the material well-being of northerners (see: Larsen & Huskey, 2010). Indigenous Peoples are also gaining economic power through more formal mechanisms, such as benefit sharing agreements that provide Indigenous communities more say in, and benefit from, economic development (Larsen & Petrov, 2020).

3.3.2. POLITICS

At the circumpolar level, the Arctic countries choose to work together to ensure stability, (see: Exner-Pirot & Murray, 2017), although that stability has recently been challenged with the Arctic Council changing its operations as a result of Russia’s invasion of Ukraine. Nevertheless, the Arctic Council plays an important role in circumpolar cooperation, even though the organization itself is not a form of government and the decisions and agreements made there are implemented through international law or by the eight Arctic countries themselves (see: Loukacheva, 2020). Moreover, the economic and social decisions that directly impact the lives of northerners are made within countries, and so it is important to understand the various political structures that prevail across the circumpolar region.

Federalism is the government structure in North America. This means there is a division of power between the federal, state/provincial/territorial, and municipal levels of government, each with their own sets of responsibilities. Governments are generally able to raise revenue through different types of taxes and fees. The situation for the Canadian territories, however, is different than in the provinces (Poelzer & Wilson, 2014). Little revenue is raised through taxes and “unconditional transfers from the federal government” through the Territorial Formula Financing agreement are responsible for the bulk

of each territory’s gross expenditure base (Yurris, B eland, & Tombe, 2022). Alaska is also different from other American states, as it consists of “autonomous regions or boroughs”, although their government structure does not “challenge the state’s territorial integrity” (Poelzer & Wilson, 2014, p. 190). Thus, each level of government in Alaska and the Canadian territories provides different services for those living in the North.

The government system is different in the Nordic countries than in North America. Notably, regional (county) governments do not necessarily have the same responsibilities that state and territorial governments have in Alaska and northern Canada. Rather, the federal government assumes responsibility for ensuring fairness across the country, while the provision of certain services may be administered by municipal governments (Haveri, 2015; M akinen, 2017; Poelzer & Wilson, 2014). A defining factor of government within this bloc is the Nordic Welfare Model, which was designed to ensure that everyone has access to publicly offered services, while seeking to prevent people from experiencing hardships, although some people may opt for private alternatives (Melin, 2014). This notion of collective responsibility and equality certainly shapes economic outcomes for individuals. As Pareliussen, Hermansen, Andr e, and Causa (2018) explain:

“A number of key institutions, notably collective bargaining, activation policies and wide access to high-quality education, reinforce each other, allowing a compressed wage distribution and extensive redistribution to co-exist with the high employment necessary to fund the extensive public services and transfers” (p. 18).

Although research has shown that there is growing income inequality within many of the Nordic regions (Grunfelder, 2020), “the Nordics have so far been able to adjust their policies in such a way that equality, opportunity and economic efficiency co-exist relatively well compared to the rest of the OECD” (Pareliussen et al., 2018, p. 18). Reducing inequality, therefore, is a policy choice.

Greenland and the Faroe Islands are part of the Nordic regions, although they have different government structures based on their relationship with Denmark. Greenland asserted independence from Denmark with the *Home Rule Act* of 1979 and gained the right to form its own government and control things such as “education, fisheries, environment and health” (Jacobsen, 2020, p. 174). The Faroe Islands gained some independence in 1948 with the *Home Rule Act*. Similar to Greenland, this act identifies Faroese areas of responsibility, including public and health services (Adler-Nissen, 2014; “Home Rule Act of the Faroe Islands,” 1948). Both Greenland and the Faroe Islands receive annual funding from Denmark to administer services (Adler-Nissen, 2014; Gad, 2014).

Russia experienced a brief period of political decentralization following the collapse of the Soviet Union, although this has changed over the past 15 or so years, especially as Putin has sought to gain more authority over the northern regions (Poelzer & Wilson, 2014; Sergunin & Konyshchev, 2019). Centralization means that “regions and municipalities in the existing Russian system of fiscal federalism have *extremely limited authority over revenues and expenditures* and cannot impose new taxes or change the tax base [...], whereas spending priorities are often imposed by the federal government” (Yushkov, 2015, p. 411). However, in 2015 the Russian government created the State Commission on the Arctic Development that “consists of not only the heads of the federal ministries and agencies involved in the Arctic affairs but it also includes the governors of the AZRF regions and presidential envoys to Russia’s five northern federal districts” (Sergunin & Konyshchev, 2019, p. 82). The inclusion of governors indicates more regional representation in northern governance, although how this will affect the provision of public services is not clear, as the ministries involved tend to focus on economic, international, environmental, and security/safety considerations.

Indigenous governments also have a role to play in Arctic politics, and “with the exception of Iceland, all Arctic countries have national level Indigenous organizations that advocate for Indigenous interests within their respective national political systems” (Poelzer & Wilson, 2014, p. 207). However, the structure of these organizations varies across the circumpolar region: “in some cases, such as the Sámi

Parliaments in the Nordic countries and Russia, these organizations are formal political institutions. In other cases, such as the Inuit Tapiriit Kanatami in Canada, they are nongovernmental organizations” (Poelzer & Wilson, 2014, p. 207). Additionally, RAIPON was instrumental in improving Indigenous rights in Russia during the 1990s and 2000s. This relationship soured when RAIPON became critical of the government between 2010 and 2013, although relations began to improve again following an organizational restructuring (Sergunin & Konyshchev, 2019). In addition to government and governance organizations like those just mentioned, Indigenous peoples are gaining more say in the affairs that affect them through co-management structures, particularly in the natural resources sector (Fondahl, Filippova, & Mack, 2015).

3.3.3. IDEOLOGY

Neoliberalism emerged in the 1980s as an ideological and economic response to the Keynesian Welfare State and continues to shape the lives of individuals today. Neoliberalism as an ideology is rooted in the belief in individualism, private property, and free-market economies, and it encourages the economic practices of competition, deregulation, and commodification (Connell, 2010; Harvey, 2005; Thorsen & Lie, 2006). These practices have extended economic reach, since “the most dramatic form of commodification is the privatization of public assets and institutions” (Connell, 2010, p. 23), including but not limited to health and education (see also: Harvey, 2005). A key element of this ideology is the lowering of taxes, which means less money to provide public services, and this has resulted in a shift towards new public management practices that seek to run government services similar to businesses (Connell, 2010). As a result, power has shifted to those at the top of the corporate structure (Grabb, 2007; Harvey, 2005). It is important to remember, however, that neoliberalism operates differently depending on the time and place in which it holds sway (Harvey, 2005).

Both the North American and Nordic countries have experienced the effects of neoliberalism. For example, a study of 13 countries from the OECD, including six in the Arctic, found that spending was reduced between 1995 and 2005 in response to rising national debt.¹⁴ For the Arctic

countries, as a percentage of the GDP, reduction in spending on public services was between 1.2% in Finland and 5.1% in Canada, while reductions in social protection varied between 0.4% in the USA and 5.4% in Denmark (Peters, 2012, p. 212). Overall spending cuts also affected public service employment.

The situation in Russia is quite different. There, neoliberal economic policies started following the collapse of the Soviet Union rather than in the 1980s. Nevertheless, Russia underwent some economic privatization and other economic reforms as a result of loans from the International Monetary Fund and the World Bank. However, many neoliberal reforms were not implemented, some were delayed, and others were adapted to the Russian context. Moreover, while privatization of the market did occur, the government retained control of 40% of the economy in 2008 (Rutland, 2013). The provision of social services by not-for-profit organizations increased in the 2010s as a result of federal legislation, with regional governments taking responsibility for overseeing the process, with varying results (Cook, Iarskaia-Smirnova, & Tarasenko, 2021).

Considering the importance of government-provided services to individuals and families, and the effects of neoliberalism on such services, it is important to include this kind of information when discussing income inequality.

3.4. DISCUSSION

There are a number of factors that shape the size and composition of personal incomes across the circumpolar Arctic and certain connections emerge between: 1) the fiscal burden of individuals and inequality; 2) fiscal policy and income inequality; and 3) demography, economic activity, and their connection to financial outcomes.

3.4.1. FISCAL BURDEN AND INEQUALITY

There are regions where individuals have higher personal incomes per capita than in other regions within the same country, although the gap between regions varies by regional bloc. Generally speaking, the data shows that these regions also have a higher fiscal burden for individuals, seeing that they often pay the most in transfers in comparison to the other regions within their respective countries.¹⁵ How this relates to income equalization, however, depends on whether the data is analyzed as a percentage or a dollar amount. The situations in Canada, Norway, Sweden, Finland, and Russia are discussed below, as they include more than one region or they offer complete data sets for comparison.

With regards to percentages (see Appendix C), the Northwest Territories and the Yukon in Canada, Troms in Norway, Västerbotten in Sweden, Northern Ostrobothnia in Finland, and Yamal-Nenets in Russia have the highest percentage of their total income coming from primary income sources and also pay the most in transfers as a percentage of primary income (Nordland is tied with Troms and Khanty-Mansi is tied with Yamal-Nenets). Yet only the Yukon, Troms, and now Nordland retain the highest percentages of their incomes as disposable incomes. The effect of the transfers or the fiscal burden on the individuals in these regions has an equalizing effect; Norrbotten, Kainuu, and Karelia have the highest percentage of disposable incomes after transfers have been paid.

This changes when the fiscal burden is calculated as a dollar amount (see Appendix B). For instance, Troms, Norrbotten, and Yamal-Nenets all have the highest dollar amount for primary, total, and disposable income, and also pay the most in transfers. In Canada, the Northwest Territories has the highest primary and total incomes and pays the most in transfers, while the Yukon has the highest disposable income per capita, albeit by a few hundred dollars. In Finland, the findings are different: individuals in Northern Ostrobothnia have the highest primary incomes and pay the most in transfers, those in Kainuu have the highest total income, and those in Lapland have the highest disposable income per capita.

¹⁴ The six Arctic countries are Canada, Denmark, Finland, Norway, Sweden, and the USA, and the seven other OECD countries are Austria, Belgium, Germany, France, Italy, Netherlands and the United Kingdom. These countries were selected because they are “most representative of Nordic and Continental European ‘social market economies’ (SMEs) as well as the Anglo-American ‘liberal market economies’ (LMEs) – which are conventionally believed to respond to economic and social pressure through dramatically different public policies” (Peters, 2012, p. 210).

¹⁵ Individuals in Iceland have the highest fiscal burden: 48% of their total income goes to transfers paid. Recall, however, that Iceland is considered a singular region for this study.

What this demonstrates is that regions where individuals have the highest primary and total incomes in a given country are generally the same regions that place the highest fiscal burden on individuals, as they pay the most in transfers. Yet the effectiveness of this on income equality is more readily observable when income composition is presented as percentages rather than in dollar values.

3.4.2. FISCAL POLICY AND INCOME EQUALITY

Fiscal and social policies are often shaped by larger neoliberal ideology, although the consequences for individuals is hard to measure, given that our study focuses on a single year. Moreover, the effects of neoliberalism on government spending on health and social services would be better discussed in the government sector, provided there is data with details on government spending. Our data also does not indicate the value of services provided to individuals and what needs to be paid out of pocket for things like healthcare. Thus, it is difficult to interpret the value of transfers in relation to required services. Nevertheless, we can still discuss political systems and neoliberal ideology and offer some insights into the effects of fiscal policy on income inequality.

In North America, there are clear differences between the USA and Canada with regards to transfers received from, and paid to, different levels of government. On the one hand, Alaskans receive and pay similar amounts of transfers, which consequently has little effect on their disposable income. On the other hand, individuals in northern Canada not only receive more of their income as transfers than Alaskans, they also pay substantially more of their total income as a percentage in transfers, which lowers their disposable income compared to their primary income. The effect of the transfers paid and received in the Canadian North appears to equalize disposable incomes in the Northwest Territories and the Yukon, but maintains the gap between Nunavut and the other regions.

In a federalist system, the provision of social services, including healthcare, are often provided at the subnational level (ex. state/province/territory). Yet many health services are not offered by the government and are often paid for by individuals through private health care plans, with Americans spending more on such plans than Canadians

(Marchildon, Cafaro, & Brown, 2018). This may account for the higher percentages of transfers being paid by individuals in northern Canada than in Alaska.

A unique transfer is provided by the Alaska Permanent Fund (APF), which “receives a percentage of Alaska’s revenue from oil production”, and dividends are paid on an annual basis (Kozminski & Baek, 2017, p. 98). While these payments can have an impact on income inequality and poverty (Kozminski & Baek, 2017), they have not kept pace with inflation and now “represent a smaller percentage of per-capita personal income than during much of the 1990s” (Berman, 2018, p. 162). Unfortunately, the data for Alaska does not indicate how much of the transfers received came from the APF.

The federal structure in North America does not mean that federal governments have no responsibility to improve the health and well-being of individuals, including northerners. For instance, the Canadian federal government operates the Nutrition North Canada food subsidy program to help reduce the astronomically high food prices in numerous locations across the North and improve food security. The program is not without its challenges (Galloway, 2017), however, and it is underpinned by neoliberal regulation of both food providers and consumers (Duhaime, Caron, Lévesque, Garon, & Baribeau, 2019).

As for the Nordic regions, individuals living in Iceland, northern Sweden, and northern Finland generally pay more in transfers than they receive. As such, taxes are an equalizing factor in Norrbotten, Västerbotten, Lapland, and Northern Ostrobothnia, albeit to a lesser extent than in Iceland. Individuals living in northern Norway receive more than they pay, although the reason for this difference is not evident from the data alone. Nevertheless, the data indicates that transfers in the Nordic countries do have a somewhat equalizing effect within and between these countries’ northern regions, which is coherent with the Nordic Welfare Model. As for the Faroe Islands and Greenland, it is difficult to connect the effect of Home Rule and the Nordic Welfare Model to our analysis of personal income, since data on transfers received for individuals is unavailable. Moreover, the effects of Home Rule on government spending would be more clearly demonstrated in the income structure of the government sector.

In northern Russia, individuals in all but one region receive more than they pay; however, the value of the transfers (paid and received) does not necessarily reduce inequality between the regions, as demonstrated by the range of disposable incomes. Our indicators do not reveal very much about the use of not-for-profits in Russia. Nevertheless, we can assume that in regions where individuals do not pay or receive much in transfers, they probably have to pay out of pocket for services, and likely more than in regions where transfers are more prominent. This may suggest that income inequality is more closely linked to economic activity, while the political policy is less prevalent.

3.4.3. DEMOGRAPHY, ECONOMIC ACTIVITY, AND FINANCIAL OUTCOMES

Overall, the data does indicate certain connections between demography and regional economic activity.

As we have seen, population sizes are relatively small in the North (Appendix A), and there are some similarities among regions where a high percentage of Indigenous Peoples live. While most statistical agencies do not employ comparable methods to estimate Indigenous populations (for example, see: Heleniak & Bogoyavlensky, 2014; Young & Bjerregaard, 2019), some estimations can nevertheless be made. In Canada, estimates from 2011 indicate that approximately 86% of the population in Nunavut identified as being Indigenous (primarily Inuit). In Greenland, estimates from 2019 indicate that 91% of the total population is Inuit. In Russia, the 2010 Census indicates that approximately 54% of the population in Sakha and 35% of the population in Chukotka are Indigenous¹⁶ (Young & Bjerregaard, 2019). All these regions also have some extractive industries. When looking at the four regions together, some similarities emerge between Nunavut, Greenland, and Sakha. For example, individuals in Nunavut and Greenland have the lowest disposable incomes in their geographical blocs, while over 22% and 23% of total income in Nunavut and Sakha, respectively, comes from transfers. In contrast, individuals in Chukotka have the second highest disposable income in northern Russia and only 14% of their total income comes from transfers. In terms of customary activities, these are

“frequently necessitated by a number of critical factors including the small size of the local market economy; limited access to full-time, permanent, and well-paying modern-sector jobs; the high costs of doing business in the Arctic; and limited accessibility to markets and resources in general. This also helps explain why transfer income becomes an important source of household income for many northerners” (Larsen & Petrov, 2020, p. 88).

Our data, however, is unable to provide more detailed analyses with regards to income composition based on sex, age, or race and ethnicity, as the data is shown on a per capita basis for each region, nor is it able to determine the significance of customary activities for regional economies.

The primary economic activities in the different regions may also provide insights into regional income composition. For example, extractive resources such as oil and gas are key economic drivers in Alaska, Yamal-Nenets, and Khanty-Mansii and there are some similarities in their income structure. In particular, between 85-90% of the total income in these regions comes from primary income sources, with transfers accounting for the remaining 10-15% of the total income per capita. This is lower than other regions within their respective regional blocs (an exception being Chukotka which is also at 14%). Similarly, transfers paid are between 12-15% of total income per capita. While this is the lowest percentage paid in North America, Khanty-Mansii and Yamal-Nenets pay the highest percentage of their incomes in transfers when compared to the other Russian regions, likely due to higher wages associated with the oil and gas sector. As for disposable incomes in Alaska and Yamal-Nenets, these are the highest within their geographical blocs, while the disposable income in Khanty-Mansii is the fifth highest.

There are also regions where economies have diversified, tourism has flourished, and education levels are high, such as in the Yukon, northern Finland, and northern Sweden. Indeed, levels of tertiary educational attainment are high in these locations and more people are employed in secondary sector jobs than they are in the primary sector (Duhaime et

¹⁶ These percentages are based on the number of “indigenous, numerically small people of the North, Siberia and Far East”, as well as Komi, Komi-Permyak, and Yakut populations living in Sakha and Chukotka. Without the inclusion of the last three populations, the percentage in Sakha would be 4.3% (Young & Bjerregaard, 2019, p. 10).

al., 2021; Jungsberg et al., 2019). While there are some similarities in economic activities, there are also differences in the personal income structures between the Yukon and the Finnish and Swedish regions. In particular, 80% of the total income per capita in the Yukon comes from primary incomes sources, while this number drops to 68% in Kainuu and is only 74% in Västerbotten and Northern Ostrobothnia. Yet, disposable income as a percentage of total income is low in both Västerbotten and Kainuu: 63% in the former and 69% in the latter.

While there are some similarities in income composition (the share of transfers paid, for example), there are substantial differences across the three regional blocs with regards to the share or distribution of total income as transfers paid and received (see Appendix C). If our observations are correct, then our five income variables are influenced by more than just economic activity, but also by politics and ideology.

3.4.4. SUMMARY

National and regional accounts provide data for an entire population, meaning it is possible to identify the components of income by location, but not by sex, race or ethnicity, or age. At best, inferences can be made for some regions that have large Indigenous populations.

Regions in North America display the highest disposable incomes per capita; yet, the data shows that the least income inequality is observed in the Nordic regions, where the value of disposable income per capita is relatively similar across the regions. In part, this appears to be due to the amount of transfers paid which reduces income inequality between regions and is likely the result of policy and ideology, notably the Nordic Welfare System.

In northern Russia, the data shows that the value of primary income varies by region, and this is likely a result of economic activity, with individuals earning the most in oil, gas, and mining regions. As a result, the percentage of primary income received through transfers varies widely from region to region, which increases the observed total income somewhat in many regions.

Hence, it would seem that policy and ideology play an important role in shaping income equality.

3.5. CONCLUSION

This chapter examined the structure and composition of personal income across the circumpolar Arctic and its impact on income inequality. Three key findings emerged from the analysis. First, in all regions, income comes primarily from work and other sources of primary income like investments, rather than from government transfers to individuals.

Second, the amount of income varies both across and within countries. For example, individuals in North America have the highest disposable incomes, followed by individuals in the Nordic countries, and then individuals in Russia. Yet, incomes can vary substantially within regional blocs: as we have seen, Greenlanders earn less than individuals in other Nordic regions, while individuals in Alaska and Yamal-Nenets earn more in North America and Russia, respectively. Regional economic activity is also important for personal economic outcomes. To be sure, regions where economic activities are primarily focused on natural resource extraction have some of the highest disposable incomes, such as Alaska and the Northwest Territories in North America, and Yamal-Nenets, Chukotka, and Magadan in Russia.

Finally, the amount of transfers received and paid also varies, particularly within a country. Indeed, as a percentage of income, less transfers are paid in regions where income values are lower, such as in Russia. For the Nordics, individuals pay the most in transfers as a percentage of income, which is likely related to their social safety net.

Overall, the findings of this multilevel analysis reconfirms that the Arctic economy is diverse, with different outcomes for individuals not only between, but within countries. This is due to the different political, social, and demographic structures that shape the regions (see: Duhaime et al., 2021; Larsen, 2013; Schmidt et al., 2015). This means that innovative approaches to reducing income inequality will likely vary between and within countries and will need to be grounded in a localized understanding of power and economic, political, and ideological systems and structures (see: Grabb, 2007).

GOVERNMENT SECTOR

4.1. INTRODUCTION

There is a connection between the amount a government spends on services and programs for people and income inequality. One large-scale international study on the effect of government spending on income inequality found that under certain conditions “reallocating spending toward social protection and infrastructure is associated with lower income inequality, particularly when it is financed through cuts in defense spending” (Dolumbia & Kinda, 2019, p. 5). National level studies have also found that government transfers play a role in reducing income inequality. In Canada, for example, research has shown that transfers can offset income inequality, but the extent to which they do so depends on individual government programs and who they actually support (Heisz & Murphy, 2016). Considering the extent of income inequality not only amongst the Arctic countries, but within them as well (Duhaime et al., 2017; Duhaime et al., 2021), it is imperative to obtain a better understanding of government spending in the Arctic regions.

4.2. DATA ISSUES PERSIST

In the methodology chapter, we discussed the challenges of obtaining data at the regional level across the circumpolar Arctic. For example, some national statistics agencies provide general government data, but this is only available at the regional level in certain locations; elsewhere, detailed accounts are not provided. Based on available data, the public finance records for the general government in northern Canada, Faroe Islands, Greenland, and Iceland are similar, as shown in Table 4.1. While data is accessible in all regions for many sources of income and revenue, it is not available for all categories, including contributions by residents to social insurance and the amount spent on social benefits in kind.

TABLE 4.1

COMPARABLE GENERAL GOVERNMENT DATA FOR CANADA, FAROE ISLANDS, GREENLAND, AND ICELAND, 2017

	Yukon	Northwest Territories	Nunavut	Faroe Islands	Greenland	Iceland
Revenue						
Gross operating surplus					•	
Withdrawal from quasi-corporations					•	
Sale of goods and services	•	•	•			•
Investment income	•	•	•	•	•	•
Taxes	•	•	•	•	•	•
Taxes on production and imports	•	•	•	•	•	
Taxes on income	•	•	•	•	•	
Contributions to social insurance	•	•	•	•		
Transfers	•	•	•	•	•	
Other income						•
Other capital transfers	•	•	•		•	•
Capital taxes and capital transfers				•		
Expenses						
Compensation of employees				•	•	•
Final expenditure on goods and services	•	•	•			•
Sale of goods and services					•	
Interest	•	•	•	•	•	•
Subsidies	•	•	•	•	•	•
Transfers	•	•	•	•	•	•
Social benefits in kind				•		
Capital transfers	•	•	•			•
Investment grants and capital transfers					•	
Capital expenditures				•		
Non-financial capital accumulation					•	
Other expenses						•

Table 4.2 shows the breakdown of available data for the transfers both received and paid by the government. Data is not available for all categories and for all regions, although some categories are location specific, like transfers from

the EU and the Danish government to Greenland. The data gap identified in both tables limits our understanding of the extent to which governments provide support to both individuals and businesses at the regional level.

TABLE 4.2

COMPARABLE GENERAL GOVERNMENT TRANSFER DATA FOR CANADA, FAROE ISLANDS, GREENLAND, AND ICELAND, 2017

	Yukon	Northwest Territories	Nunavut	Faroe Islands	Greenland	Iceland
Non-Capital Transfers Received						
Other current transfers from households	•	•	•			
Current transfers from NPISH	•	•	•			
Other current transfers from non-residents	•	•	•		•	
From domestic private sector				•		
From rest of world				•	•	
From EU institutions	-	-	-		•	-
From the Danish state	-	-	-		•	-
Total Capital Transfers Received						
Capital transfers from households	•	•	•			
Capital transfers from NPISH	•	•	•			
Capital transfers from business	•	•	•		•	
Other resident sector						•
Non-Capital Transfers Paid						
Current transfers to household	•	•	•	•	•	•
Current transfers to NPISH	•	•	•	•		•
To private non-for-profit institutions					•	
Other domestic transfers				•		
Current transfers to non-residents	•	•	•			
To rest of world				•		•
Capital Transferred Paid						
Capital transfers to households	•	•	•		•	
Capital transfers to NPISH	•	•	•			
Capital transfers to private non-for-profit institutions					•	
Capital transfers to business	•	•	•		•	
Capital transfers to non-residents	•	•	•			
Other resident sector						•

4.3. ADDRESSING THE GAP

The first challenge is identifying what data is comparable. The responsibilities of regional governments are not the same across the circumpolar Arctic, as municipalities in some countries take on a greater role than in others. Moreover, concordances would also need to be made with government data from the Faroe Islands and Greenland. Therefore, a straightforward circumpolar comparison is not possible.

That said, it is not altogether impossible to make international and interregional comparisons. For example, a further research study could:

1. Identify the principal sources of revenue and expenses that could be compared across all regions.
2. Determine which items are currently available at the national, regional, and municipal level, taking into account that these items may be called something different at each level.
3. Establish a contact with the relevant statistical agency(ies) to obtain data that may not be publicly available. For example, perhaps some regional level data could be compiled at a cost.
4. If municipal level data includes the required income sources and expenses, consider obtaining data for all municipalities within a region, as well as relevant county level data.

Due to the current study's time and resource limitations we were not able to implement these suggestions.

CORPORATION SECTOR

5.1. INTRODUCTION

Analysis of the corporation sector is important to understanding the relationship between economic development and income inequality in the circumpolar Arctic. Large development projects do not always benefit local communities, as wealth often flows south (Duhaime, 2004; Huskey et al., 2014), and in some cases, reliance on labour from outside certain regions can place an extra burden on the system as “Fly-in workers consume public goods and services but do not contribute tax dollars to support the costly provision of these services in the north” (Finnegan & Jacobs, 2015, p. 190). That said, there are projects that are economically beneficial to regions, especially when local government and communities are involved in decision making throughout the life of the project (see for example: Kadenic, 2015).

5.2. DATA ISSUES PERSIST

Problematically, and as explained in the methodology chapter, it is not possible to obtain regional accounts data for the corporation sector that would show the value of wages paid to employees and taxes and royalties paid within regions. This is further complicated by the fact that statistics agencies need to ensure that data remains anonymous, which can be difficult in this sector. Therefore, a different approach is required to understand the situation of businesses in the Arctic, and case studies can prove useful.

5.3. ADDRESSING THE GAP

Case studies can take different approaches and help address the data gap. The first type of case could look at a specific industry, such as reindeer herding and husbandry. This is an interesting topic, as herding is a customary economic activity of multiple Indigenous populations. Case studies, for example, could compare the industry across two or more countries, or they could focus on the industry within a certain country or region. For the former, different outcomes in one country compared to another could suggest inequalities that are linked to the structure (ownership) of the industry. For the latter, Finland could be an interesting choice because “anyone living within the area of Finnish reindeer husbandry who is a citizen of the European Union has the right to own reindeer, in contrast to the situation in Norway and Sweden, where only Sámi are legally permitted to own reindeer” (International Centre for Reindeer Husbandry, n.d.). Certainly, if there are differing outcomes for Sámi and non-Sámi owned enterprises, this could suggest structural and social inequalities.

Another industry specific case study could examine the fishing industry. In 2018, the five Arctic littoral countries, the European Union, China, Japan, and South Korea signed the *International Agreement to Prevent Unregulated Fishing in the High Seas of the Central Arctic Ocean*. The purpose of the agreement is to “[prevent] commercial fishing from occurring until adequate scientific information is available to inform decision making in relation to the viability and sustainability of any potential future fishing activities in the agreement area” (Arctic Council, 2020). A case study could thus focus on established fishing grounds of the Arctic littoral countries and Iceland. Other studies could focus on the situation of Indigenous owned businesses compared to non-Indigenous owned in one or more regions, or the relationship between open sea fishing and fish farming.

In both the reindeer and fishing industries, it may be difficult to obtain publicly available business documentation of the various enterprises. If so, these case studies would require the use of interviews and/or surveys, including financial information provided from the businesses themselves.

A second approach could be to examine the situation of specific companies within a sector or industry, and this could be done two ways. First, a case study could focus on a particular enterprise that operates in the North, such as Equinor (Norway). Alternatively, a case study could compare domestic and foreign owned enterprises in a given sector. For instance, Canadian owned Baffinland or Agnico Eagle could be compared to foreign owned De Beers or Rio Tinto in the Canadian mining sector. For either of these options, publicly available documents (e.g. annual reports) could be analyzed to better understand the operations and practices of these businesses in the North, what their finances look like, how many local residents they employ and in what kind of jobs (e.g. management vs labour), and what kind of investments they make in the local communities. Case studies such as these, especially if longitudinal, will be important in identifying inequalities in regions where a specific industry is predominant.

A third option could be a business survey that illustrates the economic landscape in a given territory. Data can be obtained from local businesses, business associations, and regional governments; see, for example (Duhaime & Robichaud, 2010). This research could also highlight a single company within the survey to learn more about its regional contribution, particularly if the organization is the local branch of a national company. If detailed data on the value of local operations is not available, this can be estimated on a number of factors, including production value and prices in the time period. Moreover, if relationships are developed with the company, the value of spending on local operations may be obtained. Mixed methods would be useful; quantitative methods could analyze the numbers and impute values that are created and stay within or exit the region, while qualitative methods such as interviews could be used to substantiate the financial information. This approach would allow the research to go beyond using social accounting matrices (SAM) and create input/output tables that synthesize both sets of data (see: Duhaime & Robichaud, 2010).

For these case studies to be successful, the projects should be grounded in extensive literature reviews to properly situate the study in the breadth of existing literature.

CONCLUSION

6.1. INTRODUCTION

This pilot project constitutes an initial exploration into the connection between income composition for households, governments, and corporations and income inequality in the circumpolar Arctic. In part, the purpose of the project was to not only identify income inequality, but to test the comparability of international statistical data, which proved to be difficult for governments and corporations. Data for the household sector, such as personal income per capita, was easier to obtain and a fuller analysis for this sector was completed. The key findings can be grouped into two themes: methodological findings and findings that emerge from our analysis of the household sector.

6.2. KEY FINDINGS

6.2.1. METHODOLOGICAL

The methodological findings associated with data collection are two-fold. First, it is impossible to conduct the same kind of analysis across the three economic agents/sectors (households, governments, and corporations) at the regional or subnational level. To be sure, regional accounts for the household sector are generally available; however, this is not the case for governments and corporations, as discussed in Chapter 2. While some data is accessible, internationally comparable data is not available for all countries and regions. In part, this is due to different governance systems whereby national governments are responsible for the provision of services in certain regions, while state/territorial governments or municipal governments have that responsibility elsewhere. In contrast to households and governments, regional account

data is not available for corporations for multiple reasons, including the tax location of large companies. Second, although regional account data is available for the household sector, the amount of detail provided by different statistics agencies varies. Generally speaking, data is available for the main indicators analyzed in Chapter 3; however, an internationally comparative microanalysis that delves further into these income components is not possible. The challenge then becomes determining to what extent income inequality can be identified and explained, and how what does exist can be used to inform policy.

6.2.2. HOUSEHOLD SECTOR AND PERSONAL INCOME

The household chapter described the personal income composition per capita across the circumpolar Arctic. The results indicate that there is income inequality between the three regional blocs; in some cases, income inequality exists between countries within the same regional bloc (e.g. Canada and the USA, Greenland and the rest of the Nordic bloc); and finally, income inequality is also found between regions within a single country (e.g. Nunavut and the Yukon, Karelia and Yamal Nenets). In many regions, the effect of transfers received and paid by individuals helps diminish income inequalities between regions within a country. Income inequality is further affected by the strength of local economies, as well as by the political and ideological structures that govern the regions. These findings are important for policy makers, although the ability to reduce income inequality between regions within a country may be affected by government structure and by who determines inequality policies – the federal or the regional governments.

6.3. FUTURE RESEARCH

This pilot project was not without its challenges. As discussed in the chapter on methodology, the amount of detailed data is not the same across the regions, and more nuanced data is not available to provide greater insights into the different economic situations. This raises different challenges for future research.

6.3.1. HOUSEHOLD SECTOR

Access to data for the household sector was certainly greater than that of the government and corporation sectors. However, this was a preliminary pilot project, and we see four avenues for future research in this area. First, this study provides information on a single year, meaning that it does not account for the effects of booms or busts in regional economies. Longitudinal studies would be necessary to understand larger trends and patterns.

Second, research on the cost of living and how it contributes to social and economic inequalities is also necessary. For example, the cost of living is higher in northern Canada, and although disposable incomes are generally higher in the North than the national average, prior research has found that “a household in the North requires 1.46 times the income of a same-sized family in the rural South to attain an equivalent standard of living” (Daley, Burton, & Phipps, 2015, pp. 97-98). These higher costs certainly have an effect on poverty; the same study also found that after adjusting for the cost of living, “31.1% of northern families with children are poor versus 9.9% in the South” (Daley et al., 2015, p. 99). Similar findings are also observed throughout Inuit Nunangat (Duhaimé & Édouard, 2015; Édouard & Duhaimé, 2017). Therefore, future research analysis would do well to consider connecting income to the cost of living in order to determine how much income is spent on necessities such as housing, utilities, food, and so on.

A third area for future research concerns the distribution of wealth in Arctic regions. For example, some studies analyze wealth distribution by quintile (Statistics Canada, 2018), but the data is for Canada as a whole rather than by region. Distribution analyses should also go beyond quintiles and look at how wealth is distributed across different demographic indicators, such as sex, age, and Indigenous identity. This would provide a more detailed understanding of where policy interventions should be targeted.

Finally, national and regional account data does not take customary activities into account and this absence can lead to incomplete understandings of economic activities and income generation in northern regions. Moreover, misunderstandings about the extent of customary activities can have implications for policies on the preservation, conservation, and management of the land and animals involved in these activities (for example, see: Inuit Circumpolar Council et al., 2021).

6.3.2. GOVERNMENT AND CORPORATION SECTORS

Chapters 4 and 5 on the government and corporation sectors identified several possibilities for future research, such as studies at different levels of government and business/industry case studies. As research on income composition in these sectors is likely to adopt approaches that differ from the household sector (especially for the corporation sector), it will be necessary to ensure coherence across the three sectors if we are to develop a portrait of income inequality that is valid for the entire circumpolar region.

6.3.3. CONSIDERATIONS FOR THE WAGE CIRCUMPOLAR PARTNERSHIP

There are also considerations for the future research that will be conducted as part of the WAGE Circumpolar Partnership. In particular, access to data is critical, especially at the regional and local levels. Considering the challenges in accessing comparable regional account data, researchers would do well to establish relationships with national statistics agencies in order to better understand what data is publicly available, what data may need to be custom ordered, and what data does not exist. It will also be essential to fully understand the social, economic, cultural, and political situations in which the Partnership’s research is conducted. As such, collaborating with local and Indigenous partners will be imperative to ensure that the work has meaningful outcomes.

The WAGE Circumpolar Partnership seeks to make a difference in the lives of northerners across the circumpolar region. The Partnership is comprised of researchers, practitioners, Indigenous organizations, and institutions from across the circumpolar Arctic, and this diverse composition of its members should enhance the capacity and quality of the research to come.

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APPENDIX A

TABLE A1

REGIONAL POPULATION AND SIZE

Location	Population	Total Area: Km ²	Population: % of National Population	Total Area: % Of National Area	Population density per Km ²
USA	325 147 121	9 147 600	100.00	100.00	35.54
Alaska	739 786	1 477 954	0.23	16.16	0.50
Canada	36 543 321	9 984 670	100.00	100.00	3.66
Northwest Territories	44 908	1 346 106	0.12	13.48	0.03
Nunavut	37 559	2 093 190	0.10	20.96	0.02
Yukon	39 690	482 443	0.11	4.83	0.08
Denmark	5 781 190	42 934	100.00	100.00	134.65
Faroe Islands	50 481	1 396	0.87	3.25	36.16
Greenland	55 877	2 166 086	0.97	5045.15	0.03
Iceland	348 450	103 000	100.00	100.00	3.38
Norway	5 295 619	385 203	100.00	100.00	13.75
Finnmark	76 167	48 631	1.44	12.62	1.57
Nordland	243 335	38 475	4.60	9.99	6.32
Troms	166 499	25 877	3.14	6.72	6.43
Sweden	10 120 242	447 435	100.00	100.00	22.62
Norrbottnen	251 295	105 208	2.48	23.51	2.39
Västerbotten	268 465	58 875	2.65	13.16	4.56
Finland	5 513 130	338 452	100.00	100.00	16.29
Kainuu	73 959	22 688	1.34	6.70	3.26
Lapland	179 223	98 983	3.25	29.25	1.81
Northern Ostrobothnia	411 856	39 150	7.47	11.57	10.52
Russia	144 478 050	17 125 000	100.00	100.00	8.44
Arkhangelsk	1 111 031	413 100	0.77	0.77	2.69
Chukotka	49 348	721 500	0.03	4.21	0.07
Karelia	622 500	180 500	0.43	1.05	3.45
Khanty-Mansii	1 659 435	534 800	1.15	3.12	3.10
Komi	840 873	416 800	0.58	2.43	2.02
Krasnoyarsk	2 876 497	2 366 800	1.99	13.82	1.22
Magadan	144 091	462 500	0.10	2.70	0.31
Murmansk	753 557	144 900	0.52	0.85	5.20
Nenets Autonomous	43 997	176 800	0.03	1.03	0.25
Sakha	964 300	3 083 500	0.67	18.01	0.31
Yamal-Nenets	540 013	769 300	0.37	4.49	0.70

Note 1: Percentages and population density calculated by the author.

Note 2: The population of Denmark does not include the Faroe Islands or Greenland.

APPENDIX B

TABLE B1

PERSONAL INCOME AND COMPOSITION PER CAPITA, 2017 (USD PPP)^{1,2}

Location	Primary Income 3,4,5,6,7,8, 9	Total Transfers Received 10, 11, 12	Total Income 13	Total Transfers Paid 14	Disposable Income 15,16
USA	47 108	8 768	55 875	10 277	45 598
Alaska	51 933	9 016	60 948	9 197	51 751
Canada	30 011	7 702	37 713	12 550	25 163
Northwest Territories	41 895	10 727	52 622	20 613	32 009
Nunavut	29 345	8 250	37 595	14 426	23 168
Yukon	39 363	9 690	49 053	16 409	32 644
Denmark	28 208	11 063	39 271	17 541	21 730
Faroe Islands ¹⁷			29 870	9 721	20 149
Greenland ¹⁷			23 319	7 429	15 891
Iceland	33 114	6 359	39 474	18 921	20 553
Norway	23 482	8 270	31 752	8 719	23 033
Finnmark	21 017	8 778	29 795	7 096	22 699
Nordland	20 668	9 285	29 953	7 758	22 195
Troms	22 500	8 612	31 112	8 077	23 035
Sweden	28 016	8 545	36 560	13 531	23 029
Norrbottnen	25 776	9 608	35 384	12 874	22 510
Västerbottnen	24 979	8 741	33 720	12 534	21 186
Finland	25 896	8 928	34 824	12 034	22 791
Kainuu	21 599	9 935	31 534	9 835	21 699
Lapland	22 764	9 691	32 455	10 428	22 027
Northern Ostrobothnia	22 824	8 223	31 047	10 526	20 523
Russia	9 678	2 820	12 497	1 240	11 258
Arkhangelsk	9 342	3 446	12 788	1 173	11 614
Chukotka	19 723	3 344	23 067	2 443	20 624
Karelia	6 868	4 181	11 049	842	10 207
Khanty-Mansii	14 804	2 681	17 485	2 036	15 449
Komi	9 219	4 010	13 229	1 207	12 022
Krasnoyarsk	8 781	2 788	11 568	1 055	10 513
Magadan	18 341	4 064	22 404	2 195	20 209
Murmansk	12 518	3 881	16 398	1 626	14 772
Nenets Autonomous	15 747	5 459	21 206	2 086	19 121
Sakha	12 191	3 691	15 882	1 487	14 395
Yamal-Nenets	23 486	2 501	25 988	2 989	22 999

Note 1: Data from the household and not-for-profit institutions serving household (NPISH) sectors of the System of National Accounts (SNA). However, NPISH data is only available for Canada and the regions, nationally for Denmark, and Iceland.

Note 2: Data for Norway and the northern regions is from 2016.

Note 3: Primary income is the sum of compensation of employees, mixed income, operating surplus, net property income, and other income. The values in this column are provided by the national statistics agencies, with the exception of the USA and Alaska. In this case, the author manually calculated the value.

Note 4: Compensation of employees is a component of primary income. In the household sector this reflects the compensation received by resident households in a territory. However, this data is not available for the USA and Alaska, and compensation of employees from production (resident producers) was substituted.

Note 5: Statistics Norway notes that compensation of employees does “not include employers’ social contributions”.

Note 6: Operating surplus and mixed income are components of primary income. Their values are net, meaning they are the value “after deduction of consumption of fixed capital” (World Bank, 2009, p. 58).

Note 7: Mixed income includes, among other things, income from self-employment. For the USA and Alaska, this is called proprietors’ income, although it is defined a little differently than mixed income in the SNAs. Notably, it includes income from unincorporated businesses due to the NIPA’s definition of corporations. As such, certain income is included here for the USA and Alaska, whereas it would be included in the corporate sectors in the SNA.

Note 8: Property income is another component of primary income and it is also a net value. It was calculated by the author by subtracting property income paid from property income received. The USA does not provide values for property income paid; therefore, their values are gross property income. For Canada, the NPISH sector only provides values for investment income received, not paid. Thus, for Canada the value is a combination of the net value for households and gross for NPISH.

Note 9: Primary income also includes a category for other income, the value for which is provided for Canada and Norway. For Canada, the value is for sales of goods and services in the NPISH sector. For Norway, the regional account identifies negative values for other income (net) but does not explain what they are for.

Note 10: Total transfers received is the sum of social benefits other than social transfers in kind (STiK), other current transfers received, and other transfers.

Note 11: The USA and Alaska include social transfers in kind (STiK) as part of their social benefits in total transfers received. This is unlike the other regions which separate them as per the SNA (see: McCulla, Moses and Moulton, 2015, p. 12).

Note 12: Only the USA and Russia have entries for other transfers in their total transfers received. For the USA and Alaska, this is an ‘adjustment for residence’, and for Russia and its regions it is for social benefits received from individuals and organizations.

Note 13: Total income is the sum of primary income and total transfers received and was calculated manually by the author for the USA, Canada, Iceland, Norway, and Russia.

Note 14: Total transfers paid is the amount of transfers paid by individuals/households, and includes net social contributions paid, taxes paid, other transfers paid, and other expenses.

Note 15: Disposable income is the amount of income individuals retain once they have paid their transfers.

Note 16: Statistics Norway data also includes a correction for the financial intermediation services indirectly measured (FISIM) in their SNA sequence to calculate the household disposable income. However, we do not include this value in our calculation because it is a correction and does not influence the in-pocket income of households. Additionally, other countries do not explicitly address FISIM in their sequences. For reference, these values are: nationally 1 086; Finnmark 692; Nordland 877; Troms 892 (USD PPP per capita).

Note 17: Due to data limitations, the official values are for individuals 15 years of age and older. The author did manual calculations to account for the entire population.

APPENDIX C

TABLE C1

PERSONAL INCOME AND COMPOSITION PER CAPITA, 2017 (%)¹

Location	Primary Income	Total Transfers Received	Total Income	Total Transfers Paid	Disposable Income
USA	84	16	100	18	82
Alaska	85	15	100	15	85
Canada	80	20	100	33	67
Northwest Territories	80	20	100	39	61
Nunavut	78	22	100	38	62
Yukon	80	20	100	33	67
Denmark	72	28	100	45	55
Faroe Islands			100	33	67
Greenland			100	32	68
Iceland	84	16	100	48	52
Norway	74	26	100	27	73
Finnmark	71	29	100	24	76
Nordland	69	31	100	26	74
Troms	72	28	100	26	74
Sweden	77	23	100	37	63
Norrbottnen	73	27	100	36	64
Västerbotten	74	26	100	37	63
Finland	74	26	100	35	65
Kainuu	68	32	100	31	69
Lapland	70	30	100	32	68
Northern Ostrobothnia	74	26	100	34	66
Russia	77	23	100	10	90
Arkhangelsk	73	27	100	9	91
Chukotka	86	14	100	11	89
Karelia	62	38	100	8	92
Khanty-Mansii	85	15	100	12	88
Komi	70	30	100	9	91
Krasnoyarsk	76	24	100	9	91
Magadan	82	18	100	10	90
Murmansk	76	24	100	10	90
Nenets Autonomous	74	26	100	10	90
Sakha	77	23	100	9	91
Yamal-Nenets	90	10	100	12	88

Note 1: see notes for Appendix B Table B1 for detailed information on the data.

APPENDIX D

TABLE D1

INDIVIDUAL TRANSFERS RECEIVED PER CAPITA, 2017 (USD PPP)¹

Location	Social Benefits Other Than Social Transfers in Kind ²	Other Current Transfers Received	Other Transfers	Total Transfers Received
USA	8 759		8	8,768
Alaska	9 261		-245	9 016
Canada	1 377	6 325		7 702
Northwest Territories	1 150	9 577		10 727
Nunavut	390	7 860		8 250
Yukon	1 321	8 370		9 690
Denmark	9 091	1 972		11 063
Faroe Islands				
Greenland				
Iceland	5 565	794		6 359
Norway	8 270			8 270
Finmark	8 778			8 778
Nordland	9 285			9 285
Troms	8 612			8 612
Sweden	7 737	808		8 545
Norrbottnen	8 782	826		9 608
Västerbotten	7 941	800		8 741
Finland	8 470	458		8 928
Kainuu	9 417	518		9 935
Lapland	9 163	529		9 691
Northern Ostrobothnia	7 762	460		8 223
Russia	2 559		261	2 820
Arkhangelsk	3 206		240	3 446
Chukotka	3 156		188	3 344
Karelia	3 789		392	4 181
Khanty-Mansii	2 511		171	2 681
Komi	3 796		213	4 010
Krasnoyarsk	2 624		163	2 788
Magadan	3 720		344	4 064
Murmansk	3 562		319	3 881
Nenets Autonomous	5 300		159	5 459
Sakha	3 313		378	3 691
Yamal-Nenets	2 323		178	2 501

Note 1: See notes for Appendix B table B1 for detailed information on the data.

Note 2: The social benefits other than social transfers in kind for Canada and the regions were originally part of other current transfers received on the Statistics Canada table. However, these values were moved to this column to better align with the SNA.

TABLE D2

INDIVIDUAL TRANSFERS PAID PER CAPITA, 2017 (USD PPP)¹

Location	Taxes Paid 2,3	Net Social Contributions Paid 4	Other Transfers Paid	Other Expenses Paid 5	Total Transfers Paid 6
USA	6 286	3 991			10 277
Alaska	5 043	4 154			9 197
Canada	5 669	2 058	3 755	1 067	12 550
Northwest Territories	7 191	3 621	8 255	1 545	20 613
Nunavut	3 940	2 093	6 608	1 785	14 426
Yukon	4 738	2 719	6 816	2 136	16 409
Denmark	12 443	3 789	1 309		17 541
Faroe Islands	9 721				9 721
Greenland	7 429				7 429
Iceland	7 336	10 937	648		18 921
Norway	8 719				8 719
Finnmark	7 096				7 096
Nordland	7 758				7 758
Troms	8 077				8 077
Sweden	7 934	4 681	916		13 531
Norrbottnen	7 545	4 491	839		12 874
Västerbotten	7 313	4 353	869		12 534
Finland	5 813	5 452	769		12 034
Kainuu	4 637	4 363	835		9 835
Lapland	4 956	4 653	820		10 428
Northern Ostrobothnia	4 944	4 812	771		10 526
Russia					1 240
Arkhangelsk					1 173
Chukotka					2 443
Karelia					842
Khanty-Mansii					2 036
Komi					1 207
Krasnoyarsk					1 055
Magadan					2 195
Murmansk					1 626
Nenets Autonomous					2 086
Sakha					1 487
Yamal-Nenets					2 989

Note 1: See notes for Appendix B table B1 for detailed information on the data.

Note 2: Canadian personal income tax is calculated as part of current transfers paid to general governments rather than as a line item, as per the SNA. As such, the total amount of current transfers paid to general governments was removed from the current transfers and the taxes portion (including items such as fees, licences, etc.) was placed in the taxes paid columns, while the portion for social insurance plans is in the net social contributions column.

Note 3: Statistics Norway notes that these values do “not include employers’ social contributions”.

Note 4: The values for contributions to social insurance plans for Canada were removed from the current transfers paid value provided by Statistics Canada and moved into the net social contributions paid column to align with the SNA.

Note 5: The other expenses paid column includes expenses that do not align with any of the other expenses. In particular, it includes gross expenditure on goods and services for the NPISH sector in Canada.

Note 6: The sum of transfers paid in Russia and the regions are here accounted for in the total transfers paid column, as the original data source did not provide a detailed breakdown.

CANADA RESEARCH CHAIR
ON COMPARATIVE ABORIGINAL CONDITION
Université Laval
Pavillon Charles-De Koninck
1030, avenue des sciences humaines
Québec (Québec) G1V 0A6
CANADA

418 656-7596
chaireconditionautochtone@fss.ulaval.ca
chaireconditionautochtone.fss.ulaval.ca