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Getting the Small Things Right:

How data suppression and provincial reporting distort Northern realities

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Author's calculations are based on data available at the time of publication and are therefore subject to change.

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About the Author **James Cuddy**



James Cuddy is Northern Policy Institute's in-house Economist. He has over 5 years of experience conducting research on various economic issues, with a particular focus on labour market and socioeconomic analysis and regional and urban economics. As a skilled leader with a strong communications background, he helps to expand and implement the Institute's research priorities and assist in quality control.

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Introduction

It's been over five years since Statistics Canada replaced the mandatory long-form census with the voluntary National Household Survey (NHS). This move resulted in a survey that lacked the ability to produce sufficiently high quality socioeconomic data that many rely upon, particularly for conducting analyses at the local level. Without it, researchers, analysts, planners and policymakers lack the fundamental data that is necessary to make informed decisions. In the absence of the census, it is arguable, that Northern Ontario has been left in the dark. Deprived of valuable information, it has led some researchers to question whether the data being returned is even reliable enough to be used in official studies (CBC News, 2015). To get to the root of this issue and offer up suggestions to remedy the region's data drought, this briefing note has two objectives. First, it assesses how the 2011 National Household Survey created a gap in data availability in Northern Ontario and why bringing back the mandatory long-form census is so important. Second, this briefing note identifies another equally important data gap, a set of regional economic accounts for Northern Ontario, but there is still much to be done to make this a reality.

Background

Besides the data deprivation brought on by the NHS, it also produced estimates that were problematic for making comparisons to other censuses (Statistics Canada 2011) and reduced the quality of other important survey data that Statistics Canada publishes regularly (Canadian Economics Association 2015). In addition, the NHS was more expensive for Statistics Canada to implement (Grant 2015). The ripple effects of the NHS' limitations are widespread, and these shortcomings were reoccurring talking points in the lead up to the federal election in October 2015.

All of these issues stem from the fact that non-response rates were much higher as a result of the NHS being a voluntary survey, therefore resulting in higher levels of data that Statistics Canada had to suppress.¹ But, not only were non-responses higher, they were systemically higher for certain demographic subsets of the population, such as low income and high income households (Canadian Economics Association 2015), as well as for individuals with particular religious beliefs and cultural heritages (Woolley 2013). This skewed the data, creating many of the problems mentioned above, and more.²

In the case of Northern Ontario, many of the skewed non-responses were also systematically higher for certain geographic subsets of the population, which led to higher levels of suppression in the region.

Data Limitations of the National Household Survey

Recently, Tomasz Mrozewski from Laurentian University spoke about these suppressed areas in the province, showing that there are 145 suppressed and 84 partly suppressed Census Subdivisions (CSDs) out of a total of 574 in Ontario (CBC News, 2016). These CSDs cover the land mass of Ontario and are defined as a municipality or a municipal equivalent (i.e., Aboriginal Reserve/Settlement or Unincorporated Area); or in other words, 'communities.'

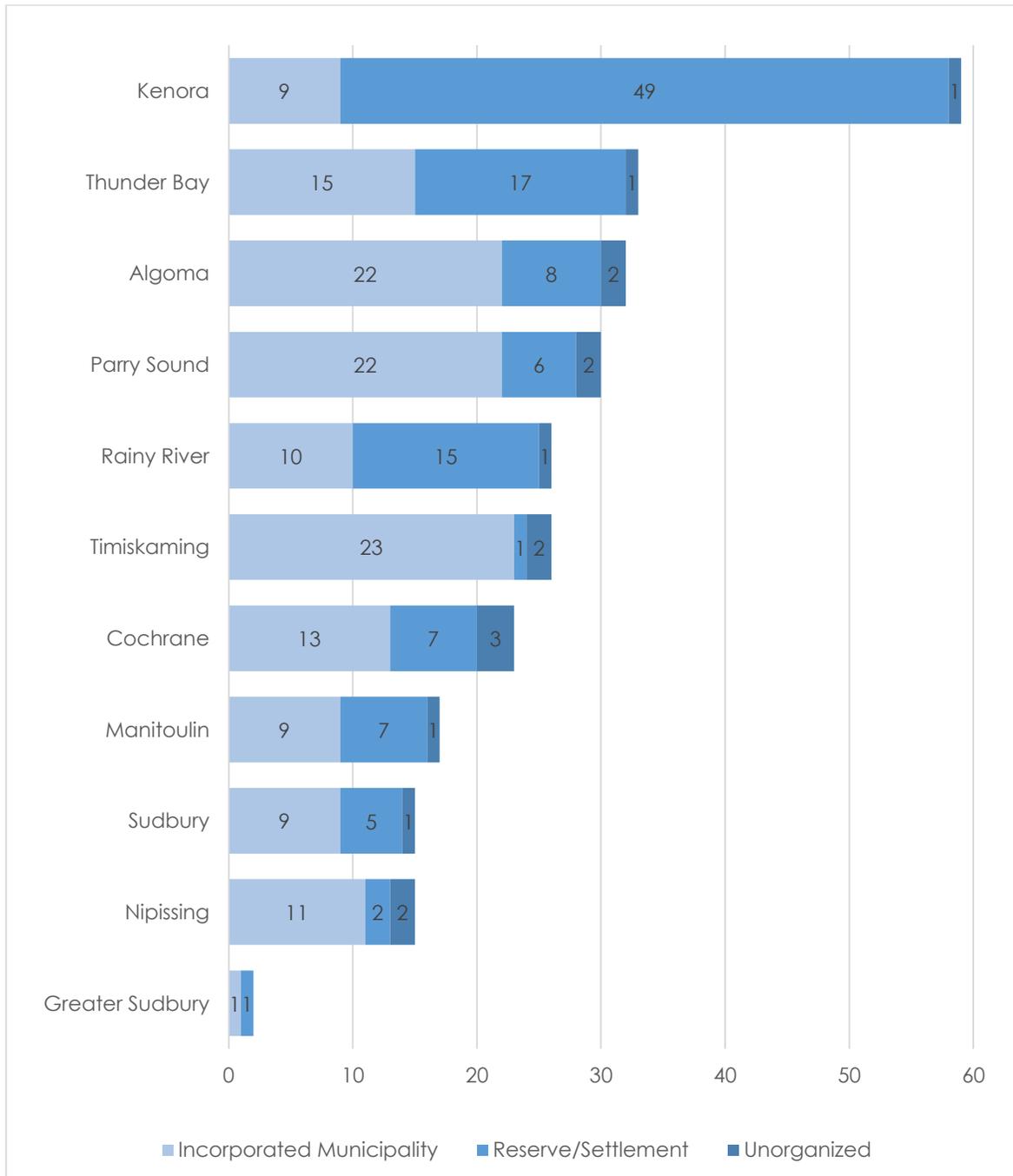
In the case of Northern Ontario, there are 278 CSDs, of which 144 are 'Incorporated Municipalities,' 118 are 'Aboriginal Reserves/Settlements' and 16 are defined as 'Unorganized Areas.' For reference, Figure 1 breaks down these CSDs by the 11 districts in Northern Ontario. The Kenora district has the largest number of CSDs, given the large number of Aboriginal Reserves/Settlements in that particular area.



¹ When 50 percent of the population of a specific subset does not respond to the NHS, then Statistics Canada will suppress the information for that subset.

² See Canadian Economics Association (2015) for a more fulsome discussion.

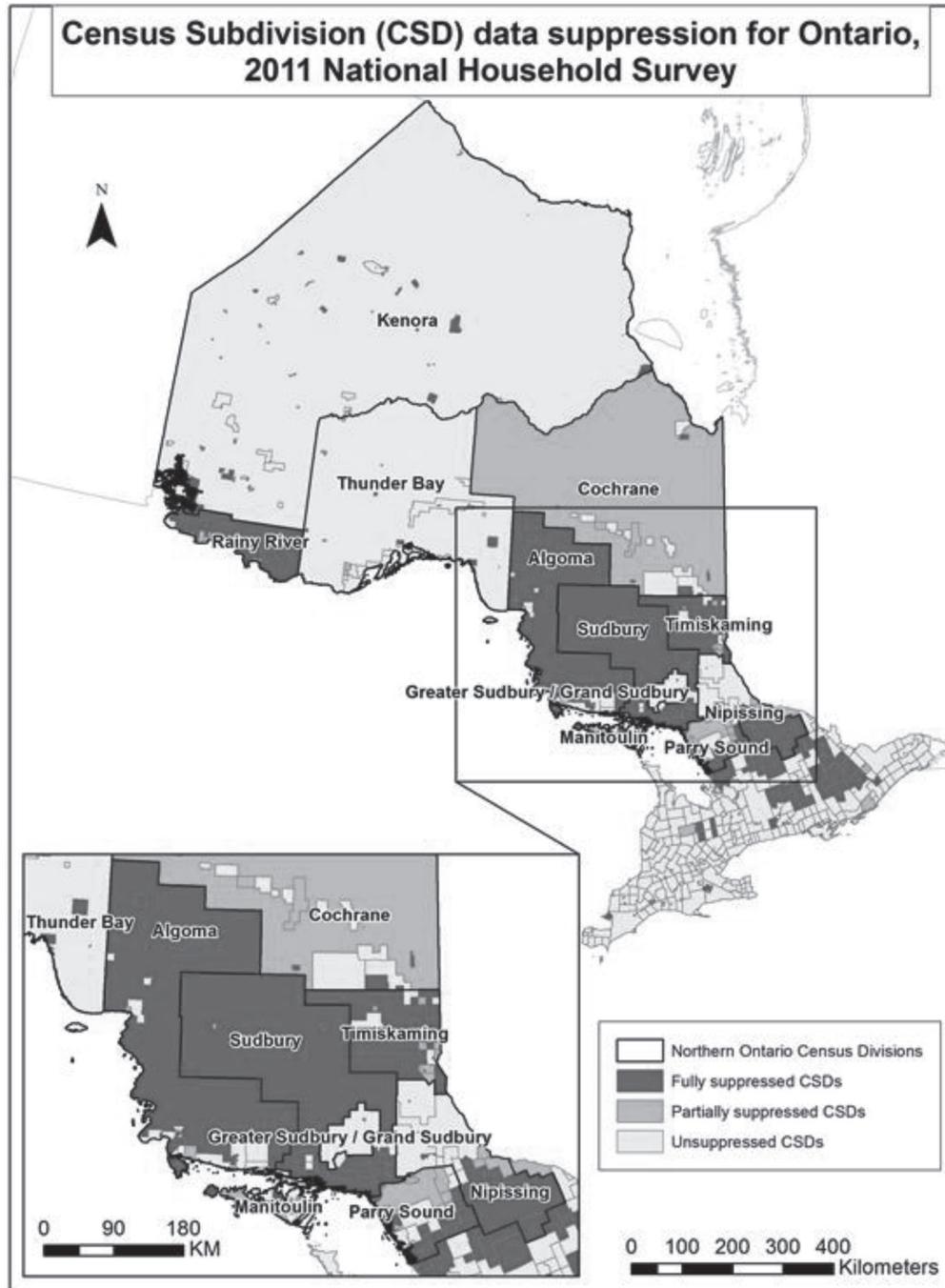
Figure 1. Census Subdivisions in Northern Ontario, by type and district



Source: Author's calculations based on Statistics Canada, National Household Survey, 2011.

Of the 278 CSDs in Northern Ontario, 107 of them were suppressed in the 2011 NHS (Map 1). In other words, 38 percent of communities in Northern Ontario do not have any NHS data. By comparison, this is only true for 13 percent of the communities in Southern Ontario. Another way to look at it: of the 145 suppressed CSDs in Ontario, 74 percent of them are in Northern Ontario, with the remaining 26 percent in the south. The NHS has done a disservice to everyone, but Northern Ontario was disproportionately exposed to the adverse effects when compared with the rest of the province.

Map 1. Census Subdivision data suppression for Ontario, 2011 National Household Survey



Source: Courtesy of Tomasz Mrozewski, JND Library, Laurentian University, 2016.

In Northern Ontario, NHS data suppression ranges across all community types. Table 1 shows that, in Northern Ontario, 63 percent of Unorganized Areas are suppressed (10 CSDs), followed by 40 percent of Aboriginal Reserves/Settlements (47 CSDs) and 35 percent of Incorporated Municipalities (50 CSDs). In addition, municipalities located in Northern Ontario were almost twice as likely to be suppressed as municipalities in Southern Ontario, while Aboriginal communities in the North were over five times as likely to be suppressed as their counterparts to the south.

Table 1. Summary table of suppressed Census Subdivisions in Ontario

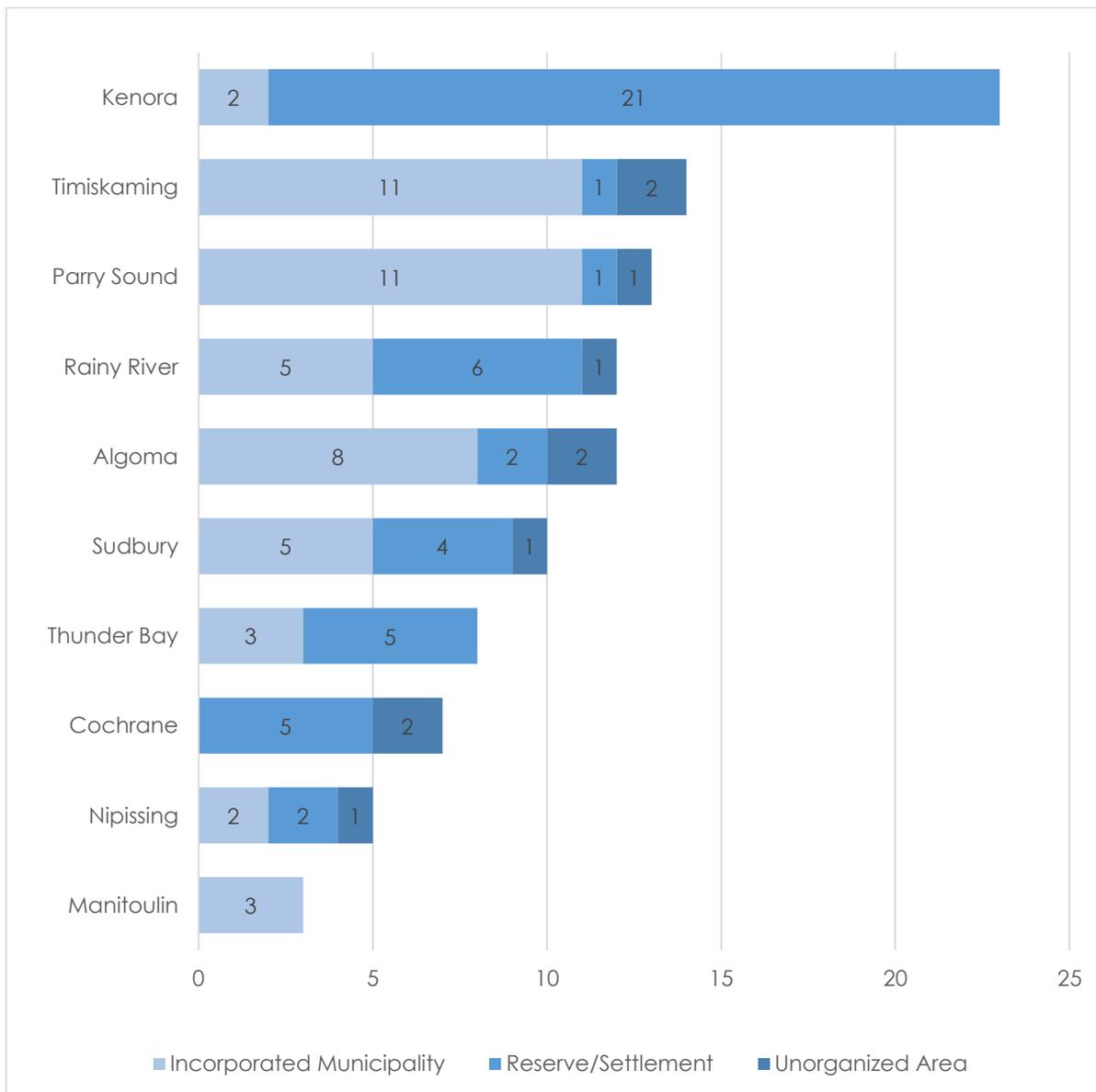
	Ontario	Northern Ontario	Southern Ontario
Number of CSDs, by type			
Number of CSDs	574	278	296
Number of Incorporated Municipalities	414	144	270
Number of Aboriginal Reserves/Settlements	144	118	26
Number of Unorganized Areas	16	16	0
Number of suppressed CSDs, by type			
All CSD types	145	107	38
Incorporated Municipalities	80	50	30
Aboriginal Reserves/Settlements	55	47	8
Unorganized Areas	10	10	0
What percent of CSDs in the region are suppressed (by type)?			
All CSD types	25%	38%	13%
Incorporated Municipalities	19%	35%	11%
Aboriginal Reserves/Settlements	38%	40%	31%
Unorganized Areas	63%	63%	0%
What percent of suppressed CSDs make up all suppressed CSDs in Ontario?			
All CSD types	100%	74%	26%
Incorporated Municipalities	100%	63%	38%
Aboriginal Reserves/Settlements	100%	85%	15%
Unorganized Areas	100%	100%	0%

Source: Author's calculations based on National Household Survey, 2011.

Drilling down even further (Figure 2), the majority of suppressed communities are Aboriginal Reserves/Settlements in the Kenora district, as well as many Incorporated Municipalities in the Timiskaming, Parry Sound and Algoma districts. While data suppression in the province was more likely to occur in Northern Ontario, it was also prevalent across nearly all districts and all types of communities in the North.

Municipalities with thousands of people, such as Perry and Seguin in Parry Sound district; Marathon and Manitouwadge in the Thunder Bay district; and Sables-Spanish Rivers and French River in the Sudbury district had even been suppressed. These six communities alone make up over 17,000 people in Northern Ontario, not to mention the other 101 communities in the region that are also suppressed.

Figure 2. Suppressed Census Subdivisions in Northern Ontario, by type and district



Source: Author's calculations based on Statistics Canada, National Household Survey, 2011.

Consequently, the 2011 NHS left Northern Ontario with a lot of unanswered questions. For example, the unemployment rate in Nipigon was suppressed, as was the average income in Englehart and the number of immigrants who live in Killarney. As one economist explained, "it's like driving with a blindfold on" (McKenna 2015). It is impossible to implement sound public policy, if Northern Ontario can't identify the challenges it is being confronted with.

Filling a Data Gap in Northern Ontario

Bringing back the mandatory long-form census is a win for the North, as it will significantly enhance the availability of community-level data. However, there still remains another data gap in Northern Ontario that goes beyond the National Household Survey. Creating a set of regional economic accounts is equally as important for understanding economic growth, particularly since Northern Ontario is fundamentally different from the rest of the province in a myriad of ways.

The industrial and occupational structure of employment in the region is largely skewed towards the public sector and primary industries. Communities within Northern Ontario are less dense, aging quicker, and have very different demographic make-ups as compared to the South. Governance in this section of the province is largely at the helm of decision-makers outside of the region. These, and many other associated issues, are well-known in the North, and are largely responsible for decades-old rumblings about seceding from the province (Moore, 2016). But there is an easier and more feasible solution, and it stems from data.

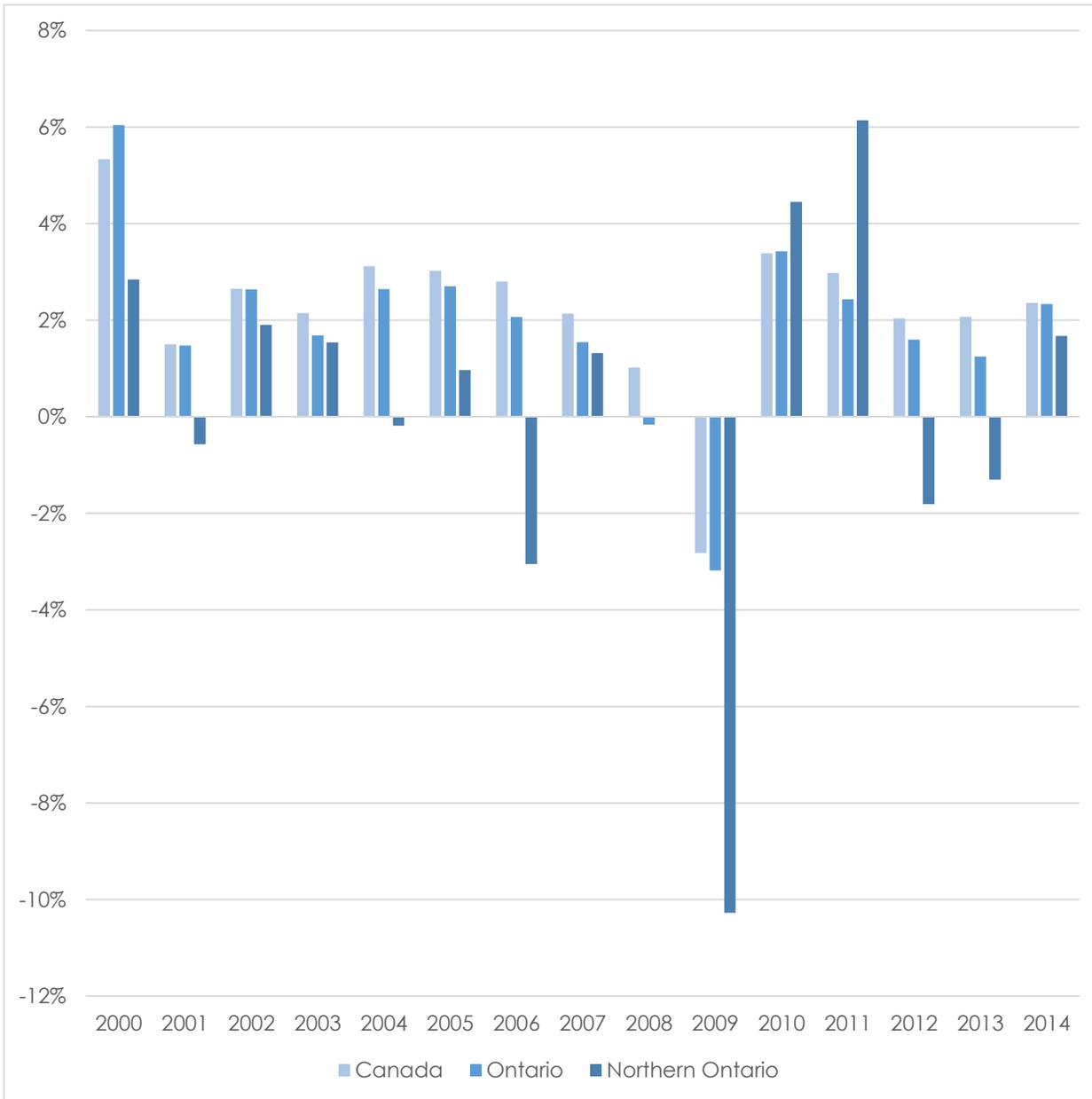
Every province in Canada, including the three territories, have a set of 'Economic Accounts' which are produced by Statistics Canada. These economic accounts include a vast amount of important information, including income- and expenditure-based Gross Domestic Product (GDP); local, provincial and federal government revenues and expenditures; taxation including direct transfers to government and taxes on production and imports; government transfers to individuals including subsidies and capital transfers to businesses; and many other fundamental economic measures (Statistics Canada 2015). This information is necessary both for understanding the challenges that Northern Ontario faces, as well as for implementing sound public policies.

While the National Household Survey had temporarily created a gap in socio-economic data for the North, the lack of a set of regional economic accounts in Northern Ontario has permanently left the region unable to identify other important economic trends and characteristics. By not having a set of economic accounts for Northern Ontario, it is implicitly assumed that economic dynamics in the region are moving at the same rate as the rest of the province.

However, to show that this is not the case, Figure 3 plots the year-over-year percentage change in national and provincial GDP against estimated regional GDP in Northern Ontario.³ It is evident that the changes in Northern Ontario's GDP are very different from the rest of the province. The only period in the past decade and a half that Ontario experienced negative GDP growth from the year prior was during the 2008-09 recession. During the same period, Northern Ontario experienced year-over-year negative growth in six of the last fifteen years.

3 Regional GDP for Northern Ontario is estimated using a Conference Board of Canada methodology (Rai and Jyot, 2013).

Figure 3. National, provincial and regional GDP (year-over-year percent change), 2000 to 2014



Source: Author's calculations based on Conference Board of Canada methodology (Rai and Jyot, 2013).

Regional Gross Domestic Product is one of many fundamental economic indicators that could be formally monitored in a set of economic accounts for Northern Ontario. In doing so, decision-makers will no longer have to assume that Northern Ontario is on the same trajectory as the rest of the province and no longer will provincial-level data be used a proxy for Northern Ontario. It is imperative that Northern Ontario removes the blindfold and begins to have a conversation about creating a set of 'Northern Economic Accounts' that will allow the region to formally and quantitatively monitor key regional economic indicators that are necessary for implementing informed public policy. Northern Ontario need not secede from the province, rather Northern Ontario should secede from Ontario's set of Economic Accounts.

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About Northern Policy Institute

Northern Policy Institute is Northern Ontario's independent think tank. We perform research, collect and disseminate evidence, and identify policy opportunities to support the growth of sustainable Northern Communities. Our operations are located in Thunder Bay and Sudbury. We seek to enhance Northern Ontario's capacity to take the lead position on socio-economic policy that impacts Northern Ontario, Ontario, and Canada as a whole.

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