

Examining the Effectiveness of INAC Funding

by Marcus Tsao

(4597412)

Major Paper presented to the
Department of Economics of the University of Ottawa
in partial fulfillment of the requirements of the M.A. Degree
Supervisor: Professor Abel Brodeur

ECO 6999

Ottawa, Ontario
August 2017

Examining the Effectiveness of INAC Funding

A Regression Discontinuity Analysis of First Nations Socioeconomic Outcomes

Marcus Tsao

Abstract

The Aboriginal population in Canada performs significantly below the national average in socioeconomic measures such as education, employment, and income. Indigenous and Northern Affairs Canada spent \$5.6 billion in 2006 and \$8.4 billion in 2015 towards improving these factors. This paper examines the relationship between INAC funding and socioeconomic outcomes using a regression discontinuity design (RDD). I utilize the border between two geographical zones, with First Nations bands located above 50 degrees latitude receiving more funding than First Nations bands below. Observations were categorized along two metrics: (i) within 50km, 100km, or 150km from the boundary, and (ii) divided into 200km or 400km segments along the boundary. On average, First Nations bands above 50° latitude receive \$6,400,153 and bands below 50° latitude receive \$4,583,365. The results show that there is no significant relationship between INAC funding level and individual income level, high-school attainment rate, unemployment rate and number of households requiring minor repairs.

Introduction

As of the 2011 National Household Survey (NHS), 1,400,685 people identified as Aboriginal, making up 4.3% of the Canadian population. The population of Aboriginal people increased by 20.1% between 2006 and 2011, while growth rate of non-Aboriginals was 5.2% (Statistics

Canada, 2013). The Aboriginal population is young, large, and growing fast; making it seem like a strong advantage for the Canadian economy. The reality; however, is a far dimmer picture.

In 2011, fewer than half of individuals aged 25-64 had a post-secondary qualification, compared to over two-thirds of non-Aboriginal peoples in Canada. The median income for Aboriginal individuals was about 26% lower than for non-Aboriginals. Aboriginal people were significantly less likely to be employed. (Statistics Canada, 2013).

Clearly, the Aboriginal population in Canada fares far worse than the general population across a broad range of socio-economic factors. It is from this dismaying reality that the Indigenous and Northern Affairs Canada (INAC) Department gains its mandate. INAC's mission is to improve the situation for Indigenous and northern peoples and communities. The department supports Indigenous peoples in improving social well-being, economic outcomes, health, sustainability, and social and political inclusion. As of 2015, the annual budget available to INAC to achieve these goals was \$8.4 billion (INAC, 2015).

The purpose of this paper is to measure the effectiveness of INAC funding by comparing socioeconomic outcomes between First Nations communities. I conduct a regression discontinuity design (RDD) analysis by taking advantage of a geographical policy boundary. RDD analysis is commonly applied in the literature to determine the effect of policies on socioeconomic outcomes. Researchers have applied this technique towards health and education outcomes (Ludwig & Miller, 2007), employment outcomes (Caliendo et al., 2013) as well as income outcomes (Pan, 2012).

As part of its funding formula, which determines the level of funding each First Nations band receives, INAC separates bands along various geographical characteristics. One of the characteristics used is latitude. Bands located between 45 degrees and 50 degrees latitude receive

less funding than bands located between 50 degrees and 55 degrees latitude. Examining bands that are located close to the boundary between these two groups allows for a regression discontinuity analysis since only the treatment variable of INAC funding should change, while other factors vary smoothly at the boundary.

The socioeconomic outcomes considered in this paper were collected by the National Household Survey and Census. The results show that although INAC funding is significantly higher for the treatment group, there is not a significant relationship with educational attainment or individual income level. I also do not find a significant relationship between INAC funding and unemployment or the number of households requiring minor repairs.

This study contributes to the literature since a null or negative result regarding the relationship between INAC funding and our outcomes measures might indicate that current policy strategies are ineffective. At the very least, the findings of this paper suggest that further study is necessary on the effectiveness of government funding to First Nations communities, especially using larger sample sizes of micro data.

This study also contributes to an ample body of literature uncovering the causes, outlining the disparities, measuring the potential benefits of improvements, and promoting policy solutions towards Aboriginal outcomes. Feir (2013) focuses on the enduring damage of residential schooling on the Aboriginal population. Hossein & Lamb (2012) investigate the how education, health status, and social capital are related to Aboriginal disparities. Richard, Vining and Weimer (2010) examine academic performance differences, and Lamb (2013) looks at earning inequalities. Calver (2015) predicts the benefit of closing the gaps between Aboriginal and non-Aboriginal outcomes for Canadian employment, GDP and productivity. However, there

is a dearth of literature that evaluates the current policy of government funding transfers to self-governing First Nations councils.

The remainder of this paper will be organized as follows. First, the available literature pertaining to this study will be reviewed. The model, data and econometric technique will be discussed, along with the variables of interest. Finally, the empirical results will be analysed and explained in order to draw conclusions and provide recommendations.

Literature Review

Socioeconomic Outcomes for Aboriginal Peoples

As discussed earlier, the current state of the average Aboriginal person in Canada is rather disappointing. Literature highlighting the socio-demographic and economic profiles for Aboriginal people finds that educational characteristics as well as employment are significantly worse for Aboriginals than non-Aboriginals (George & Kuhn, 1994; Goldmann, 2012; Lamb 2013; O’Gorman & Pandley 2015).

The picture, however, is not completely bleak. A recent study has found that although Aboriginal people face significantly poorer socio-economic expectations, improvements have been occurring. Goldmann (2012) finds that, using 2006 Census data, completion rates for educational attainment have improved over time.

Education

Beyond acknowledging the fact that Aboriginal people in Canada face considerable hurdles, a great deal of literature exists delves into the why and how of these disparities. Richards, Vining and Weimer (2010) look at academic performance among Aboriginal children. They find that,

unsurprisingly, quality of schooling plays a large part in whether or not Aboriginal children perform well. In addition, this study also reveals that culturally sensitive education for Aboriginals results in both significantly positive and negative impacts on different aspects of performance.

O’Gorman and Pandey (2015) study factors that influence educational attainment. Out of the factors they consider, the authors find that educational attainment is negatively related to being taught Aboriginal language and being in areas that speak Aboriginal languages. Their findings suggest that English language proficiency support is needed. O’Gorman and Pandey only found one variable that was positively related with educational attainment, the indicator of being taught Aboriginal culture and history.

Calver (2015) takes a different perspective on education and calculates the potential benefit of closing the education gap. He concludes that if the education gap were eliminated, the Canadian growth rate of labour productivity could increase by 0.03% over the 2011-2031 period and growth rate of employment by 0.02%. Hence, closing the gap would increase the Canadian GDP by \$261 billion between 2011 and 2031.

Employment and Income

Employment and income are also crucial when examining the state of Aboriginal communities. Hossain and Lamb (2012) investigate the factors that influence employment levels as well as income levels for Aboriginal people. As discussed above, education and employment are intimately related and as such they, along with health status and social capital are studied. They find support for the assertion that human capital, reflected by educational attainment and health

status, is positively related to income. Social capital, measured through questionnaire responses, is also significantly positively related to income.

Pendakur and Pendakur (2011) found that among Aboriginal people, how one defines their Aboriginal identity is closely related to their income. Registered Indians were the worst off, self-reported Aboriginals fared better, and best were individuals simply with Aboriginal ancestry. However, even the most successful Aboriginal people were worse off than non-Aboriginal minorities.

Resource Rents and Community Wellbeing

Aboriginal communities have been acquiring substantial property rights that account for large swaths of natural resources (Saku, 2002). By examining the income that communities can collect through property rights, we can gain insight into the effects of INAC funding as well. Both these sources of income are similar in that they are managed by First Nations governments. Vining and Richards (2016) analysed the relationship between resource rent and a Community Well-Being Index. The authors find a positive and significant relationship between rent and well-being; however, the outcomes were less impactful than expected. Communities that achieved higher well-being results were found to have better governance than those with lower results.

INAC Background

Indigenous and Northern Affairs Canada

Indigenous and Northern Affairs Canada can trace its roots back to the Royal Proclamation of 1763. This document was instrumental in setting out the fundamental elements in the relationship

between First Nations people and the Crown. The proclamation set out the basis of treaty-making in Canada and also led to the role of INAC's precursor, the Indian Department, as the primary intermediary between First Nations and Canada (Alam Choudhury, 1997).

As its name suggests, INAC is separated into two main focuses: Indigenous people and Northern Affairs. The core mission of INAC is to improve the lives of Indigenous and northern peoples and their communities. The department works towards this goal through three approaches: social well-being and economic prosperity, improving communities, and creating more political, social and economic inclusiveness (INAC, 2017a). As an intermediary for the Government of Canada and First Nations, INAC is responsible for implementing programs and services to achieve these goals. The department provides support for education, housing, community infrastructure and social assistance to Aboriginal communities. One of the most important avenues by which INAC provides support is through transfer payments to First Nations.

INAC aims to help Aboriginal communities maximize their economic development potential through funding for entrepreneurship programs, opportunity readiness programs, lands and economic development programs, and strategic partnership indicatives (INAC, 2017b). Similarly, INAC aims to improve the quality of education in Aboriginal communities by funding programs such as the New Paths for Education Program (INAC, 2017c). INAC also provides funding in order to “improve reserve housing conditions, reduce overcrowding and increase health and safety” (INAC, 2017d).

Data

INAC Funding Data

In order to determine the financial health of funding recipients as well as observe how much funding is used for what purposes, the INAC requires that bands provide annual Audited Financial Statements. These statements are audited by an independent and qualified auditor. Most importantly, for the purposes of this paper, all recipients of funding must include a Schedule of Federal Government Funding that accounts for funds directly received from all federal government departments. The main sources of federal funding are INAC funding, Health Canada funding, and CMHC funding.

Financial statements are available in PDF form on the INAC website for free and were compiled into a spreadsheet for analysis. Statements from fiscal years 2005/2006 and 2010/2011 were selected. 532 First Nations Bands provided financial data in fiscal year 2005/2006 and 476 First Nations Bands provided usable financial data in 2010/2011. Some financial statements were omitted as they were not available online and some were omitted due to the uploaded documents being unreadable or the necessary INAC funding details omitted.

Geographic Data

In order to reflect the geographical differences between bands across Canada and the different needs that result, INAC characterises bands along a number of geographical factors. These factors are used to determine the amount of funding a band receives. Bands that are more remote receive greater funding, and similarly, bands located further north receive greater funding. The area (hectares) of each band also determines the amount of funding.

Each First Nations band is assigned an 'Environmental Zone' based on its latitudinal position. The zones start at Zone A for bands located between 45° and 50° latitude, through to

Zone F for bands located between 65° and 70° latitude. This paper focuses on the difference between Zone B and Zone C, along 50° latitude.

First Nations bands are also given a Remoteness Classification by INAC. This classification groups bands into four Zones. Zone 1 accounts for First Nations located within 50km of a service centre, Zone 2 for First Nations 50-350km from a service centre, and Zone 3 for First Nations further than 350km from a service centre. First Nations bands in Zone 1 through 3 are accessible by road. Zone 4 accounts for bands that are only accessible by air, rail or boat access. A service centre is the nearest community that has access to government services, banks and suppliers. This nearest community would have supplies, materials and equipment, skilled and semi-skilled labour and at least one financial institution. This nearest community should also have provincial and federal services available. The further that a community is from a service centre, the larger the amount of funding it receives from INAC.

Census/National Household Survey (NHS) Data

In 2011, every household in Canada was asked to complete a short form Census. One in three households were asked to complete a long form National Household Survey. First Nations on reserves were also included in the census. Rather than voluntary self reporting, canvassers were sent to First Nations to complete the forms. The canvassers oversaw the mandatory short form Census and asked the household whether they would complete the NHS and completed it at the same time if the household agreed.

A total of 36 Indian reserves and Indian Settlements were ‘incompletely enumerated’ in the NHS. Of these settlements, 23 did not permit NHS enumeration or enumeration was

interrupted before it could be finished. 13 settlements could not be enumerated due to natural events (in this case forest fires).

The data of some communities was suppressed depending on their Global Non Response Rate (GNR). The GNR is a combined measure of the percentage of households that did not complete the survey as well as missing information on the returned surveys. The data from communities with a GNR of 50% was suppressed by Statistics Canada. Communities with populations below 40 were also suppressed for confidentiality reasons. In 2011, 573 reserve communities and 46 Inuit communities had their data published.

The NHS includes data on demographic and socioeconomic measures. The topics of interest for this paper which are covered in the NHS are population, education, income, household and dwelling characteristics, and employment. The measure of population of interest is total adult population on reserve. The number of high school graduates is the educational measure of interest. Average individual earned income (not including government transfers) is the income measure considered. The number of households requiring minor repairs is included as a measurement of the overall state of repair of the community. Unemployment rate is included as an outcome measure.

Model

I use a regression discontinuity approach to investigate the effects of INAC funding. Bands are considered treated if they are in Environmental Zone B and not treated if they are in Environmental Zone C. The border between the zones creates a two dimensional threshold along latitude. Discontinuity is measured using the following simple linear regression:

$$Y_{ib} = \alpha + \gamma Treatment + X_i' \beta + \delta_b + \varepsilon_{ib},$$

where Y_{ib} is the outcome variable of interest for observation i (First Nations Band), Treatment is equal to 0 if the band is located in Environmental Zone C and 1 if it is in Environmental Zone B. X_i is a vector of covariates that includes $\ln(\text{population})$, $\ln(\text{land mass area})$, and remoteness classification. δ_b is a set of boundary segment fixed effects that indicate which of the segments along the boundary each band is located. I follow the recommendations of Bertrand et al. (2004) and compute standard errors clustered at the band-level.

The RD approach used in this paper requires the identifying assumption that variables other than the treatment vary smoothly at the boundary. Population, size, and other factors should be continuous at the boundary. I test the validity of this assumption by regressing the treatment variable on the relevant factors. The results will be null if the assumptions hold.

Table I provides the summary statistics for the relevant variables for this study. We notice that there is large variance between bands with respect to size and funding as well as individual income. We also notice that for Average Individual Income and Average Earned Individual Income we have significantly fewer observations available from the National Household Survey.

Results

INAC Funding

In this section, I first check whether First Nations bands in Environmental Zone C receive more INAC Funding than Bands in Zone B. Table II presents the results. Panel A shows the estimates for Bands divided into 200km wide segments along the boundary. The results suggest that INAC Funding is 28.5% greater and significant at the 10% level for Environmental Zone C Bands as

compared to Zone B Bands for Bands <100km from the boundary. At <150km from the boundary, the results are positive and significant at the 1% level for INAC Funding.

Panel B of Table II shows estimates for Bands divided into 400km wide segments along the boundary. For bands <100km from the boundary, the difference in INAC Funding is positive and significant at the 5% level. For bands <150km from the boundary, the difference in INAC Funding is positive and significant at the 1% level. The estimates range from 33% to 38%.

Overall, the findings suggest that First Nations bands in Environmental Zone C receive significantly more INAC Funding than Bands in Zone B.

Identification Assumption

Table II, columns 4, 5 and 6, establish the identification assumption. The area (hectares) of the Band is not significant at the 10% level for the same distance from the boundary. Therefore, at <100km from the boundary, the identification assumption holds. On the other hand, the estimate is positive and significant at the 5% level for area. This result fails to hold the identification assumption.

Panel B of Table II presents estimates for Bands divided 400km wide segments along the boundary. The findings suggest that area is not significantly different for Environmental Zone C and Zone B Bands when Bands are divided into 400km wide segments, upholding the identification assumption. For bands <150km from the boundary, area is also not significant, supporting the identification assumption.

Without controls, the identification assumption would require land area not to systematically differ across the boundary; however, in practice I control for this in my main specifications.

Main Results

Table III presents the main regression results along different geographical classifications. Panel A represents observations grouped into 200km segments along the boundary while Panel B represents 400km segments. These segments were created for this study in order to ensure that observations were nearby in proximity and sufficiently similar. I regressed along two sizes of segments in order to test the effect of increasing the distance between observations. The boundary was split into 26 segments 200km wide and 13 segments 400km wide and regressions were performed once for each size of segment.

Columns (1) – (3) of Table III examine NHS data on education for First Nations. The dependent variable is the natural log of high school graduates. The estimates are not significant at the 1% level for either 200km or 400km wide segments. The results are also not significant for observations further from the boundary. The sign of the regression results is negative for <50km and <100km distances from the boundary and positive for bands <150km from the boundary.

In columns (4) – (6), the dependent variable is the natural log of households requiring minor repairs. The estimates are not significant at the 10% level for either classification of segment, nor any distance from the boundary. The regression results are all positive in sign, which is again a counterintuitive.

Unemployment results are shown in columns (7) to (9). The results are not significant at the 10% level for either classification segment, nor any distance from the boundary. The sign of the regression coefficient is negative for bands <100km from the border.

Finally, columns (10) - (12) present the results for Average Individual Earned Income. The estimates are not significant at the 10% level for either classification segment, nor any distance from the boundary.

Across the board, the regression results indicate that INAC funding has no effect on the socioeconomic outcomes tested. Around the boundary I have examined, increased funding does not have a marked effect on improving outcomes on this margin.

Conclusion

This paper uses a RDD analysis to determine the effectiveness of INAC funding towards the department's mandate of improving the socioeconomic situation for First Nations communities. I find that there is no statistically significant relationship between more funding and education attainment, unemployment, income and state of housing. These results remain not significant as observations further and further away from the boundary are considered, and as larger boundary segments are applied.

Further investigation is needed in addition to the results of this paper. The socioeconomic data available for analysis at the time of this study was limited to Band level observations. This considerably weakened the power of the regression results. Future studies would be improved if micro-level data was obtained.

This study also focused on one fiscal year of financial data with individual observations being tabulated into a spreadsheet from PDF format. Further studies should compile a panel dataset that uses multiple years along First Nations Bands. Such a broader dataset would increase the number of available observations and potentially increase the power of the regressions.

Funding was also treated as a homogeneous factor. Instead, additional studies could separate the different recipients of funding.

Although the results of this study do not support the conclusion of INAC funding being an effective tool for improving First Nations Communities, it is clear that broader and more in depth investigation is necessary.

Table I
Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
INAC Funding FY (2005/2006)	467	6,027,851	7,720,473	30,337	75,400,000
Adult Population (2011)	415	512.88	671.63	25	6,205
Hectares	493	4,431.86	9,282.05	2.6	134,292.90
Unemployment Rate (2011)	415	23.84	13.76	0	100
Highschool Graduates (2011)	415	99.04	158.3	0	1,915
Households Requiring Minor Repairs (2011)	415	61.57	73.64	0	620
Average Individual Income (2011)	298	19,889.74	6,702.50	8,848	64,344
Average Earned Individual Income (2011)	298	24,165.50	6,350.51	11,962	64,832

Table II
Identification Assumption Checks

Sample Within:	Dependent Variables					
	Log INAC Fnding (2005/6)			Log Hectares		
	<50km of Bound. (1)	<100km of Bound. (2)	<150km of Bound. (3)	<50km of Bound. (4)	<100km of Bound. (5)	<150km of Bound. (6)
Panel A. 200km Segments Along Boundary						
<i>Env. Zone C</i>	0.21 (0.235)	0.285* (0.160)	0.386*** (0.145)	0.201 (0.455)	0.561 (0.375)	0.685** (0.346)
<i>R-sq</i>	0.855	0.733	0.72	0.668	0.537	0.552
Panel B. 400km Segments Along Boundary						
<i>Env. Zone C</i>	0.19 (0.187)	0.332** (0.150)	0.383*** (0.129)	-0.225 (0.471)	0.31 (0.359)	0.441 (0.317)
<i>R-sq</i>	0.801	0.707	0.699	0.573	0.487	0.506
<i>Boundary F.E.s</i>	yes	yes	yes	yes	yes	yes
<i>Controls</i>	complete	complete	complete	partial	partial	partial
<i>Observations</i>	49	112	144	52	124	157

Complete controls consist of log(Population), log(Area), and Remoteness Classification.

Partial controls consist of of log(Population), and Remoteness Classification.

Standard Errors were clustered at the band level and are displayed in parentheses.

Significance at the *10%, **5%, ***1% levels

Table III
Socioeconomic Outcomes

Sample Within:	Dependant Variable											
	Log Highschool Graduates (2011)			Log Households Requiring Minor Repairs (2011)			Log Unemployment Rate (2011)			Log Ind. Earned Income (2011)		
	<50km of Bound. (1)	<100km of Bound. (2)	<150km of Bound. (3)	<50km of Bound. (4)	<100km of Bound. (5)	<150km of Bound. (6)	<50km of Bound. (7)	<100km of Bound. (8)	<150km of Bound. (9)	<50km of Bound. (10)	<100km of Bound. (11)	<150km of Bound. (12)
Panel A. 200km Segments Along Boundary												
<i>Env. Zone C</i>	-0.116	-0.005	0.008	0.145	0.099	0.16	0.158	-0.018	0.003	-0.015	-0.023	0.046
	(0.167)	(0.123)	(0.108)	(0.321)	(0.158)	(0.148)	(0.52)	(0.247)	(0.223)	(0.144)	(0.066)	(0.066)
<i>R-sq</i>	0.901	0.859	0.862	0.738	0.697	0.693	0.392	0.188	0.148	0.695	0.475	0.27
Panel B. 400km Segments Along Boundary												
<i>Env. Zone C</i>	-0.031	-0.051	-0.014	0.014	0.034	0.154	0.533	0.075	-0.014	0.004	-0.02	0.048
	(0.112)	(0.110)	(0.096)	(0.291)	(0.146)	(0.138)	(0.375)	(0.237)	(0.205)	(0.107)	(0.069)	(0.062)
<i>R-sq</i>	0.885	0.847	0.847	0.723	0.677	0.677	0.307	0.134	0.118	0.531	0.348	0.197
<i>Boundary F.E.s</i>	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
<i>Controls</i>	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
<i>Observations</i>	52	124	157	52	124	157	52	124	157	24	68	87

On average, bands <150km from the boundary received \$5,201,946 in Environmental Zone C and \$3,882,014 in Environmental Zone B.

On average, bands <100km from the boundary received \$4,564,779 in Environmental Zone C and \$3,925,053 in Environmental Zone B.

On average, bands <50km from the boundary received \$4,292,447 in Environmental Zone C and \$2,823,276 in Environmental Zone B.

Controls consist of log(Population), log(Area), and Remoteness Classification.

Standard Errors were clustered at the band level and are displayed in parentheses.

Significance at the *10%, **5%, ***1% levels

Citations

- Alam Choudhury, M. (1997). The concept and measurement of social wellbeing: The case of Canadian Native Indians. *International Journal of Social Economics*, 24(11), 1256-1289.
- Bertrand, M., Duflo, E., Mullainathan, S. et al.: (2004), How Much Should we Trust Differences-in-Differences Estimates?, *Quarterly Journal of Economics* 119(1), 249-275.
- Caliendo, M., Tatsiramos, K., & Uhlendorff, A. (2013). Benefit duration, unemployment duration and job match quality: A regression-discontinuity approach. *Journal of Applied Econometrics*, 28(4), 604-627.
- Calver, M. (2015). Closing the Aboriginal Education Gap in Canada: The Impact on Employment, GDP, and Labour Productivity. *International Productivity Monitor*, (28), 27.
- Dickson, M. and C. Harmon (2011) “Economic Returns to Education: What We Know, What We Don’t Know, and Where We Are Going— Some Brief Pointers,” *Economics of Education Review*, Vol. 30, No. 6, pp. 1118-1122.
- Feir, D. L. (2013). Residential schooling and sources of Aboriginal disparity in Canada.
- George, P., & Kuhn, P. (1994). The size and structure of native-white wage differentials in Canada. *Canadian Journal of Economics*, 20-42.
- Goldmann, G. (2012). In Kulcsar L. J., Curtis K. J., eds (Eds.), The aboriginal people of Canada: A rural perspective. *International Handbooks of Population*, vol. 3. New York and Heidelberg: Springer.

- Hossain, B., & Lamb, L. (2012). The impact of human and social capital on Aboriginal employment income in Canada. *Economic Papers: A journal of applied economics and policy*, 31(4), 440-450.
- INAC. (2017a) About Indigenous and Northern Affairs Canada. Retrieve from:
<https://www.aadnc-aandc.gc.ca/eng/1100100010023/1100100010027>
- INAC. (2017b) Land and Economic Development. Retrieve from:
<https://www.aadnc-aandc.gc.ca/eng/1100100032790/1100100032794>
- INAC. (2017c) Kindergarten to grade 12 education. Retrieve from:
<https://www.aadnc-aandc.gc.ca/eng/1100100033676/1100100033677>
- INAC. (2017d) First Nations Housing. Retrieve from:
<https://www.aadnc-aandc.gc.ca/eng/1100100010715/1100100010719>
- Lamb, D. (2013). Earnings inequality among Aboriginal groups in Canada. *Journal of Labor Research*, 34(2), 224-240.
- Lamb, D. (2014). Aboriginal Early School Leavers On- and Off-Reserve: An Empirical Analysis. *Canadian Public Policy/Analyse de politiques* 40(2):156–65
- Ludwig, J., & Miller, D. L. (2007). Does head start improve children's life chances? evidence from a regression discontinuity design. *Quarterly Journal of Economics*, 122(1), 159-208.
- O'Gorman, M., & Pandey, M. (2015). Explaining Low High School Attainment in Northern Aboriginal Communities: An Analysis of the Aboriginal Peoples' Surveys. *Canadian Public Policy*, 41(4), 297-308.
- Pan, Y. (2012). The impact of legal status on immigrants' earnings and human capital: Evidence from the IRCA 1986. *Journal of Labor Research*, 33(2), 119-142.

Pendakur, K., & Pendakur, R. (2011). Aboriginal income disparity in Canada. *Canadian Public Policy*, 37(1), 61-83.

Richards, J. G., Vining, A. R., & Weimer, D. L. (2010). Aboriginal performance on standardized tests: Evidence and analysis from provincial schools in British Columbia. *Policy Studies Journal*, 38(1), 47-67.

Saku, J. C. (2002). Modern land claim agreements and northern Canadian Aboriginal communities. *World Development*, 30(1), 141-151.

Statistics Canada. (2013). National Household Survey: Aboriginal Peoples – Aboriginal Population Profile, *National Household Survey, 2011, National Household Survey year 2011, Census*. Statistics Canada Catalogue no 99-011-XWE2011007

Vining, A. R., & Richards, J. (2016). Indigenous economic development in Canada: Confronting principal-agent and principal–principal problems to reduce resource rent dissipation. *Resources Policy*, 49, 358-367.