



Poverty Alleviation and Population Inclusiveness Analysis in Canada (Case Study of Indigenous People of Canada)

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CHAPTER 1

INTRODUCTION

The Indigenous people of Canada are referred to as the First Nation or Aboriginal people of Canada. Their history can be traced as back as AD 100. The Aboriginal people as commonly referred were largely hunters in the early days. There are three categories of indigenous people in Canada: Inuit, Metis, and First Nation. The Inuit primarily inhabit the northern region of Canada, and their hometown is Inuit Nunangat of the Arctic region of Canada. The Metis people are mixed with European and indigenous ancestry and mainly inhabit Canada's Prairie and Ontario regions, with others settling in other parts of Canada. The First Nation people were the original inhabitants of the land that is now Canada, occupying south territories of Arctic Canada.

The early encounters between indigenous people and the European trans-trader explorers were not that great in the sixteenth and seventeenth centuries. This followed the arrival of the French explorers. The early Europeans who came to Canada established colonies in Canada. Through the technique of assimilation or extinction, the European colonizers attempted to force Aboriginal people to adopt European ways (Jason et al., 2012). The colonization of Aboriginal people by the Europeans came with maltreatment, and forceful conditions like, denial of the right to vote, forcible relocation and confinement of land, and assimilation of Aboriginal kids into non-Aboriginal communities like “residential schools” This early European regime in the Aboriginal communities escalated with a lot of resistance by the Aboriginal people which compounded the social and economic problems of Aboriginal people. With colonization and the European settlement, the traditional indigenous ways of life were forever altered. The colonial practices and policies such as the Indian Act rule of 1878, passed a system, reserve, and residential schools, that sought to control and assimilate indigenous people. These have had ongoing impacts on generations of Indigenous people of Canada.

Over the years efforts have been made by the government of Canada to reconcile and address these challenges and pains faced by the Aboriginal communities in Canada. In 1985, the government of Canada introduced Bill C-31 to address and amend the Indian Act to conform with gender equality under the Canadian Charter of Rights and Freedom. As part of a lasting effort by the government of Canada to bring recognition to Aboriginal people, the Royal Commission on Aboriginal People was established in 1991. The purpose of this commission is to “investigate” the evolution of relationships among Aboriginal people, the Canadian government, and the society as a whole (Indian and Northern Affairs Canada, 1996).

In 2008, the government publicly apologized for the inhuman treatment of children in the Indian Residential schools in indigenous communities which remains a sad chapter in Canadian history. The government of Canada established the Truth and Reconciliation Commission (TRC) in 2008 primarily to promote healing, educate, listen, and make recommendations on the Indian Residential School system experience and legacy (Christian Aboriginal and Infrastructure, 2015)

The government of Canada has injected funds and resources as part of an ongoing reconciliation move to advance education, health, social, and economic programs within the Indigenous (Inuit, Metis, and First Nations) communities across Canada. The government of Canada has committed to improving the economic and social development of Indigenous communities across Canada. We can not discuss “reconciliation”



without talking about how well people are fed, possess access, and live in a healthy environment, which connects with a society free of violent discrimination, with tolerable levels of equality, where the sick receive proper medical care and people do not have to sleep on the sidewalks. In short, most of us would insist that the “minimal” requirement for a “developed” nation is that physical quality of life must be high and be so uniform, rather than being restricted to an incongruously affluent minority (Debraj Ray, 1998).

This research, from a socio-economic development point of view, will answer what development means and relate it to performance, finding variables that correlate well with the multifaceted process and results of development inputs from the Government of Canada's poverty alleviation funding and investment programmes between 2008 and 2025, with emphasis on the outcomes of 2020 to 2025. This research will examine the impacts of Canada's government funding and investments in advancing development and alleviating poverty within the indigenous (Inuit, Metis, and First Nations) population, limited to input variables used as my scope. Are there more visible characteristics of economic underdevelopment regarding poverty? Most people would say that the removal of poverty is the fundamental goal of economic development (Debraj Ray, 1998). It is generally accepted that a community or nation is not well off economically and socially until it gets rid of its “poverty.” Let us now go ahead and examine data regarding the poverty alleviation measures and performance within the Indigenous population of Canada

CHAPTER 2

LITERATURE REVIEW

Economic Development Viewpoint of Poverty Alleviation

Economics views poverty from conceptual, absolute, or relative viewpoints. The conceptual view addresses poverty from the notion of the “poverty line” which is a critical threshold of income consumption or more generally access to goods and services below which individuals are declared to be poor (Debraj Ray, 1998). The poverty line represents minimum levels of “acceptance” to economic participation in a given society, community, or nation. On the other hand, from an absolute view, poverty can be viewed as not meeting the “adequate” needs of people, like food, housing, health care, schools, infrastructure, and other socio-economic needs. When the adequacy of these needs is lacking, depending on the variation of what is considered “adequate” in the eye of the observer, then there is poverty in that given society or nation which most times is measured by the “income per capita” of a given population within a community in relationship with their standard of living and quality of life. On the other hand, a relative viewpoint of poverty alleviation examines how well alleviation programmes bridge the gap between low-income households and the median standard of living.

Economics sees meeting one's basic socio-economic needs as one of the measures of self-sustenance within a nation or community. The lack of these basic socio-economic needs is obviously under development which is attributed to poverty or living below the poverty line. A crucial part of addressing poverty reduction is through community development which is referred to as:

“ Working with people at the local level to perform active participation in

Identifying local needs and organizing to meet those needs” (Wright, 2004).

The Measures set out by the government, community, or institutions to reduce or permanently lift people out of their socio-economic crisis and improve their lifestyle are called poverty alleviation measures. These poverty alleviation measures are the core ideas behind the micro-economics approach in relationship to development economics concepts.

The experimental approach to alleviating global poverty according to the publication titled: (Understanding Development and Poverty Alleviation by the Committee for the Prize in Economic Science, Alfred Nobel, 2019) states that the modern approach to development economics relies on two simple but powerful ideas. One idea is that empirical micro-level studies guided by economic theory can provide crucial insights into the



design of policies for effective poverty alleviation. The second idea is that the best way to draw precise conclusions about the true path from causes to effects is often to conduct a randomized controlled field trial.

Scholars like Banerjee and Duflo, 1990 have drawn attention to low income as part of the causes of poverty among nations. Among the solutions in the research findings by Banerjee and Duflo, education and schooling are critical components of poverty alleviation reforms.

Other Scholars, like Miguel and Kremer (2004), link poverty to externalities, like disease burden attributed to health and non-health issues like the right system, infrastructure system, and welfare system. Other proponents of modern development economics link poverty to behavioral biases of decision-makers linked to a neoclassical mindset (Duflo, 2006). The contributions of Banerjee, Duflo, and Kremer have shaped and inspired a new generation of researchers in the area of development economics, poverty alleviation studies, and research.

Canada Indigenous People Poverty Alleviation background and studies

The 2021 census data reveals that the Indigenous population in Canada stands at 1,807,205, constituting 5% of the national population (Statistics Canada). This data underscores the importance of understanding and addressing the poverty issues Indigenous communities face. The government of Canada has pledged to enhance the recognition and integration of these marginalized communities.

In his 2017 publication, “Tackling Poverty in Indigenous Communities in Canada,” Dr. Fred Wien of Dalhousie University reaffirms the existence of inherent poverty in Indigenous communities. He uses the low-income narrative within these communities as a key indicator of poverty, citing a 2013 Statistics Canada report on Indigenous household income versus non-Indigenous household income. The report reveals that the median annual income for Indigenous households was \$52,581, compared to \$61,013 for non-Indigenous households. It also shows that 7.1% of Indigenous households had an income below \$10,000 per year, compared to 4.7% for non-Indigenous households in 2013.

The Canada National Advisory Council on Poverty, in August 2018 announced “Opportunity for All-Canada’s First Poverty Reduction Strategy” I will reference Chapter 7 of Opportunity for All-Canada First Poverty Reduction publication titled: Working with Indigenous People. In Chapter 7, the publication says:

“ The government of Canada is committed to reconciliation with Indigenous People

and to a renewed relationship based on the recognition of rights, respect,

Cooperation and partnership ”.

The Canada National Advisory Council on Poverty publication reaffirmed that there is poverty experience among the First Nation, Inuit, and Metis populations which is a result of the negative impact of colonization. The government of Canada introduced a new approach to addressing the needs of the Indigenous people and adopted a “Distinction-Based Approach” that recognizes the rights, interests, and circumstances of First Nation, Metis, and Inuit communities.

This Distinction Based Approach is to address housing issues, early learning, childcare, employment, and training funding programs. The National Advisory Council on Poverty report indicates that despite the government of Canada's incentives and promises, the Indigenous people are still experiencing socio-economic lack. The publication says: *” First Nation people are more likely to experience poverty in its most notable Forms (income, employment, education, and housing) ”.*

Another publication by Indigenous Corporate Training Inc., 2022 stated eight key issues for Indigenous People in Canada namely: (1) poorer health, (2) lower (3) education, inadequate housing, and crowded living, (4) lower income, (5) higher rates of unemployment, (6) higher levels of incarceration, (7) higher rates of death in children, (8) higher of suicide. The government of Canada in its national poverty reduction strategy is



continuously looking into the listed needs of the Indigenous People in regard to ways to reduce poverty within Indigenous communities.

The government of Canada announced that its official poverty line target is to reduce poverty by 20% by 2020 using the baseline year of 2015 and reduce poverty by 50% by 2030 in Canada. As part of the ongoing poverty reduction strategy in the Indigenous communities across Canada, the government of Canada has initiated the following since 2016 (according to Canada Employment & Social Development Publication):

A) 2016 budget, the government of Canada announced \$634.8 million to strengthen and support First Nation children and families over five years.

B) 2016 budget, the government of Canada invested \$1.8 billion over five years to address and improve access to clean and safe drinking water in Indigenous communities and First Nation Reserves.

C) 2017 budget, the government of Canada invested \$828.2 million over five years in healthcare facilities, and programs in the First Nation communities

D) 2017 budget, the government of Canada invested \$25 million over five years to support education financial support for Indigenous students with financial hardship to complete their education.

E) 2017 budget, the government of Canada invested \$65.2 million over five years to help previously incarcerated Indigenous people heal, rehabilitate, support their release planning, train, and improve regaining of employment.

F) 2018 budget, the government of Canada invested \$47.5 million over five years for social development and sports in more than 300 Indigenous communities across Canada.

G) 2018 budget, the government of Canada invested \$450 million over five years to boost the new Indigenous Skills and Employment (ISET) program which replaced the Aboriginal Skills and Employment Training Strategy.

H) 2018 budget, the government of Canada announced \$248.6 million over three years to boost the healing and emotional support of survivors and families affected by the Indian Residential School ordeal.

I) Annually, the government of Canada spends an estimated \$319 million to support the housing needs of First Nations on the reserve.

J) 2019 budget, the government of Canada invested \$1.2 billion over three years in Jordan's Principle for improving services for First Nation children.

K) 2019 budget, the government of Canada invested \$739 million over five years in water and clean water projects.

L) In the 2019 budget, the government of Canada invested \$333.7 over five years plus \$115.7 million to implement the Indigenous Language Act and support the implementation of Bill C-91.

M) 2019 budget, the government of Canada invested \$327.7 million over five years for post-education to reduce the existing waitlist for First Nation's post-secondary student funding and support secondary student education.

N) 2019 budget, the government of Canada invested \$127 million to create the National Council for Reconciliation to account for the mechanism identified in the Truth and Reconciliation Commission program.

O) 2021 budget, the government of Canada committed a total of \$18 billion to Indigenous people, the largest ever investment for the First Nation. This budget covers \$127 million over three years for equitable access to



health care, (2) \$12.5 million over five years to support the well-being of families and survivors, (3) \$4.3 million over four years for the Indigenous community. infrastructure, and \$1.7 million over five years for operations and maintenance of the reserve, (4) \$117 million for Indigenous businesses fund to aid the collaboration of the National Aboriginal Capital Association and Business Development Bank of Canada, (5) \$1 billion over five years for child and family services and \$73.6 million over four years for the implementation of Bill C-92 (Act representing First Nation, Inuit and Metis children, youth and families),

(6) \$43.7 million over five years to establish First Nation policing, then \$540.3 million over five years to expand the First Nation policing program, and \$108.6 million over five years to repair, renovate, and replace policing facilities in First Nation and Inuit communities, (7) \$74.8 million over three years to improve justice for Indigenous people and address systemic discrimination and representation of Indigenous people in the justice system, (8) 2.2 billion over five years to implement calls for justice of the National Inquiry into Missing and Murdered Indigenous Women and Girls (MMIWG), (9) \$112 million remote learning resources over five years, then \$726 million over five years for student transportation and regional agreement, then \$350 million for First Nation adults who wish to complete their high school degree, (10) \$275 million for revitalization and strengthening Indigenous language, then \$14.9 million for the preservation of Indigenous heritage.

Gaps to Development Growth in Indigenous Communities

Through investments and funding, the government of Canada's efforts aim to alleviate the poverty conditions of the Indigenous people of Canada. Some challenges and barriers are still impeding the collective growth of the government's efforts of sustenance and development in the Indigenous communities. The publication bulletin of the Assembly of First Nations (AFN) highlights the government of Canada's 2022 budget. AFN highlighted some gaps and lacks in the 2022 budget's \$11 billion allocation to Indigenous priorities. The AFN made the following remarks regarding the 2022 budget:

“The \$11 billion over six years – an average of \$1.8 billion per year – is a substantial reduction from the rate of investment the federal government had made over its first 6 years in office and falls short in addressing the urgent and long-term needs identified by First Nations. For comparison, the 2018 Budget committed \$18 billion to Indigenous priorities over five years”. (AFN,2022).

The AFN reiterated in its submission that the government of Canada's 2022 budget is insufficient and will slow First Nations' recovery and participation in the economy. The Assembly of First Nations (AFN) said:

“Much more is needed to meet current needs, account for growth, and repair the systemic inequalities faced by First Nations for generations. When First Nations are strengthened, so too are Canada's economy and its social fabric, and we can all enjoy a more prosperous future” (AFN, 2022).

The federal budget commits \$3 billion over five years for First Nations housing. This falls short of the AFN's well-researched identified need of \$44 billion over 10 years when population growth is taken into account. First Nations have been living with the impacts of a housing shortage for generations. Investing appropriately will empower First Nations to exercise jurisdiction over housing and to see more positive outcomes in health, education, and economic progress (AFN, 2022).

In another publication in April 2022 from the Canada House of Commons, Committee on Indigenous and North Affairs titled: Barriers to Economic Development in Indigenous Communities, some expressed barriers to the growth of government efforts towards improving developments in the Indigenous communities. The House of Commons Committee report was based on 33 witnesses over five meetings to get the views of these witnesses towards economic development in Indigenous communities and how to remove these barriers.

The general barriers from the House of Commons Committee report that were expressed by survey witnesses include lack of access to capital, inadequate infrastructure, and limited capacity. These inherent barriers according to the witnesses can be traced to the impact of colonialism and the failure to recognize the jurisdiction. In the words of Regional Chief Terry Teegee of the British Columbia Assembly of First Nation,



he said: “ *The common theme that serves as a barrier to First Nation’s economic development is the going systemic impact of colonialism*”

(Terry Teegee, AFN, 2023).

The House of Commons Committee reaffirmed that the results of colonialism and the neglect to recognize Indigenous people as stated in the United Nations Declaration of Rights of Indigenous People (UNDRIP) in decisions and affairs concerning Indigenous people is one the root causes of the barriers to economic development in the indigenous communities. Regional Chief Terry Teegee said:

“ There is lack of involvement in the planning. First Nations must be included in the strategic planning and decision-making process for economic recovery”.

In a remark reiteration of Chief Terry Teegee, he cited Indigenous people's non-involvement matter, referencing the 2019 federal government where \$3 million was allocated to support Indigenous entrepreneurs which ended up in the management hands of a non-Indigenous organization. The House of Commons committee witnesses made it clear that you can not empower Indigenous people from the outside, the empowerment must come from the inside. Among other barriers listed by the Canada House of Common Committee, witnesses on Indigenous and Northern Affairs include:

A) Administrative Burden: this can be attributed to the long bureaucratic process of handling government-related Indigenous decisions, applications, obtaining information, and actioning information.

B) Access to Capital and Equity: This deals with giving Indigenous people equal access to capital. According to Chief Commissioner Jules, Indigenous people face an access capital gap of about \$175 billion (Committee on Indigenous and Northern Affairs, 2022).

C) Procurement: The committee witnesses mentioned that 32 federal departments must ensure that a minimum of 5% of federal contracts are awarded to businesses owned and led by Indigenous individuals. These procurement hurdles slow material supplies and project executions.

D) Education and Capacity building: The Committee witnesses mentioned that the lack of enough schools and talent development in the Indigenous communities is still a barrier to economic development in the Indigenous communities.

E) The Impact of Remoteness: The House Committee witnesses reported that over 50 Inuit communities across Canada are all isolated because of limited access to road infrastructure. The vice president of Economic Development at the Makivik Corporation said:” residing in fly-in only communities makes it tremendously hard for many of our Inuit communities” The remoteness of businesses in Indigenous communities makes it hard for businesses to thrive in these remote communities for example many Indigenous communities do not have banks which pose a big financial handicap to accessing capital or funds to run businesses in these Indigenous communities.

F) Exclusion of the Metis: The House Committee witnesses stated that the Metis have historically marginalized land and economic development.

In the 2023 budget of the government of Canada, the allocation to Indigenous investments totaled roughly \$4.1B over the next five years. \$1 billion has been identified as part of new spending priorities for fiscal year 2023-2024. The remaining investments are allocated to existing programs. (AFN, 2023)

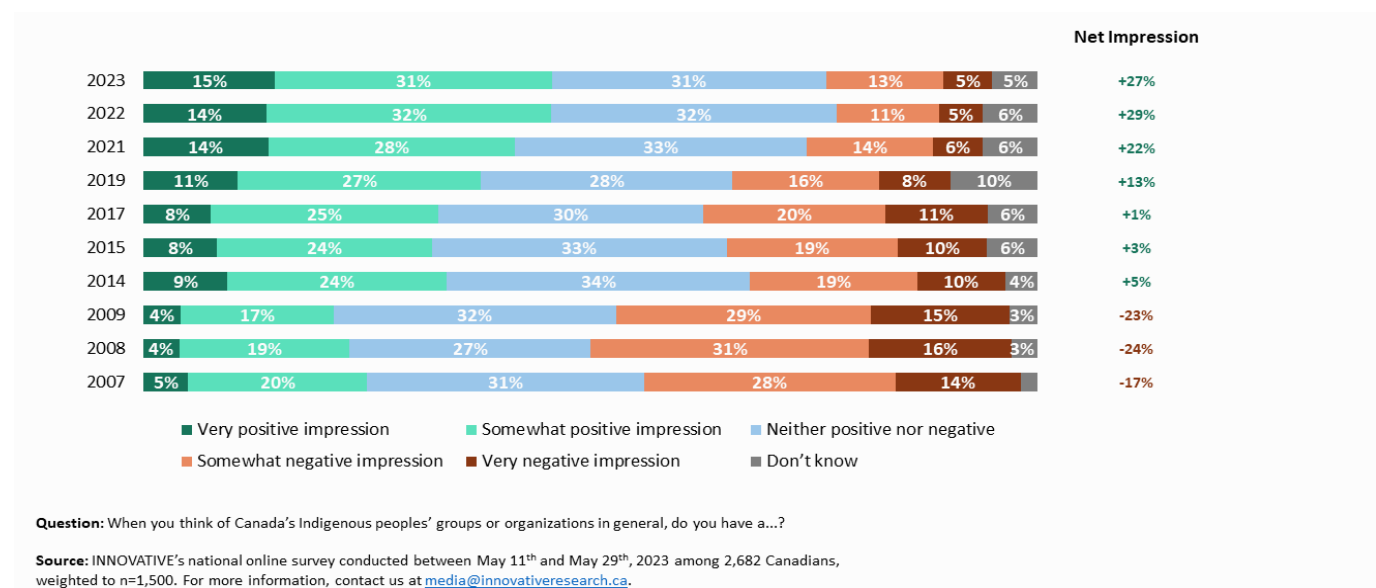
Major advocates of Indigenous People struggle like Chief RoseAnne Archibald still believe that the 2023 budget is not enough to address the growing needs of Indigenous communities with her remark stating:

“What we see the federal government do is chronically, intentionally underfund us, and so they’re creating this cycle of poverty, It’s repetitive injustice. It’s a deliberate pattern of harming our communities through underfunding.” (RoseAnne Archibald, AFN, 2023).

Canadian Inference Perception of Indigenous People's Issues

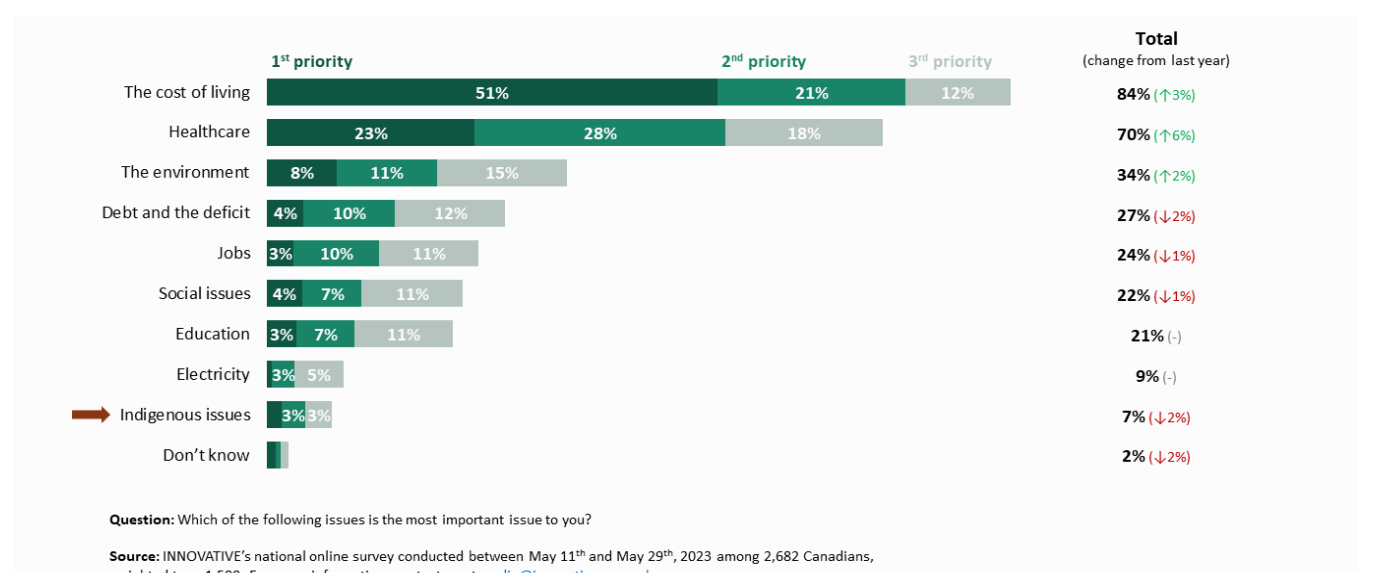
A research study was carried out by Innovative Research Group in June 2023. The research was conducted to ascertain Canadians' views concerning Indigenous people. The research was based on the opinions and issues of 2,682 Canadians. The research was broken down into four categories of questions. Responders to the research survey are segmented into 39% representing: equal treatment supporters, 19% representing: special rights supporters, 33% representing: conflicted, and 10% representing: ambivalent. The tables below represent different survey answers, feedback, and questions asked to Canadians to get their feedback on matters concerning the Indigenous people of Canada.

First Question: What do you think of Indigenous Peoples groups or organizations in general?



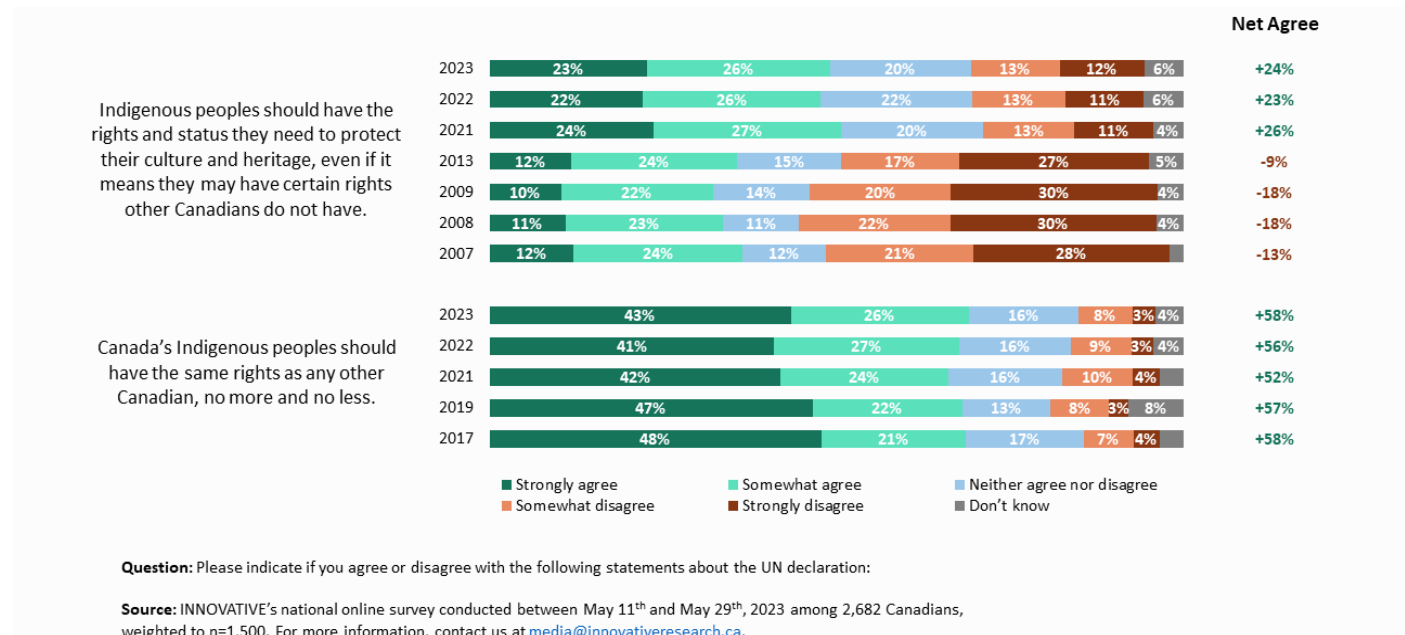
In the table above, in 2023, Canadian's thoughts about Indigenous people with the “some positive impression” vote came in at 31% same with the “Neither positive nor negative impression” vote. In 2023, the Canadians with a “very positive impression” vote were 15%.

Second Question: Which of the following issues is most important to you?



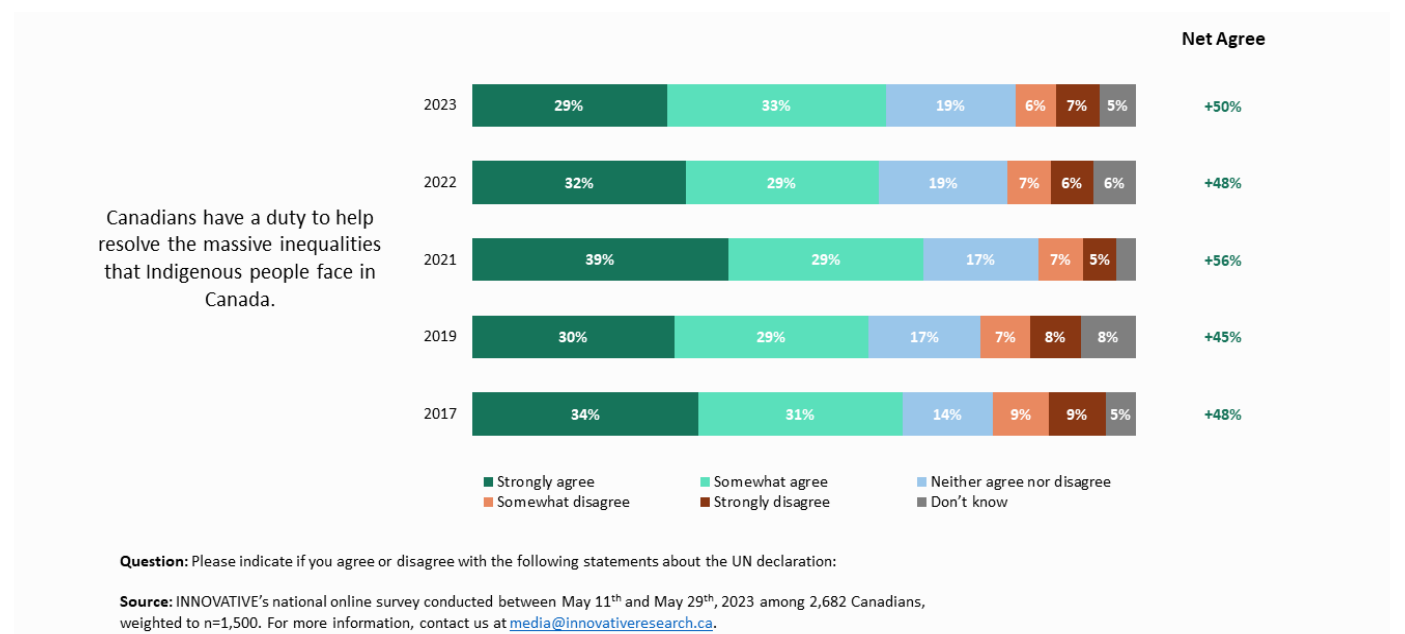
In the table above, the Canadian view about Indigenous issues came second bottom with 3% vote as second priority in the survey question regarding the most important issue to Canadians. The first priority for Canadians with the highest score is “the cost of living,” with 51% of the vote. The answer to the question: Which of the following is the most critical issue to you? It tells the heart of most Canadians – managing the cost of living is rated very important. Although 3% vote of respondents still agree that Indigenous issues are still an issue to be treated.

Third Question: Please indicate if you agree with the following statement about the United Nations declaration?



In the table above, 26% vote of Canadians in 2023 “somewhat agree” believe that “ Indigenous people should have the rights and status they need to protect their culture and heritage, even if it means they may have certain rights that other Canadians do not have. In 2023, 43% vote of Canadians “strongly agree” that “Canadian Indigenous people should have the same right as any other Canadian, no more and no less”

Fourth Question: Please indicate if you agree or disagree with the following statement about the UN declaration?





In the table above in the 2023 year, 33% vote of Canadians “somewhat agree” that “Canadians have a duty to help resolve the massive inequalities that Indigenous people face in Canada” while 29% vote “strongly agree”

The findings from this research from the Innovative Research Group states: that special rights supporters are far more likely than equal treatment supporters to feel a strong sense of moral obligation towards Indigenous peoples. The net agreement of Canadians that believe they have a duty to help resolve the massive inequalities that Indigenous people face in Canada” stands at +80% for special rights supporters and +20% for equal treatment supporters. (Innovative Research Group, 2023). 70% of special rights supporters also much more likely to have a positive impression of Indigenous groups and organizations, while only 24% of equal treatment supporters do. These findings suggest that reconciliation will not happen solely based on people feeling the need for equal treatment. True reconciliation will happen when individuals recognize and acknowledge that Indigenous peoples have special rights due to their historical presence and cultural heritage (Innovative Research Group, 2023) Key findings according to Innovative Research Group are:

- 1) Indigenous peoples and groups have experienced a significant increase in their reputation since our tracking began in 2007.
- 2) Canadians, however, find themselves in a complex dilemma, torn between empowering Indigenous peoples with special rights and responsibilities and treating all individuals equally, underscoring the complexity of the issue.
- 3) Indigenous issues continue to face challenges in gaining attention, given the competition with other pressing concerns like affordability and health, highlighting the urgent need for increased awareness.
- 4) Canadians’ express dissatisfaction with the government’s performance on Indigenous issues.

Overall, support for Indigenous peoples in Canada remains high, but challenges persist. While public opinion on Indigenous groups and organizations has improved over the past decade, Indigenous issues are not a top priority for many Canadians. As Canada commemorates National Indigenous Peoples Day, it serves as a reminder of the ongoing work needed for reconciliation and addressing the injustices faced by Indigenous peoples. The gains in reputation place Indigenous peoples in a much stronger position to advance this work (Innovative Research Group, 2023).

Reflection on Measuring Indigenous Communities Economic Development in the Face of Poverty

There is a need to measure the position of economic development in the Indigenous communities through feedback from the Indigenous people (the beneficiaries) in their various communities. I will refer to the economic development status from the research survey report from the First Nations Information Governance Centre (FNIGC), Regional Health Survey(RHS) Phase 2, 2008. This survey was based on employment and income in connection with the resultant effect on the well-being and mental health of Indigenous people who live in the reserves of First Nation communities. This research survey report was done through a semi-structured method of in-person interviews and surveys among elders, knowledge holders, and subject matter experts with First Nation communities. The survey interview feedback suggests that many First Nation people have lived a self-communal life in poverty without knowing the context of poverty, making it hard to measure poverty. Mindy Denny, who participated in the FNIGC survey interview, said wellness is more conceptualized when measuring First Nation poverty. In Mindy Denny’s words from Eskasoni Mikmaw Nation Nova Scotia, she said: “ *When I’m looking at poverty I am thinking about wellness. I’m thinking the indicators that they are using to measure wellness, are Western ideas of wellness; they’re not inclusive of the values and perspectives that indigenous we’re not well because we’re not interacting with our environment. We’re not well because we are not living the way we are intended to live... What they are measuring is how well we are assimilating*”(Mindy Denny,2008).

Another feedback from Dr. Andrew Bear Robe who participated in the FNIGC survey interviews suggests that economic, housing, and social issues are good measurements of First Nation poverty or wealth. In Dr. Andrew Bear Robe's words from Siksika Nation, Alberta, he said: “ *One measure that I would like to see used is the*



level of employment. I would say the second indicator of poverty is families that are in distress: they are in distress because of lack of employment, lack of adequate housing and child welfare – the child apprehensions have to come down” (Andrew Bear Robe, 2008).

The majority of respondents from the FNIGH survey research, RHS Phase 2, agree that income and money are not the only factors for measuring poverty; the measurement should involve other socio-economic indicators such as housing, food, family welfare, health care, education, and holistic integration of Indigenous culture.

Other measurements of community wellness and development, like the Community Well-being (CWB) index were used in the past to measure the socio-economic well-being of Indigenous and First Nation communities. There were CWB index results from 1981 to 2016 of Indigenous and First Nation communities. The CWB index scores its components from 0 (low) to 100 (high) points for each component. The CWB index is made up of the following four components: (1) Education based on how many community members have at least a high school education and how many have a university degree. (2) Labour force activity measures how many community members participate in the labour force and how many labour participants have jobs. (3) Income is calculated based on the community's total income per capita. (4) Housing is based on the number of community members whose homes are in an adequate state of repair and are not overcrowded.

The findings according to Crown-Indigenous Relations and Northern Affairs Canada, CIRNAC, and Indigenous Services Canada, ISC show an increased total of 45 points to 58.4 points CWB index over 35 years span from 1981 to 2016. The comparison of the CWB scores between the Indigenous and non-Indigenous communities indicates that First Nation and Indigenous communities had a 19.1 points gap lower than the average non-Indigenous communities. This 19.1 points gap is similar to the observed gap in the 1981 CWB score index.

However, there has been a notable improvement in CWB scores in the areas of education and income for First Nations and Indigenous communities. There are still gaps in the areas of labour, and housing. (Crown-Indigenous Relations and Northern Affairs Canada, CIRNAC and Indigenous Services Canada ISC, 2019)

CHAPTER 3

METHODOLOGY

My methodology will emphasize the Indigenous (Inuit, Metis, and First Nations) population within the geographical area covering the ten provinces and three territories from 2008 to 2025 in the Canadian socio-economic development space. The year 2008 marks the year the Government of Canada established the Truth and Reconciliation Commission (TRC) to address the concerns of the Indigenous people of Canada. I will also highlight other research methodologies, models, and assumptions made by other scholars of the development economics school of thought to address population wellness and community development. The Government of Canada poverty alleviation funding and investment programmes between 2008 and 2025 (with emphasis from 2020 to 2025) will be used to address key areas of the Indigenous population's inclusiveness, namely: the Indigenous employment penetration rate, education/literacy rate, and the average income of the Indigenous labour force population as my scope. My research method will analyze and compare key variable components like income, ManuscriptManuscriptManuscript employment, and education of Indigenous and non-Indigenous populations. My methodology used the following tools of analysis:

1.) **Par Capita Income:** to determine the average income earned by a person to evaluate the level of the standard of living of the population within the given geographical region or community at a given time for development growth check.

2.) **Correlation Coefficient:** to determine the strength of two or more variables. The coefficient will range between -1 and + 1, with a positive correlation increasing the value or likelihood and a negative correlation decreasing the value or likelihood.



3.) **Ratio:** to determine the relation of two or more variable inputs and their magnitude proportional difference to each other or of the total amount of variables.

4.) **Diagram illustrations:** Bar charts, pie charts, and graphs will be used to visually demonstrate the gaps and differences between the variable inputs.

PURPOSE AND JUSTIFICATION OF THE METHODOLOGY

The justification for the use of my methodology is to compare and analyze the socio-economic progress of the government of Canada's economic development initiatives in the Indigenous communities in Canada. I will evaluate the government's efforts through its established committees and commissions, such as the Canada House Committee on Indigenous and Northern Affairs together or The Truth and Reconciliation Commission Canada, which aims to ameliorate the conditions of the Indigenous people. My research will check how well the recommendations of some of these government committees and commissions have alleviated the poverty level and enhanced the socio-economic development of the Indigenous population. In the past, the Community Well Being (CWB) index was used to measure the wellness of the Indigenous population taking into account education, labour force, and housing as the four components of measurement. The Community Well-Being (CWB) index was used to track the gaps between the Indigenous and non-Indigenous communities. My methodology will measure and review the wellness of the Indigenous population from a different perspective lens using different characteristics ratio analysis, and correlation analysis with illustrations to measure and compare Indigenous and non-Indigenous population wellness as a function of economic development.

The 2023 survey information from Innovative Research Group indicated that 29% of Canadians "strongly agree" and 33% of Canadians "somewhat agree" to resolve the massive inequality that Indigenous people face. There is an established fact that there is inequality faced by Indigenous people in Canada. My research analysis will help to throw more light on the progress of the inequality gap bridging and reconciliation to alleviate poverty and inequality among the Indigenous population in Canada. My research analysis will use specific variables like Indigenous employment rate, Indigenous education/literacy level, national job vacancies, and Indigenous average income to weigh and measure the progress of the inequality gap bridging among the Indigenous population in Canada.

Other scholars of economic development schools of thought, like Malthus (Malthusian view), believe that population growth will always outstrip the means of sustenance (food production), advocating for checks on population growth. My methodology will in contrast check the Indigenous sustenance using income (output) as a means of sustenance against "food production as Malthus's view proposed. My methodology will not use "food production" as a means of sustenance. My methodology will use the income (output). This represents mathematically that Income is a function of education and employment is $I = f(E, Em) = Ps$ where I is income, E is education, Em is employment, and Ps is population sustenance. My research makes a case with some assumptions that income is a means of sustenance expressed as $I = \alpha + \beta E + \beta Em = Ps$ where I is Income, α is a constant, βE is education, βEm is employment, Ps is population sustenance in the face of population growth with no need to limit the population growth as Malthus advocated. My methodology will use education level and employment rate to test community development growth and population wellness regarding income power potential. Income and population growth are important features of economic underdevelopment or development in different world economies. Income is considered an output in the context of the economic growth of a nation or community. We will assume that the Harrod-Domar model demographic transition "trap" will not impact per capita income growth. According to the Harrod-Domar model, population and per capita income growth depend on factors affecting population growth known as "demographic transition "traps," which can reduce economic growth in terms of the capital-output ratio. These demographic transition traps include high death rates, high birth, the incidence of famine, disease outbreaks, high unemployment rates, etc. However, it is generally argued that income growth creates a quantity-quality trade-off among the poor and will reduce socio-economic inequality.



Table 1: Comparison of the gap in median income 2015 to 2020 (adjusted), Indigenous and non-Indigenous populations, aged 25 to 64, Canada

	2015		2020		Five-Year Change	
	Income	Gap	Income	Gap	Income	Percentage change in gap
Registered Indian on reserve	\$22,100	-\$24,500	\$32,000	-\$18,400	\$9,900	-24.9%
Registered Indian off reserve	\$35,400	-\$11,200	\$42,000	-\$8,400	\$6,600	-25.0%
Non-Status Indian	\$37,400	-\$9,200	\$43,200	-\$7,200	\$5,800	-21.7%
Inuit	\$36,000	-\$10,600	\$42,800	-\$7,600	\$6,800	-28.3%
Métis	\$44,300	-\$2,300	\$48,800	-\$1,600	\$4,500	-30.4%
Non-Indigenous	\$46,600		\$50,400		\$3,800	

Source: Indigenous Services Canada. Custom Tabulations, 2016 to 2021 Census of Population.
 Note: The dollar values for 2015 have been adjusted for inflation and are stated in terms of their value in 2020.

The table 1 from Indigenous Services Canada shows discrepancy in the median income between the Indigenous and non-Indigenous population in their value in 2020. My research analysis will evaluate the impact of education and literacy on the income-earning ability of the indigenous population. Some of the answers to my research will throw more light on how good or bad the education levels of the Indigenous population contribute to any inequality and ability to gain more employment and earn more. The table indicates that the non-Indigenous population's median income in 2020 is \$50,400 compared to other classifications of the Indigenous population that earned less.

Sampling and Source Method

A non-probability sampling method will be adopted in my methodology. This research examines specifics of Indigenous socio-economic community developmental growth from secondary data sources. These variable inputs are all data inputs collected and collated from reputable secondary sources. The following are the sources of my data collection for this research analysis:

1. Statistics Canada
2. Crown-Indigenous and Northern Affairs Canada (CIRNAC)
3. Aboriginal Affairs and Northern Development
4. First Nation Information Governance Centre
5. Union of Nova Scotia Indians
6. Indigenous Services Canada (ISC)
7. Network Environment for Aboriginal Health Research (NEAHR)
8. Employment and Social Development Canada (ESDC)
9. Department of Finance Canada
10. Government of Canada Publication
11. Yellowhead Institute
12. Canadian Research Data Centre Network



13. Open Government Canada
14. Northern Inter-Tribal Health Authority
15. Social Sciences and Humanities Research Council
16. Canada Research Coordinating Committee
17. National Research Council Canada
18. Statista Research
19. Employment Equity Data Bank (EEDB) Canada

Limitations, Scope, and Disclosures

- 1.) This research analysis did not intend to alter the distinctive cultures, histories, and identities of the First Nation and Indigenous people of Canada.
- 2.) This research is intended to respect and maintain the cultures, languages, and identities of First Nation and Indigenous people of Canada as a step towards finding truth and reconciliation.
- 3.) For the purpose of this research, the First Nations, the Metis, and the Inuit are referenced as Aboriginal or Indigenous people.
- 4.) For the purpose of this research the 600 or more First Nations communities with more than 50 Indigenous languages are referred collectively as Indigenous communities without referring to a particular community within the First Nations communities. Many Indigenous communities have their own languages and dialects with more than 50 Indigenous languages which may not be widely understood by non-Indigenous researchers. Effective communication requires translators and interpreters, which can introduce additional challenges in accurately conveying meanings when conducting primary physical surveys in the communities.
- 5.) This research writing and analysis context is only restricted to First Nations and Indigenous people of Canada and not associated with other First Nations and Indigenous communities outside Canada.
- 6.) This research analysis data is based on published, verified secondary data collection which was collected from reliable published sources.
- 7.) There was no physical engagement with the band chiefs or reserve residents in the Indigenous communities because of cost and logistics limitations. The right to control physical research conducted within Indigenous territories poses some challenges in my data collection. This means researchers must obtain community consent and involve community members in the research process from the beginning. However, achieving meaningful consent and ensuring community involvement can be complex due to diverse community structures, decision-making processes, and power dynamics.
- 8.) The scope of this research analysis will be limited to specific variables, labour force, employment rate, income, and education level among the Indigenous population.
- 9.) The 2021 Canada census data was used for writing and carrying out my research analysis because the Canadian census is done once every five years, and the next census is in 2026.
- 10.) The data used for the ratio analysis of education level between Indigenous and non-Indigenous is between 2022 and 2023 year because of limitations to 2024 data.
- 11.) The data used for correlation analysis of employment and job vacancy rate between the Indigenous and



non-Indigenous is between the third quarter of the 2022 year and the third quarter of the 2023 year because of the limitation of 2024 data.

12.) The data used for per capita income analysis between the Indigenous and non-Indigenous population census is from the 2021 year Canada population census because of the limitation of the new census record that will be available in 2026.

13.) My research is carried out within the context of the development economics area of study and did not cover other areas of economics or other disciplines.

14.) This research analysis did not use or involve the collection of primary sample data because of the extensive cost involved in carrying out surveys and gathering primary sample data. My research data used is limited to secondary data.

15.) This research is self-funded from personal funds without any external research funding grant or scholarship or financial aid.

16.) The data analysis will be performed using computerized analytical system tools, which will reduce the degree of bias and error.

17.) The entire content of this research is done in the English language because of multi-lingual and language fluency limitations.

18.) Full ethics of research writing and conduct was observed in the entire writing and analysis of this research to avoid misconduct, cultural biases, and other biases that compromise the originality of this research.

19.) The quality of secondary data varies widely, depending on its original source. There may be errors, biases, or inconsistencies in the data that could affect the validity and reliability of your analysis. I made a very necessary effort to ensure that all data sources were from credible sources to avoid any validity issues.

CHAPTER 4

FINDINGS AND ANALYSIS

My findings and analysis report will test my hypothesis using some variables to determine how the Indigenous population has been impacted by the government's socio-economic incentives in selected key areas classified into three sections with assumptions for each. The three classifications are:

1) Education level impact and employment rate: using Table # 1 for Education Levels Ratio Analysis of Indigenous and Non-Indigenous Population. I will analyze the implementation impact of education and schooling programs funded by the government for the Indigenous population in 2022 and 2023 as a reference point. I will compare different levels of education growth between the Indigenous and non-Indigenous using ratio analysis. My hypothesis will test education growth between the Indigenous and non-Indigenous and will check if there is a significant impact or not.

2) Employment rate and job vacancies: using Table # 2A & Table # 2B for National Job Vacancies and Employment Rate Correlation Analysis between Indigenous and Non-Indigenous Population. I will check the impact of government-initiated self-identification and equity employment programs for the Indigenous population for Q3-2022 and Q-2023 years as a reference point. I will do a correlation analysis relationship between the employment rate and job vacancies of the Indigenous and non-Indigenous populations. My hypothesis test will inform me if there is significant impact or not

3) Population and Income power output: using: Table # 9 for Indigenous Per Capita Income Earnings Analysis. Per Capita Income is the amount of money earned per person in a community or nation that evaluates the quality of life within that population. I will analyze the average income of the Indigenous and

non-Indigenous population for the 2021 year as a reference point. I will use ratio analysis and check the gap between the per capita income of the Indigenous and non-Indigenous populations to evaluate the standard of living and sustenance of the Indigenous population. My findings will inform me if there is significant impact or not.

Table # 1: (Education Impact and Employment Rate Analysis)

Education Levels Ratio Analysis of Indigenous and Non-Indigenous Population

Geography ²		Canada (map)				
Labour force characteristics		Employment rate ³				
Age group		25 to 54 years				
Indigenous group ¹	Educational attainment	2019	2020	2021	2022	2023
Percentage						
Indigenous population	Total, all education levels	72.8	68.7	73.3	77.3	74.3
	Less than high school ⁴	45.8	43.3	45.3	51.1	46.0
	High school graduate or some post-secondary ⁵	68.4	62.8	66.3	72.2	68.3
	Completed post-secondary education ⁶	82.4	77.8	82.9	85.0	84.0
Non-Indigenous population	Total, all education levels	83.8	79.9	82.7	84.9	85.1
	Less than high school ⁴	62.5	59.6	61.5	64.3	64.0
	High school graduate or some post-secondary ⁵	77.2	71.8	74.7	78.3	78.1
	Completed post-secondary education ⁶	87.5	83.6	86.3	88.0	88.2

Source: Statistics Canada / Indigenous Services Canada

I will look at three different types of education qualification groups in both the Indigenous and non-Indigenous populations and see how their various education attainment level impacts employment rates and opportunities within each population group. The three different education level groups we are going to examine are:

- i) Less than high school level education group
- ii) High school or some post-secondary level education group
- iii) Completed post-secondary level education group

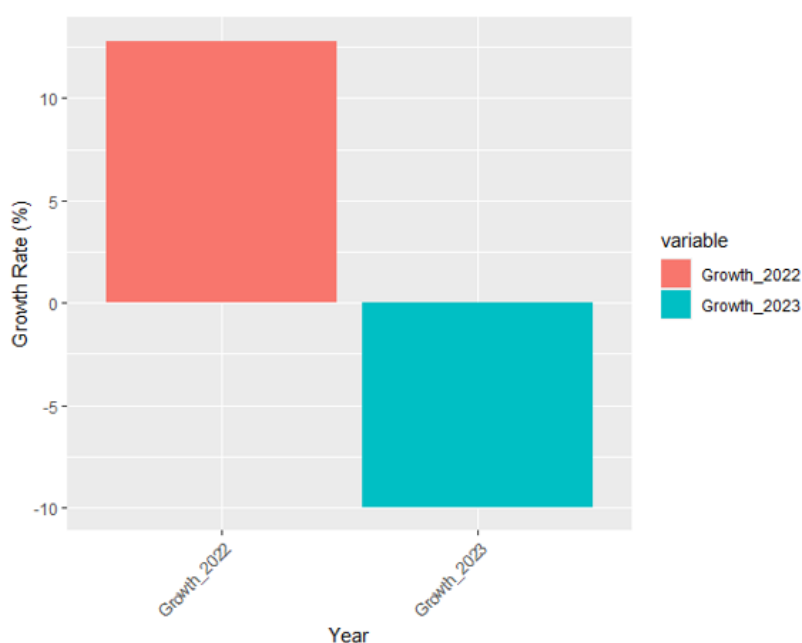
Assumptions of the education level and employment rate ratio analysis between Indigenous and non-Indigenous populations are:

- 1) All registered Indians off / in-reserves, Inuit, First Nations, and Metis are all classified as Canadian Indigenous populations for the purpose of this research.
- 2) The data for this analysis is limited to 2022 to 2023 year data as reported by Statistics Canada and Indigenous Services Canada for ages 25 to 54
- 3) A non-Indigenous population is any other population mix within Canada that is not classified as an Indigenous population.

- 4) Education in the context of this analysis is regarded as a component factor of community development, advancement, and growth.
- 5) Education in the context of this analysis is regarded as a major component factor of wealth acquisition and the ability to earn more income. This means that high levels of education generate more wealth, bring technological advancement and good standards of living to a population.
- 6) Other socio-economic development and growth factors within Indigenous communities, such as housing, health care, utilities, etc., are not factored into this analysis other than education.
- 7) The information used in this analysis has been meticulously collected within the defined scope of secondary data, ensuring the reliability and accuracy of our findings.
- 8) Limited access to 2024 published data was factored into the scope of this research analysis.
- 9) The analysis graph is designed to be adaptable, using approximate numbers to accommodate the margin of error. This flexibility ensures that the analysis remains robust, even within the limitations of page outlines.
- 10) Sample data used for this analysis represents the two sets of tested populations- the Indigenous and non-indigenous. Each population is half equal to the total population. I will check the consistency and growth patterns in the employment rate among different education qualification levels among these populations.
- 11) Hypothesis check for change differential range from: 0.05 to 1.0 points, where 0.01 to 1.0 points indicates consistent but from 1.0 points and above indicates not consistent
- 12) The hypothesis findings will serve as an inference and a guide to support, improve, and evaluate other previous works done by researchers and writers on the Indigenous population.
- 13) This research content is not intended to alter or change any government of Canada's existing program or policies for the Indigenous population. Instead, it serves as an inspiration, supporting the building of bridges to aid true reconciliation work with the indigenous people of Canada.

(Growth Rates of Employment for Indigenous for Less Than High School Education)

Diagram 1.1

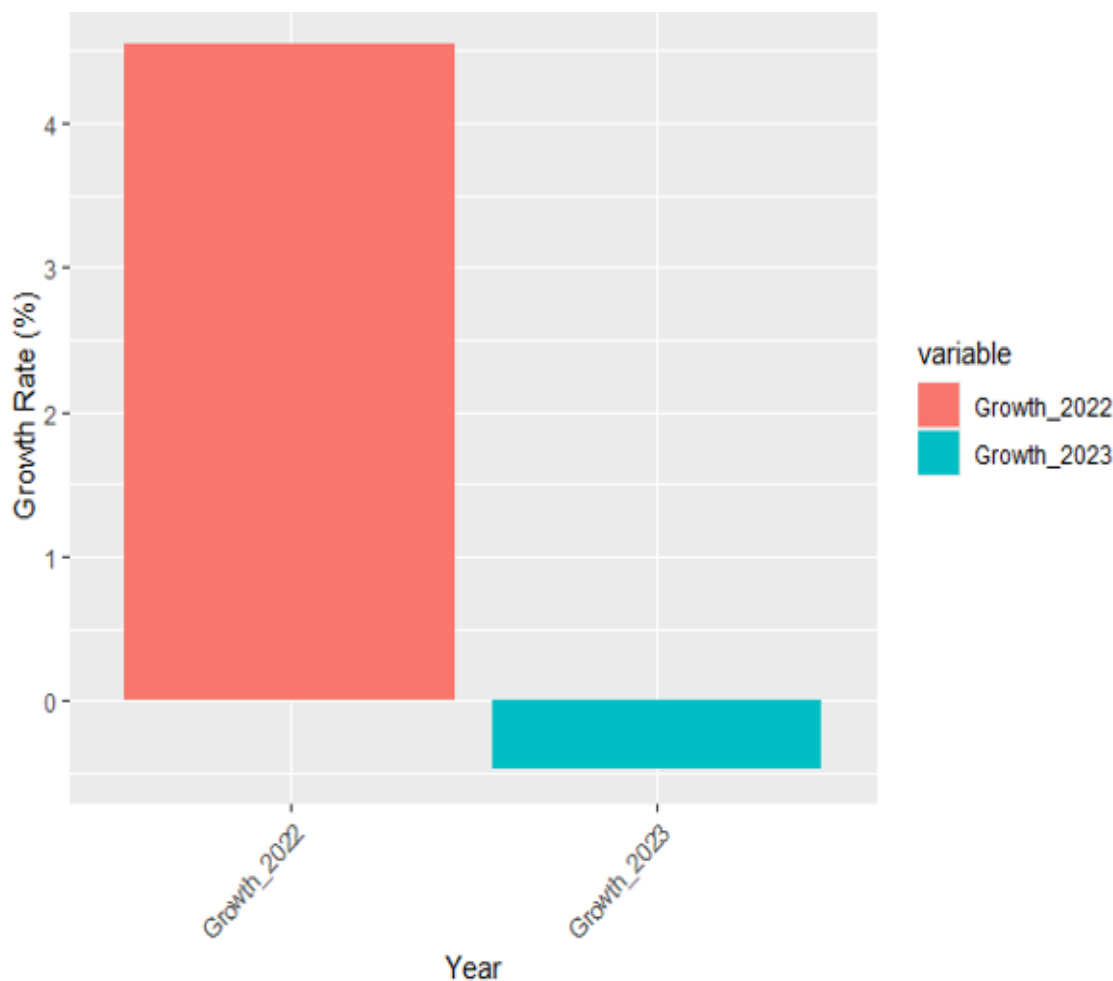


Source: E.Ngenegbo Research Analysis

Analysis findings from diagram 1.1 indicated that the Indigenous population with less than a high school education saw significant growth in 2022, suggesting that there might have been entry-level job opportunities that did not require higher education. A close look at diagrams 1.1 and 1.2 indicated that in 2023, there was a negligible decrease in the non-Indigenous population employment rate under this education level group. In 2023, Diagram 1.2 suggests that the Indigenous population's job opportunities in this population's education level group declined and were unsustainable.

(Growth Rates of Employment for Non-Indigenous for Less Than High School Education)

Diagram 1.2



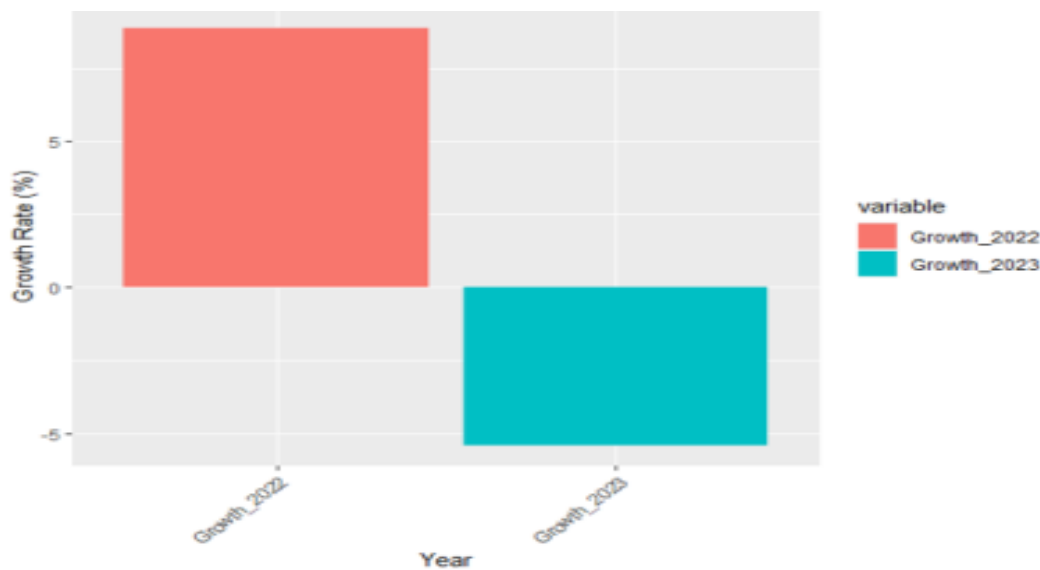
Source: E.Ngenegbo Research Analysis

The analysis findings indicated that in 2022 the employment growth of the non-Indigenous population gained more employment than the Indigenous population in

the less than high school level education group. Diagram 1.2 indicated a sustained and negligible employment rate decrease in 2022 and 2023 for the non-Indigenous population compared to the notable drop of 0.1 points (10%) in the Indigenous population among less than high education level group. In 2023, the non-Indigenous population's employment growth was 0.28 points (28%) higher than that of the Indigenous population for the less-than-high education level group. In 2022, Diagram 1.1 shows a drop of 0.04 points (4%) in the employment rate of the Indigenous population in this education level between 2022 and 2023. In 2023 the non-Indigenous population employment was 0.28 points (28%) higher than the Indigenous population for this education level group

(Growth Rates of Employment for Indigenous for High School or Some Post-Secondary Education)

Diagram 1.3

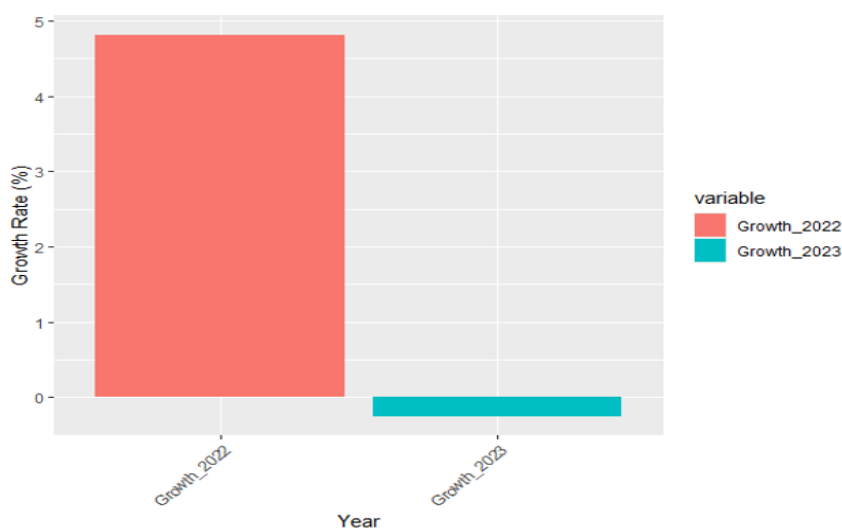


Source: E. Ngenegbo Research Analysis

The Indigenous population from diagrams 1.3 for some high school education group saw a notable increase in the employment growth within this education-level group in 2022 which is in line with the less-than-high school education-level group indicating a consistent effect in employment growth among the Indigenous population. There was no matching employment growth in 2023 in this education level group which shows a decline pattern in the less-than-high-school education group in 2023. The non-indigenous population is 0.08 points (8%) more employed than the indigenous population in 2022 in the high school education group. The non-Indigenous population sustained its employment growth in 2023, as shown in diagram 1.4, and the Indigenous population's employment rate in the high school education level group dropped by 0.05 points (5%). The non-Indigenous population was higher by 0.13 points (13%) than the Indigenous population in terms of high school education level employment growth.

(Growth Rates of Employment for Non-Indigenous for High School or Some Post-Secondary Education)

Diagram 1.4

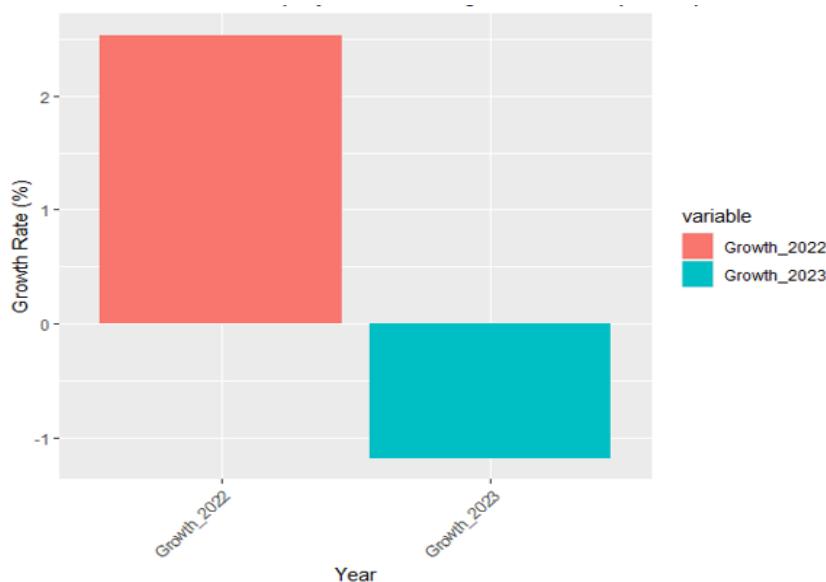


Source: E.Ngenegbo Research Analysis

In diagram 1.4, the non-Indigenous population sustained its employment growth in 2023, while the Indigenous population employment rate in the high school education level group dropped by 0.05 points (5%). The non-Indigenous population was higher by 0.13 points (13%) than the Indigenous population in terms of high school education level employment growth.

(Growth Rates of Employment for Indigenous for Complete Post-Secondary Education)

Diagram 1.5

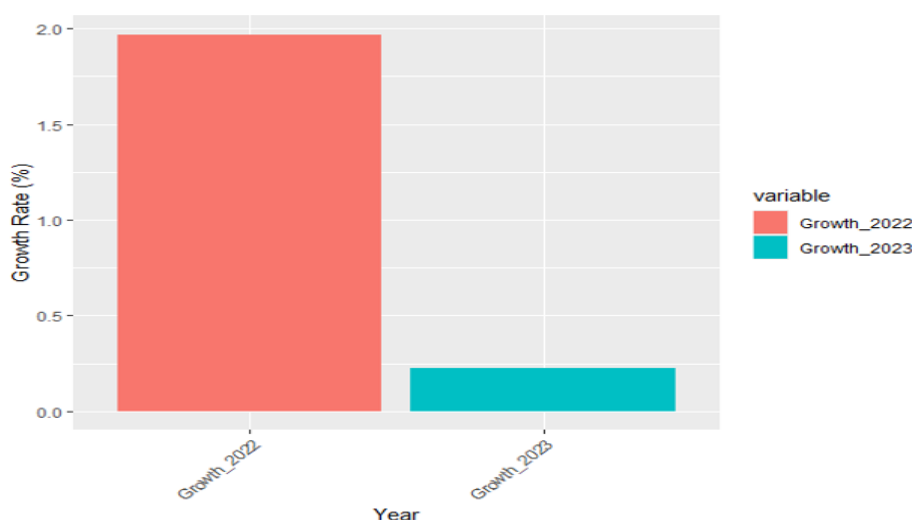


Source: E.Ngenegbo Research Analysis

Diagram 1.5 for the complete post-secondary education group indicates better employment growth for the Indigenous population in 2022 in completed post-secondary level education, which moved higher than the other two education level groups. There was a sustained and negligible drop in employment rate in the complete post-secondary group among the Indigenous population compared to the other two education level groups. The non-Indigenous population sustained employment growth in 2023 compared to the Indigenous population. The non-Indigenous population was over by 0.05 points (5%) the Indigenous population.

(Growth Rate of Employment for Non-Indigenous for Completed Post-Secondary Education)

Diagram 1.6

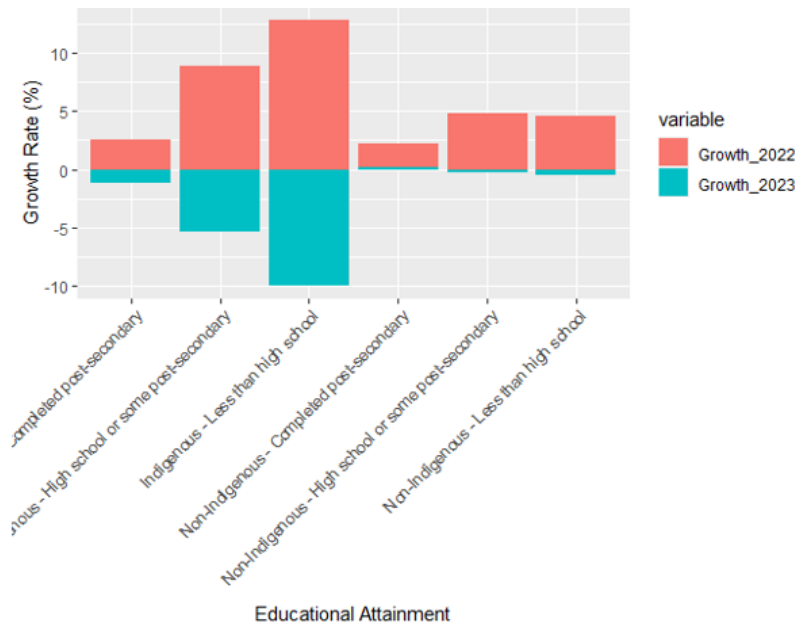


Source: E.Ngenegbo Research Analysis

Diagram 1.6 indicates that the non-Indigenous population employment rate was still higher by 0.03 points (3%) than the Indigenous population employment rate in 2022. Compared to the Indigenous population, the non-Indigenous population showed consistency and sustained employment growth in 2023. The non-Indigenous population was over by 0.05 points (5%).

(Growth Rates of Employment by Education Level Over Time)

Diagram 1.7



Source: E.Ngenegbo Research Analysis

Diagram 1.7 for employment by education level over time indicates a more sustainable employment growth in the three education levels for the non-Indigenous population in 2022 and 2023 compared to the Indigenous population employment rate, which suggests there is a gap in the education attainment and employment between the non-Indigenous population and the Indigenous population. The ratio analysis between the Indigenous and non-Indigenous populations compared in the three education level groups indicated that the non-Indigenous population employment rate was higher than the Indigenous population in 2022 and continued to be higher in 2023. The analysis shows that the non-Indigenous population had an employment rate margin of 0.28 points (28%) over the Indigenous population for the group with a “less than high school education” level group in 2023. The analysis indicated a 0.13 points margin (13%) in employment rate gain attributed to non-indigenous people over the Indigenous population for the “high school education” level group over the Indigenous population. The “completed post-secondary education” level group had the lowest point of 0.05 points (5%) for the non-indigenous population compared to the Indigenous population in 2023. This suggests that the Indigenous population has better employment opportunity chances with their highly educated population than their less educated population.

Education Level Impact and Employment Category Hypothesis Findings in 2023

Education Level	Differential Change	Population Group in Advantage	Indication
Less than school	0.28	Non-Indigenous	Severe
High school	0.13	Non-Indigenous	Severe
Completed post-education	0.05	Non-Indigenous	Not Severe



My findings are based on all assumptions mentioned in this category. The education level impact and employment rate analysis, as stated in my hypothesis, indicate that the Indigenous population has fewer job opportunities with their less educated population than their highly educated population with college and university education. My findings will be used as an inference to affirm that the Indigenous population with less education is more vulnerable to experiencing economic hardship than the highly educated population segment. A reflection of other studies done by other institutions and researchers equally suggests that the most impacted Indigenous population segment is those with less education.

In the June 2023 publication by Truth and Reconciliation Commission Canada, representing the government of Canada in ongoing reconciliation with the Indigenous people of Canada, agreed with the challenges faced by Indigenous people in the labour market during 2022 and 2023. The question now is, what is the government of Canada doing to empower the Indigenous population with less education? The Truth and Reconciliation Commission responded to the call to the Canadian government to develop a joint strategy with Aboriginal groups to eliminate educational and employment gaps between Aboriginal and non-Aboriginal Canadians by starting key education reform initiatives for the Indigenous people. Some of the key highlights of these education initiatives aimed at bridging education and employment gaps include:

- 1) Introduction of Skills for Success Program to provide project funding to fund 20 organizations that will support skills and employment training. The funding will map 6 of these projects exclusively to solve the education needs of Indigenous people
- 2) The announcement of \$197.7 Million from 2023 to 2025 to support work placement for students, aiming at creating work-integrated learning opportunities
- 3) Indigenous Services Canada (ISC) signing 10 regional education agreements with First Nation partners for education transformation to boost education and learning and support co-development distinctions based post-secondary education strategies for First Nations, Inuit, and Metis recipients

The government of Canada has introduced various education programs to promote education and reduce skill shortages within the Indigenous communities across Canada. Some of these programs include the Post-Secondary Partnership Program. These programs support First Nations and Indigenous communities in defining their own partnerships with educational institutions and increasing the availability of post-secondary education programs tailored to First Nations cultural and educational needs. The post-secondary partnership program funding allocations are determined by a 2-step process: (1) regional allocations are made based on First Nations population distribution (2) First Nations designated and directed organizations in each region that will work with Indigenous Services Canada (ISC) in the allocation of funds according to program guidelines – (Indigenous Services Canada ISC Publication, 2024)

The government of Canada has skill-building programs for the less educated to enhance their employment skills and job acquisition through the First Nations and Inuit Skills Link Program in 2024. This skill-building program supports activities that assist youth in gaining the essential skills to help them gain employment, function well in the workplace, and learn about job and career options. What is included in this skill-building program according to Indigenous Services Canada includes supporting the development and enhancement of essential employability skills and knowledge among First Nations and Inuit youth aimed at equipping them to participate and succeed in the current and future labour markets, such as communication, problem-solving, and working with others to achieve the following.

- A) exposing youth to various career options and helping youth acquire skills by providing wage subsidies for mentored work experiences.
- B) supporting the provision of mentored school-based work and study opportunities such as cooperative education and internships
- C) helping First Nation and Inuit youth overcome barriers to employment

D) promotes the roles of education and skills in successfully participating in the labour market

There are other Indigenous education programs like the Post-Secondary Student Support Program and University-College Entrance Preparation Program funded by the Government of Canada through Indigenous Services Canada (ISC) to enhance the education and employment growth of Indigenous across Canada.

In January 2022, the labor market in Canada was subject to changes resulting from a range of factors, including industry developments, government regulations, and economic conditions. In brief, here is what happened: before the pandemic, Canada had consistently grown employment and comparatively low unemployment rates. On the other hand, the COVID-19 epidemic had a disastrous effect on the labor market, resulting in a high number of layoffs and a decrease in hiring in areas. However, the speed of recovery differed among industries and geographical regions in 2021. The COVID-19 pandemic's disproportionate impact impacted several businesses, including retail, hospitality, and tourism. Conversely, other areas, such as healthcare, technology, and logistics, experienced a rise in labor demand. Hiring procedures and workplace relations changed as remote work became more common in many industries.

The question is how much of the changes from 2022 post-COVID-19 impacted the Indigenous population in the labour market. Is it logical to say that the notable low employment rate in 2022 and 2023 among the Indigenous population was part of the effects of COVID-19? To dig further into employment analysis as it relates to the Indigenous population, I will do a correlation analysis to check the relationship between job vacancies and employment rates among Indigenous and non-Indigenous populations. The correlation analysis from data in Table # 2 and Table # 3 will answer the question of the impacts of change in 2022 and 2023 on the Indigenous and non-Indigenous populations regarding available job vacancies.

Table # 2 A (Employment rate and job vacancies Analysis) Canada Job Vacancies Q3-2022 to Q3-2023

Geography ⁴	Statistics	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023
Canada (map)	Number					
	Job vacancies ⁵	991,680 ^A	855,890 ^A	781,205 ^A	818,195 ^A	737,530 ^A
	Payroll employees ⁶	16,835,515 ^A	17,068,765 ^A	16,865,200 ^A	16,979,545 ^A	17,253,640 ^A
	Percentage					
	Job vacancy rate ⁷	5.6 ^A	4.8 ^A	4.4 ^A	4.6 ^A	4.1 ^A
	Dollars					
Newfoundland and Labrador (map)	Number					
	Job vacancies ⁵	8,185 ^A	6,890 ^B	5,795 ^B	8,650 ^A	7,300 ^B
	Payroll employees ⁶	210,735 ^A	201,965 ^A	193,395 ^A	196,105 ^A	214,010 ^A
	Percentage					
	Job vacancy rate ⁷	3.7 ^A	3.3 ^A	2.9 ^B	4.2 ^A	3.3 ^A
	Dollars					
Prince Edward Island (map)	Number					
	Job vacancies ⁵	4,090 ^B	3,370 ^B	3,010 ^C	4,100 ^B	3,240 ^B
	Payroll employees ⁶	72,135 ^A	70,365 ^A	64,600 ^A	67,700 ^A	74,415 ^A
	Percentage					
	Job vacancy rate ⁷	5.4 ^B	4.6 ^B	4.5 ^C	5.7 ^B	4.2 ^B
	Dollars					
Nova Scotia (map)	Number					
	Job vacancies ⁵	22,960 ^A	21,700 ^A	18,765 ^A	20,580 ^A	18,650 ^A
	Payroll employees ⁶	419,620 ^A	419,140 ^A	412,560 ^A	417,630 ^A	431,240 ^A
	Percentage					
	Job vacancy rate ⁷	5.2 ^A	4.9 ^A	4.4 ^A	4.7 ^A	4.1 ^A
	Dollars					
	Number					
	Job vacancies ⁵	22,960 ^A	21,700 ^A	18,765 ^A	20,580 ^A	18,650 ^A
	Payroll employees ⁶	419,620 ^A	419,140 ^A	412,560 ^A	417,630 ^A	431,240 ^A
	Percentage					
	Job vacancy rate ⁷	5.2 ^A	4.9 ^A	4.4 ^A	4.7 ^A	4.1 ^A
	Dollars					

New Brunswick (map)		Percentage			
	Job vacancy rate ^Z	4.7 ^A	4.1 ^A	3.8 ^A	3.5 ^A
		Dollars			
	Average offered hourly wage ⁸	20.90 ^A	20.75 ^A	22.40 ^A	22.50 ^A
Quebec (map)		Number			
	Job vacancies ⁵	246,230 ^A	208,795 ^A	196,510 ^A	202,095 ^A
	Payroll employees ⁶	3,820,720 ^A	3,870,040 ^A	3,794,630 ^A	3,832,900 ^A
		Percentage			
	Job vacancy rate ^Z	6.1 ^A	5.1 ^A	4.9 ^A	5.0 ^A
		Dollars			
	Average offered hourly wage ⁸	23.70 ^A	24.00 ^A	24.65 ^A	24.30 ^A
Ontario (map)		Number			
	Job vacancies ⁵	372,075 ^A	323,100 ^A	279,725 ^A	284,025 ^A
	Payroll employees ⁶	6,512,280 ^A	6,625,010 ^A	6,564,190 ^A	6,580,290 ^A
		Percentage			
		Dollars			
	Average offered hourly wage ⁸	24.65 ^A	25.55 ^A	26.15 ^A	26.05 ^A
Manitoba (map)		Number			
	Job vacancies ⁵	32,290 ^A	25,855 ^A	28,140 ^A	27,250 ^A
	Payroll employees ⁶	600,580 ^A	610,410 ^A	602,865 ^A	604,315 ^A
		Percentage			
	Job vacancy rate ^Z	5.1 ^A	4.1 ^A	4.5 ^A	4.3 ^A
		Dollars			
	Average offered hourly wage ⁸	21.60 ^A	21.95 ^A	22.25 ^A	22.80 ^A
		Number			
Saskatchewan (map)		Number			
	Job vacancies ⁵	25,445 ^A	23,500 ^A	23,205 ^A	26,385 ^A
	Payroll employees ⁶	473,415 ^A	485,555 ^A	481,405 ^A	484,280 ^A
		Percentage			
	Job vacancy rate ^Z	5.1 ^A	4.6 ^A	4.6 ^A	5.2 ^A
		Dollars			
	Average offered hourly wage ⁸	22.45 ^A	22.10 ^A	23.40 ^A	23.15 ^A
Alberta (map)		Number			
	Job vacancies ⁵	103,380 ^A	93,210 ^A	86,655 ^A	94,145 ^A
	Payroll employees ⁶	1,984,925 ^A	2,007,845 ^A	1,999,585 ^A	2,020,890 ^A
		Percentage			
	Job vacancy rate ^Z	5.0 ^A	4.4 ^A	4.2 ^A	4.5 ^A
		Dollars			
	Average offered hourly wage ⁸	24.80 ^A	25.35 ^A	25.60 ^A	25.10 ^A
British Columbia (map)		Number			
	Job vacancies ⁵	156,645 ^A	132,305 ^A	123,600 ^A	132,685 ^A
	Payroll employees ⁶	2,353,935 ^A	2,394,565 ^A	2,381,510 ^A	2,399,060 ^A
		Percentage			
	Job vacancy rate ^Z	6.2 ^A	5.2 ^A	4.9 ^A	5.2 ^A
		Dollars			
	Average offered hourly wage ⁸	25.45 ^A	26.55 ^A	26.50 ^A	25.80 ^A

		Number				
Yukon (map)	Job vacancies ⁵	1,720 ^B	1,290 ^C	1,190 ^C	1,330 ^D	1,175 ^C
	Payroll employees ⁶	19,495 ^A	19,230 ^A	18,330 ^A	18,560 ^A	20,170 ^A
		Percentage				
	Job vacancy rate ⁷	8.1 ^B	6.3 ^C	6.1 ^C	6.7 ^C	5.5 ^C
		Dollars				
	Average offered hourly wage ⁸	26.20 ^A	28.70 ^B	28.90 ^A	28.90 ^B	28.45 ^B
		Number				
Northwest Territories (map)	Job vacancies ⁵	1,820 ^D	1,525 ^D	1,410 ^C	1,365 ^D	1,180 ^C
	Payroll employees ⁶	21,780 ^B	21,775 ^B	22,045 ^A	22,070 ^A	22,565 ^A
		Percentage				
	Job vacancy rate ⁷	7.7 ^D	6.5 ^D	6.0 ^C	5.8 ^C	5.0 ^C
		Dollars				
	Average offered hourly wage ⁸	31.15 ^C	32.70 ^C	36.50 ^B	34.35 ^A	35.65 ^B
		Number				
Nunavut (map)	Job vacancies ⁵	405 ^C	530 ^C	640 ^C	700 ^C	600 ^D
	Payroll employees ⁶	15,315 ^A	15,980 ^A	15,690 ^A	15,890 ^A	16,370 ^A
		Percentage				
		Dollars				
	Average offered hourly wage ⁸	35.15 ^A	34.25 ^A	36.70 ^A	30.35 ^A	31.55 ^B

Source: Statistics Canada / Indigenous Services Canada (ISC)

We will use Canada vacancy rate data from Q3 2022 to Q3 2023 in Table # 2A and Canada employment rate from 2022 to 2023 in Table # 2B in our correlation analysis. We check and test the following:

- The consistency of employment growth of Indigenous and non-Indigenous populations and any discrepancy
- If available vacancies and employment reflect a true share of the Indigenous population labour force
- The impact of designated Indigenous job positions and its reflection in the job vacancies and employment in the Canadian labour market

TABLE # 2 B (Employment Rate and Job Vacancies Analysis)

Canada Labour Force Population Percentage and Employment Rate 2019 to 2023

Labour force characteristics		Employment rate ²				
Sex		Both sexes				
Age group		15 years and over				
Geography ³	Indigenous group ¹	2019	2020	2021	2022	2023
Percentage						
Canada (map)	Total population ⁴	62.2	58.0	60.3	61.9	62.0
	Indigenous population	57.4	52.4	56.8	60.9	58.7
	Non-Indigenous population	62.4	58.2	60.5	61.9	62.1
Atlantic region ⁵ (map)	Total population ⁴	56.1	53.3	55.2	56.2	56.3
	Indigenous population	52.9	52.3	54.5	53.4	55.7
	Non-Indigenous population	56.3	53.4	55.2	56.3	56.4
Quebec (map)	Total population ⁴	61.8	57.9	60.1	61.6	62.1
	Indigenous population	53.6	46.7	51.6	59.2	52.5
	Non-Indigenous population	61.9	58.1	60.3	61.7	62.3
Ontario (map)	Total population ⁴	61.6	57.4	59.8	61.7	61.7
	Indigenous population	56.6	52.4	55.9	59.6	60.7
	Non-Indigenous population	61.7	57.6	59.9	61.7	61.8

Manitoba (map)	Total population ⁴	63.3	59.9	61.9	63.0	63.3
	Indigenous population	56.7	53.4	57.4	59.3	59.8
	Non-Indigenous population	64.2	60.9	62.6	63.6	63.9
Saskatchewan (map)	Total population ⁴	65.1	61.3	62.7	64.0	63.7
	Indigenous population	53.7	52.7	56.9	58.9	57.0
	Non-Indigenous population	66.4	62.4	63.5	64.7	64.6

Alberta (map)	Total population ⁴	66.7	60.9	63.6	65.5	65.4
	Indigenous population	61.4	53.4	60.4	66.2	63.7
	Non-Indigenous population	67.0	61.3	63.8	65.5	65.5
British Columbia (map)	Total population ⁴	63.1	58.2	61.1	62.0	61.5
	Indigenous population	61.9	54.3	59.1	65.4	57.0
	Non-Indigenous population	63.2	58.4	61.2	61.8	61.8

Source: Statistics Canada / Indigenous Services Canada (ISC)

Assumptions of the employment rate and job vacancies correlation analysis between Indigenous and non-Indigenous population:

1. Information used in this analysis is based on the secondary information collected and does not represent any data outside this scope of analysis.
2. The recent data used is limited and does not include 2024 published data, which wasn't accessible; this was factored into the scope of this research analysis.

9) The analysis graph is designed to be adaptable, using approximate numbers to accommodate the margin of error. This flexibility ensures that the analysis remains robust, even within the limitations of page outlines.

4. The correlation coefficient range from 0 to 0.5 indicates that the variables are less correlated. If the correlation coefficient ranges from 0.5 to 1.0, it indicates that the variables are highly correlated. This coefficient range will be used to test and confirm if there is a true relation between the job vacancy rate and employment rate variables of the Indigenous population.

5. The hypothesis findings will serve as an inference to support, improve, and evaluate other previous works done by researchers and writers on the Indigenous population.

13) This research content is not intended to alter or change any government of Canada's existing program or policies for the Indigenous population. Instead, it serves as an inspiration, supporting the building of bridges to aid true reconciliation work with the indigenous people of Canada.

8. I will only focus on the national rather than the regional view. The data for Canada's (national) employment rate for 2022 and 2023 will be solely used in the correlation analysis. The regional and provincial employment rate data will not be used in this correlation analysis as shown in Table 2B. I will also use only data on Canada's (national) job vacancies from Q3-2022 to Q3 2023 as shown in Table 2A. The regional and provincial job vacancies data will not be used

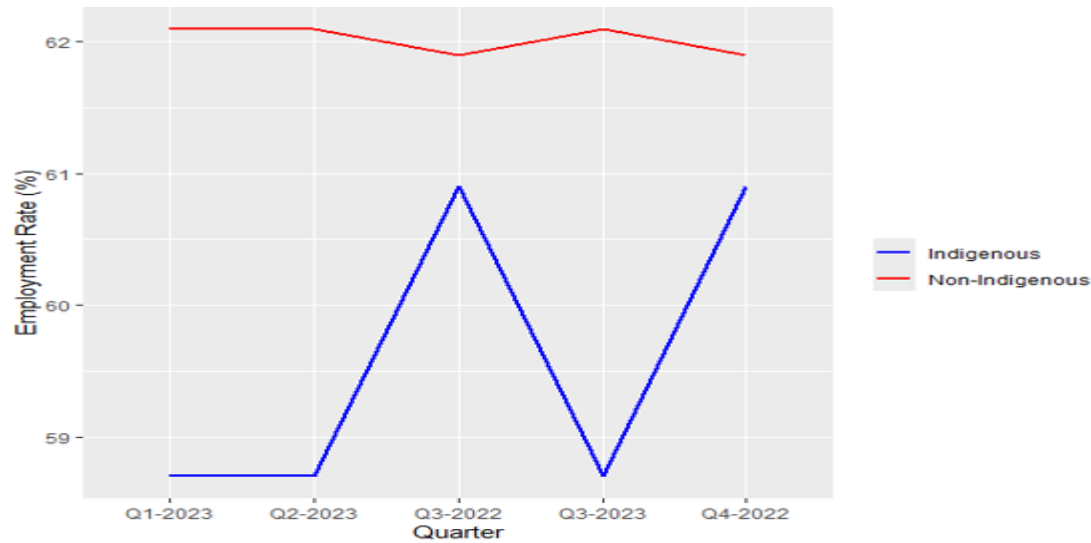
9. The scope of job vacancy rate and employment rate analysis will not focus on other socio-economic factors causing unemployment. For this research analysis, I will focus on education and skill-learning factors.

Diagram 2.1 Correlation Plot Between Job Vacancy Rate & Employment Rate for the Indigenous & Non-Indigenous Population



Source: E.Ngenegbo Research Analysis

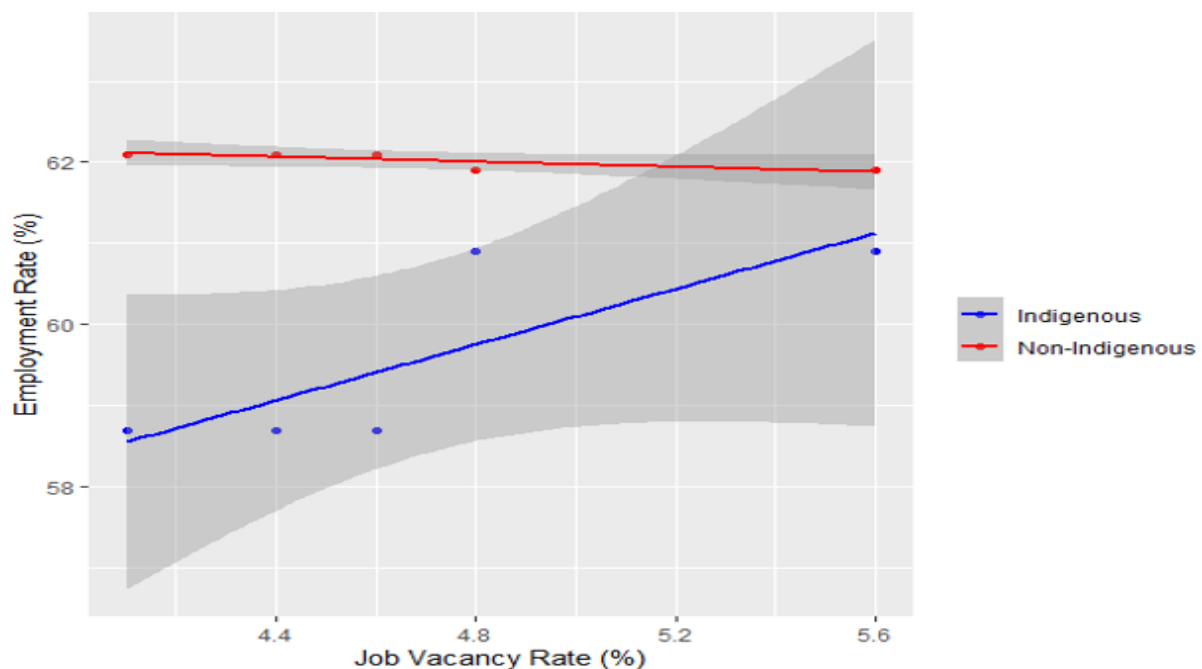
Diagram 2.2 Employment Rates Graph From Q3-2022 to Q3-2023



Source: E. Ngenegbo Research Analysis

Table 2A. Canada Job Vacancies		Table 2B. Canada Employment Rate		
Q4 2022	5.60%	2022	Indigenous Population	60.90%
Q4 2022	4.80%	2022	Non-Indigenous Population	61.90%
Q1 2023	4.40%	2023	Indigenous Population	58.70%
Q2 2023	4.60%	2023	Non-Indigenous Population	62.10%
Q3 2023	4.10%			

Diagram 2.3 Correlation (Scatter Plot) Between Job Vacancy Rate and Employment Rate



Source: E. Ngenegbo Research Analysis



Diagram 2.3's scatter plot indicated a significant positive correlation of approximately 0.81 between the job vacancy rate and the employment rate for the Indigenous population, indicating that as job rates increase, so does the Indigenous employment rate. Conversely, there is a negative correlation of approximately -0.81 between the job vacancy rate and the employment rate for the non-Indigenous population.

Job Vacancies and Employment Category Hypothesis Findings in 2023

Coefficient Range between Job Vacancy & Employment	Population Group	Indication
0.81	Indigenous	Positive
-0.81	Non-Indigenous	Negative

The hypothesis and findings suggest a low employment growth between 2022 and 2023 for the Indigenous population. The Indigenous population gained some available jobs between 2022 and 2023. This correlation analysis also suggests that Indigenous-designated equity jobs were filled in the job market. Researchers on the Indigenous employment equity suggested there was employment growth for the Indigenous population in 2022 and 2023 compared to the previous year, even though the non-Indigenous population had higher employment growth in 2022 and 2023.

Table Diagram 2.4: Representation of designated group with National Research Council (NRC) workforce FY 2021-2022 and FY 2022-2023

Designated Group	2021-2022				2022-2023			
	LMA ¹	NRC Rep.	Result ²	Gap	LMA ¹	NRC Rep.	Result ²	Gap
Women	37.6%	38.5%	102.6%	41	38.2%	39.5%	103.6%	61
Indigenous Peoples	2.1%	1.3%	60.5%	-36	2.2%	1.3%	62.5%	-35
Persons with disabilities	8.5%	3.8%	44.6%	-201	8.5%	4.9%	57.4%	-159
Racialized persons	23.3%	21.9%	93.9%	-61	23.3%	23.4%	100.4%	4

¹ Source: 2016 Census and the 2017 Canadian Survey on Disability

² The result is calculated as the NRC representation relative to labour market availability (NRC rep/LMA).

Source: National Research Council (NRC) Canada

The National Research Council (NRC) has the mandate to report the progress and implementation of the Workforce and Workplace Equity, Diversity, and Inclusion (EDI) Strategy in Canada, as well as put mechanisms in place to consult employees concerning Employment Equity (EE) issues. Diagram 2.4 shows the representation of Indigenous Peoples relative to Labour Market Availability (LMA) at the end of FY 2022-2023 was 62.5%, an increase from 60.5% reported in the previous fiscal year. In terms of employee count, the representation of Indigenous Peoples was below Labour Market Availability (LMA) estimates by 35 individuals. (National Research Council publication, March 2023)

Employment Rate of Aboriginals in Canada from 2007 to 2022

Diagram 2.5



Source: Statista Research Department

According to diagram 2.5 from Statista Research (a privately operated research institute) report from 2007 to 2022, the employment rate of Aboriginals in Canada has fluctuated slightly. In 2022, the employment rate of Aboriginals in Canada stood at 60.5 percent, an increase from the previous year when the employment rate stood at 56.4 percent. (Statista Research Department publication March 11, 2024) The facts of my hypothesis test and previous research done by other researchers and writers which I referenced, suggest there is consistency of employment growth in the Indigenous population in 2022 and 2023 regardless that non-Indigenous populations had a higher growth in 2022 and 2023. The employment equity of designated job vacancies (especially in public service) represents a fairly true employment share of the Indigenous population's labour force especially among the educated and professional classes of the Indigenous population. The introduction of government education skill enhancement initiative programs in 2023 that I highlighted was aimed to accommodate the noticeable employment gap in less education among the Indigenous population. There is a need to reassess the impact of these government of Canada education skill enhancement programs in 2024 and 2025 to check the employment growth among the less-educated Indigenous population.

My research scope will be limited to education and learning as the only factors causing the gap in employment. Other factors contributing to the employment issues in the Indigenous communities will not be evaluated in this analysis. Some other factors linked to the Indigenous employment crisis are high drug usage, mental illness, environmental issues, family issues, etc. Liesha Prabhudesai said: *"Other major factors affecting Indigenous Canadians' employment struggles include environmental racism, mental illnesses — which often inform alcohol and drug usage — and poverty"* (Voice of Our Nation publication – The Unemployment Crisis of Indigenous People in Canada by Liesha Prabhudesai publication, 26 July 2022)

TABLE # 3A (Population and Income Power Output Analysis)

Indigenous Population Profile, 2021 Population Census

Characteristic	[Country]								
	Data quality Map Related data								
	Total - Gender, Total - Age groups, Total - Residence on or off reserve								
	Total - Indigenous identity ¹	Indigenous identity ²	Single Indigenous responses ³	First Nations (North American Indian)	Métis	Inuk (Inuit)	Multiple Indigenous responses ⁴	Indigenous responses not included elsewhere ⁵	Non- Indigenous identity
Labour force status									
Total - Labour force status for the population aged 15 years and over in private households - 25% sample data ⁷⁶	30,335,920	1,348,035	1,299,245	764,750	486,625	47,875	20,210	28,580	28,987,880
In the labour force	19,310,345	801,500	773,150	424,920	321,125	27,100	12,785	15,565	18,508,850
Employed	17,321,700	680,430	656,115	354,005	279,905	22,205	10,705	13,610	16,641,270
Unemployed	1,988,640	121,065	117,035	70,915	41,220	4,895	2,075	1,955	1,867,580
Not in the labour force	11,025,575	546,540	526,100	339,835	165,495	20,770	7,430	13,015	10,479,030
Participation rate	63.7	59.5	59.5	55.6	66.0	56.6	63.3	54.5	63.9
Employment rate	57.1	50.5	50.5	46.3	57.5	46.4	53.0	47.6	57.4
Unemployment rate	10.3	15.1	15.1	16.7	12.8	18.1	16.2	12.6	10.1

Source: Statistics Canada, 2021 Census of Population.

Indigenous identity (9) ⁸	Total - Indigenous identity ⁹	Indigenous identity ¹⁰	Single Indigenous responses ¹¹	First Nations (North American Indian)	Métis	Inuk (Inuit)	Multiple Indigenous responses ¹²	Indigenous responses not included elsewhere ¹³	Non- Indigenous identity
Income statistics (17)									
Total - Income statistics ^{14, 15, 16, 17, 18, 19}	30,335,915	1,348,040	1,299,250	764,755	486,620	47,870	20,215	28,580	28,987,880
With total income	29,242,930	1,270,440	1,223,900	712,850	465,390	45,655	19,035	27,510	27,972,490
Percentage with total income (%)	96.4	94.2	94.2	93.2	95.6	95.4	94.2	96.3	96.5
Median total income (\$)	41,200	34,800	34,800	32,400	39,200	33,200	34,800	36,000	41,200

Source: Statistics Canada, 2021 Census of Population

Assumptions of Population and Income Power Output Analysis

1. Information used in this analysis is based on the secondary information collected and does not represent any data outside the scope of this analysis.
2. I used only limited data from the 2021 Canada census population publication data; this limitation was factored into the scope of this research analysis. I can't do a test comparison because the next Canada census is in 2026.
3. I will assume that food is not the only means of sustenance as advocated by the Malthusian view which suggests that population growth will always outstrip the means of sustenance (food production). Malthus's theory advocates for checks on population growth to keep a balance level with food production.

4. I used the per capita income (average income) growth of the Indigenous population as the only means of sustenance in the face of population growth with no need to limit the population growth as Malthus's view advocated.
5. I assume that community development growth and population wellness are based on income power potential, high education levels, and employment rate penetration. I assume that the ability to earn a solid income drives economic growth and advancement.
6. For the scope of this research, I assume that income power has a simultaneous growth with population growth. Once income grows, there is no “ population growth trap”
7. Per capita income uses the overall income of a population and divides it by the total population, but this doesn't always provide an accurate representation of the standard of living. In other words, the data can be skewed, not accounting for income inequality. I will assume the Indigenous population has no wealth or income inequality.
8. I will assume the inflation rate is a constant for 2021. Per capita income doesn't reflect the inflation rate in an economy or community because prices rise over time and erode the purchasing power of money.
9. I will use the total Indigenous population but assume children are not included. Per capita income calculation normally includes children in the total population who don't earn any income, and this can skew the result.
10. All the components of national GDP income will not apply to the calculation of the per capita income analysis of the Indigenous population. I assume that all GDP income components it is factored into income which serves as an output in this analysis. I will use simple per capita income calculation as it applies to a small community population and not from a national macro point of view.

Components of Income Per Capita

$$\frac{\text{GDP}}{\text{population}} = \frac{\text{GDP}}{\text{hours worked}} \times \frac{\text{hours worked}}{\text{employment}} \times \frac{\text{employment}}{\text{labour force}} \times \frac{\text{labour force}}{\text{working-age population}} \times \frac{\text{working-age population}}{\text{total population}}$$



GDP per capita labour productivity hours worked per person employed 1-unemployment rate labour force participation rate demographic participation rate

Source: Conference Board of Canada

Per Capita Income = Total Income of Area / Total Population



Per Capita
Income Formula = $\frac{\text{Total Income of Area}}{\text{Total Population}}$



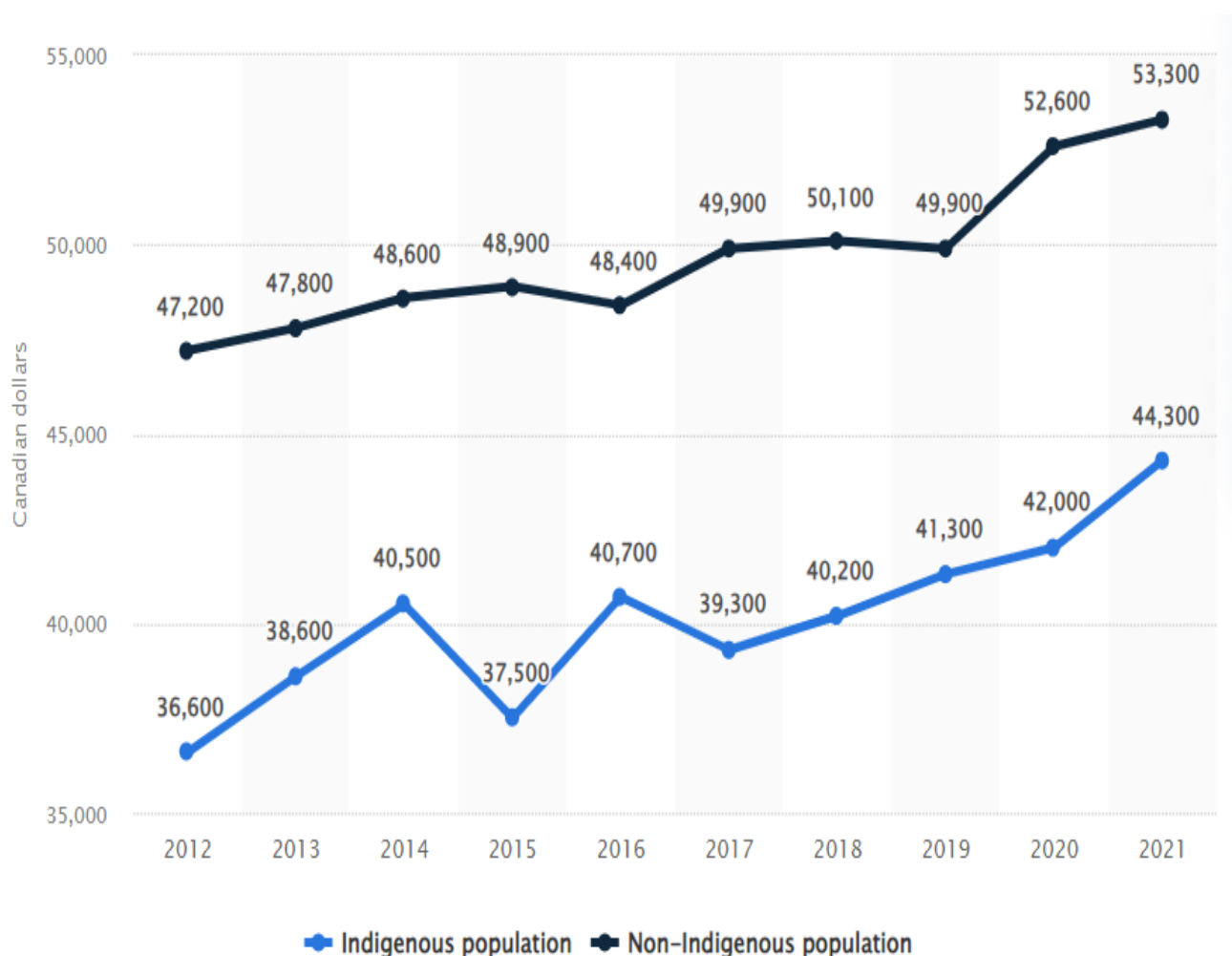

11. I used the 2021 Canada census data to compare the Indigenous and non-Indigenous per capita income, all things being equal.

12. According to the 2021 Census, there were 1.8 million Indigenous people, representing 5.0% of the total Canadian population. I will assume the population did not change and is still the same.

13. Per Capita Income in the context of this analysis means average income. The difference between the median income and average income suggests that the median income reflects typical middle-of-the-road incomes. The average income captures collective earnings across a population or group. This research will reference the Canadian median and average income to throw more light on this analysis.

Diagram 3.1

Average total income of the Indigenous and non-Indigenous population in Canada between 2012 and 2021



Source: Statista Research Department

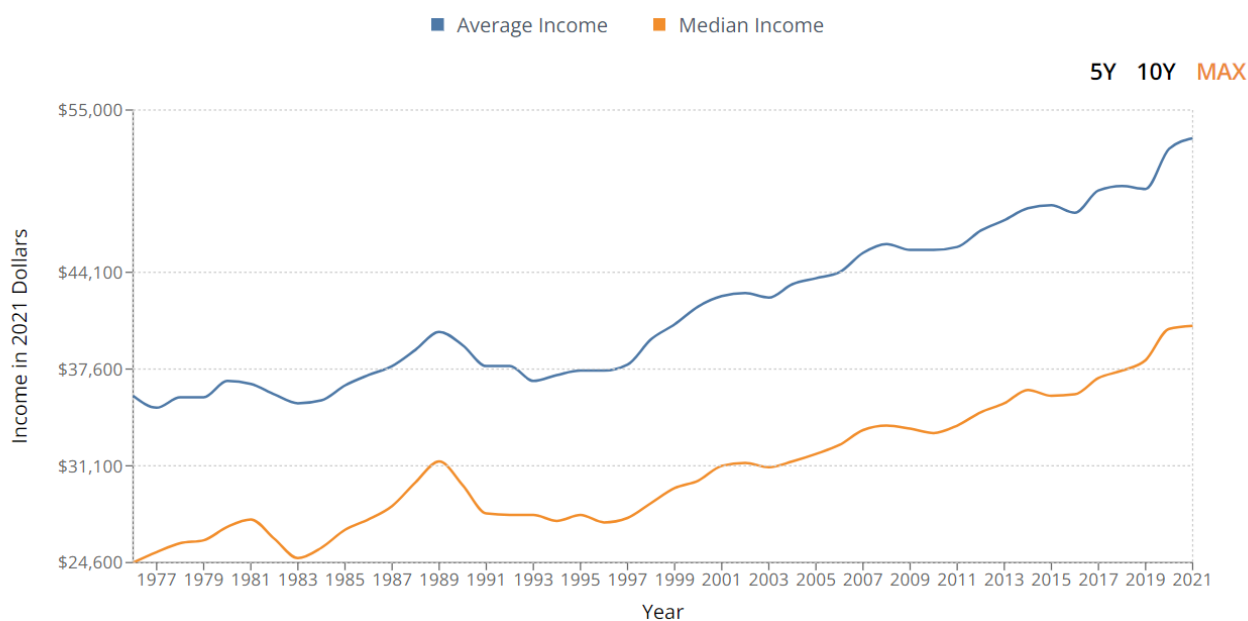
According to Statista research (Diagram 3.1) using 2021 census data, Canada's Indigenous populations (First Nations or Métis) had an average total income of 44,300 Canadian dollars, 9,000 dollars less than non-Indigenous populations. This gap in average income has fluctuated since 2012 but remains relatively stable overall. The year in which it was the smallest was 2016 when non-indigenous populations earned 7,700 dollars more than indigenous populations. The most unequal year in terms of average total income was 2015. (Statista Research Publication, March 2024)

Diagram 3.2

Canada Job Market Main Attribute 2017- 2021

Year↑	Over 16 Population (In thousands)	People with Income (In thousands)	Average Income (In \$)	Median Income (In \$)
2017	29,601	28,920	49,600	37,000
2018	30,022	29,482	49,900	37,500
2019	30,517	29,876	49,700	38,200
2020	30,730	30,331	52,400	40,300
2021	31,145	30,647	53,100	40,500

Sources: Labour Force Survey Canada



Sources: Labour Force Survey Canada

Diagram 3.3

Canada June 2023 – October 2023 Canada Average Employment Income

Month	Average Weekly Hours Worked (Main Job)	Average Hourly Wage Rate (\$)	Average Weekly Wage	Average Annual Salary
June 2023	35.9	33.12	\$1,221	\$63,492
July 2023	36.3	33.24	\$1,233	\$64,116
August 2023	36.3	33.47	\$1,244	\$64,688
September 2023	35.7	34.01	\$1,249	\$64,948
October 2023	35.6	34.08	\$1,247	\$64,844

Source: Labour Force Survey Canada

Population and Income Power Output Category Findings

My findings suggest that the Indigenous population's per capita income is \$44,300 against the non-Indigenous population with \$53,300 in 2021 from Diagram 3.1. The Canadian national median income is \$40,300 and the national average income is \$40,500 respectively in 2021 from Diagram 3.2. The median income reflects



typical middle-of-the-road income, while the average captures collective earnings across a population or group. The Canadian national average income was \$64,844 in October 2023. The scope of this research will use only 2021 data because of limited available data in the 2024 year.

My analysis findings suggest that the Indigenous population's per capita income (average income) is lower than the non-Indigenous population by \$9000, indicating there is a gap in 2021. This means that certain non-Indigenous populations have higher incomes than others compared to the Indigenous and non-Indigenous populations. When you blend the Indigenous and non-Indigenous population income, the national average income tends to mask the average income difference between the Indigenous and non-Indigenous population. Some of the mask and hidden income differential factors could be attributed to population size differences, group income brackets, population attributes, unaccounted Indigenous populations living in unreachable remote areas, and other socio-economic factors outside this study's scope. I will say there is still a need for a better income match between the Indigenous and non-Indigenous to justify the advancement of a better standard of living within the Indigenous population. I unequivocally affirm that when you empower a community with good education and skills, the community will earn more income, and then more income will fund the necessary food production needed as the population grows.

My research does not agree that you need to check population growth as Malthus's view suggests, which argues that population grows exponentially while food production grows linearly and recommends “preventive checks” like delayed marriages, and birth control on the population to avoid a “growth trap”. Education, innovation, technological advancement, and skill enhancement bring income to sustain food production. Income is the basis of sustenance and not food. Income is a function of education and employment, which brings sustenance expressed as $I = f(E, Em) = Ps$ where I is income, E is education, Em is employment, and Ps is population sustenance. My research makes a case with some assumptions that income is a means of sustenance; $I = \alpha + \beta E + \beta Em = Ps$ where: I is Income, α is a constant, βE is education, βEm is employment, Ps is population sustenance in the face of population growth with no need to limit the population growth as Malthus advocated. The Indigenous population is not fully at the point of comparing their per capita income equally with the non-indigenous population. The 2026 census will re-evaluate the government of Canada's Indigenous employment, education, and social development initiatives and check the status of Indigenous income and education and employment rating. There is a need to recheck the Indigenous average income. Most of the information and data used in this research analysis is based on the 2021 Canada census.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

This research has gone deep to analyze the government of Canada's path to reconciliation with Indigenous people and weigh the impact of the reconciliation inputs on socio-economic benefit outputs. Some of the areas of the reconciliation, aimed at achieving several goals include:

1 Healing and Justice: Acknowledging the historical injustices inflicted upon Indigenous peoples, including the legacy of residential schools, forced assimilation policies, and systemic discrimination, and working towards healing and justice for affected communities.

2 Respect for Indigenous Rights: Recognizing and respecting the inherent rights of Indigenous peoples, including self-determination, land rights, and cultural rights, as affirmed in various treaties, agreements, and international law.

3 Cultural Revitalization: Supporting Indigenous cultures, languages, and traditions to thrive and flourish, reversing the impacts of colonialism on Indigenous identity and heritage.

4 Socio-Economic Equity: Addressing socio-economic disparities between Indigenous and non-Indigenous peoples, including access to education, healthcare, housing, employment, and economic opportunities.



5 Nation-to-Nation Relationships: Fostering meaningful and respectful nation-to-nation relationships between the Canadian government and Indigenous nations based on mutual recognition, cooperation, and partnership principles.

6 Reconciliation: Building trust, understanding, and reconciliation between Indigenous and non-Indigenous peoples through dialogue, education, and collective action.

7 Implementing Truth and Reconciliation Commission Calls to Action: Taking concrete steps to implement the recommendations of the Truth and Reconciliation Commission, aimed at addressing the legacy of residential schools and advancing reconciliation in Canada.

The goal of the reconciliation is to work collaboratively with Indigenous people to address the historical injustices, promote Indigenous rights and self-determination, and build a more equitable and inclusive society for all Canadians. Over the years, efforts have been made by the government of Canada to reconcile and address these challenges and pains faced by the Aboriginal communities in Canada. In 1985, the government of Canada introduced Bill C-31 to address and amend the Indian Act to conform with gender equality under the Canadian Charter of Rights and Freedom. As part of a lasting effort by the government of Canada to bring recognition to Aboriginal people, the Royal Commission on Aboriginal People was established in 1991. The purpose of this commission is to “investigate” the evolution of relationships among Aboriginal people, the Canadian government, and the society as a whole (Indian and Northern Affairs Canada Publication, 1996).

In 2008, the government publicly apologized for the inhuman treatment of children in the Indian Residential schools in indigenous communities which remains a sad chapter in Canadian history. The government of Canada established the Truth and Reconciliation Commission (TRC) in 2008 primarily to promote healing, educate, listen, and make recommendations on the Indian Residential School system experience and legacy (Christian Aboriginal Infrastructure, 2015)

The government of Canada has injected funds and resources as part of an ongoing reconciliation move to advance education, health, social, and economic programs within the Indigenous communities across Canada. The government of Canada has committed to improving the economic and social development of Indigenous communities across Canada. We can not discuss “reconciliation” without talking about how well people are fed, possess access, and live in a healthy environment which connects with a society free of violent discrimination, with tolerable levels of equality, where the sick receive proper medical care and people do not have to sleep on the sidewalks. Factually, most of us would insist that the “minimal” requirement for a “developed” nation is that physical quality of life be high and be so uniform, rather than being restricted to incongruously affluent minority (Debraj Ray, 1998)

The Canada National Advisory Council on Poverty publication reaffirmed that there is poverty experience among the First Nation, Inuit, and Metis populations which is a result of the negative impact of colonization. The government of Canada introduced a new approach to addressing the needs of the Indigenous people and adopted a “Distinction-Based Approach” that recognizes the rights, interests, and circumstances of First Nation, Metis, and Inuit communities. This Distinction Based Approach is to address housing issues, early learning/Childcare, employment, and training funding programs. The National Advisory Council on Poverty report indicates that despite the government of Canada's incentives and promises, the Indigenous people are still experiencing socio-economic lack. The National Advisory Council on Poverty publication mentioned: “*First Nation people are more likely to experience poverty in its most notable Forms (income, employment, education, and housing)*”

This research, from economics of development point of view, answered what development means and related it to performance, finding variables that correlate well with the multifaceted process and results of development inputs from the government of Canada. This research examined the impacts of the government of Canada's funding and investment initiatives to advance the development and alleviate poverty within the Indigenous population. This research finding brought some insight into the impacts of Canada's government fund initiatives and reconciliation programs on the Indigenous population based on the scope of this research, which is limited to income, education, and employment variables.



The income, education, and employment variables were used to test my hypothesis to determine how the Indigenous population has been impacted by the government's socio-economic incentives in selected key areas classified into three sections with assumptions for each. The three key classifications are:

1. Education level impact and employment rate: using Education Levels Ratio Analysis of Indigenous and Non-Indigenous Population. The analysis checked the implementation impact of education and schooling programs funded by the government for the Indigenous population in 2022 and 2023 as a reference point — the different levels of education growth between the Indigenous and non-Indigenous were analyzed using ratio analysis. My hypothesis test was evaluated to check the impact of education growth on Indigenous and non-Indigenous populations.

2 Employment rate and job vacancies: using National Job Vacancies and Employment Rate Correlation Analysis between Indigenous and Non-Indigenous Population. I checked the impact of government-initiated self-identification and equity employment programs for the Indigenous population for Q3-2022 and Q-2023 years as a reference point. I did a correlation analysis between the employment rate and job vacancies of the Indigenous and non-Indigenous populations. My hypothesis test was evaluated to check the significant impact.

3 Population and Income power output: using: Per Capita Income Earnings Analysis. I analyzed the average income of the Indigenous and non-Indigenous population for the 2021 year as a reference point. I used ratio analysis to check the gap between the per capita income of the Indigenous and non-Indigenous populations as a measure to evaluate the standard of living and wellness of the Indigenous population. My findings checked the significant impact and argued against the Malthusian view which used food as a singular means of population sustenance.

Efforts have been made by the Canadian government, Indigenous organizations, and other stakeholders to address these disparities through initiatives focused on education, skills training, economic development, and reconciliation. However, significant work remains to be done to achieve meaningful and sustainable improvements in the income, education, and employment of Indigenous peoples in Canada. The purpose of my research findings is to contribute to the effort to narrow the disparities between Indigenous and non-Indigenous populations with an analysis focused on the income, education, and employment of Canada's Indigenous population.

Analysis and Findings Summary

The interpretation of my research findings can be classified into three areas of my research analysis namely: (1) education level impact and employment rate, (2) employment rate and job vacancies, and (3) population and income power output.

(1) Education Level Impact and Employment Category Hypothesis Findings in 2023

Education Level	Differential Change	Population Group in Advantage	Indication
Less than school	0.28	Non-Indigenous	Severe
High school	0.13	Non-Indigenous	Severe
Completed post-education	0.05	Non-Indigenous	Not Severe

My findings indicate that the most affected Indigenous population is the population with less “than high school education” with 0.28 points (28%) differential gap compared to the non-Indigenous population in the labour market. The Indigenous population with “complete post education” is least impacted negatively with 0.05 points (5%) gap compared to the non-Indigenous population. My findings suggest that the Indigenous population with less education is more vulnerable to experiencing economic hardship than the highly educated population segment which is supported by other studies done by other institutions and researchers which equally suggests that the most impacted Indigenous population segment is those with less education. The question remains what the government of Canada is doing to empower the Indigenous population with less



education, and this was answered through the Truth and Reconciliation Commission (TRC) Canada in its June 2023 publication. The Truth and Reconciliation Commission (TRC) has called for a revamping of education systems to include Indigenous perspectives, histories, and cultures. This includes integrating Indigenous knowledge into mainstream education curricula and providing resources for Indigenous students to access education which includes initiatives aimed at bridging education and employment gaps like:

1 Introduction of Skills for Success Program to provide project funding to fund 20 organizations that will support skills and employment training. The funding will map 6 of these projects exclusively to solve the education needs of Indigenous people

2 The announcement of \$197.7 Million from 2023 to 2025 to support work placement for students, aiming at creating work-integrated learning opportunities

3 Indigenous Services Canada (ISC) signing 10 regional education agreements with First Nation partners for education transformation to boost education and learning and support co-development distinctions based post-secondary education strategies for First Nations, Inuit, and Metis recipients

The government of Canada has introduced various education programs to promote education and reduce skill shortages within the Indigenous communities across Canada. Some of these programs include the Post-Secondary Partnership Program. These programs support First Nations and Indigenous communities in defining their own partnerships with educational institutions and increasing the availability of post-secondary education programs tailored to First Nations cultural and educational needs. The post-secondary partnership program funding allocations are determined by a 2-step process: (1) regional allocations are made based on First Nations population distribution (2) First Nations designated and directed organizations in each region that will work with Indigenous Services Canada (ISC) in the allocation of funds according to program guidelines – (Indigenous Services Canada ISC Publication, 2024)

The government of Canada has skill-building programs for the less educated to enhance their employment skills and job acquisition through the First Nations and Inuit Skills Link Program in 2024. This skill-building program supports activities that assist youth in gaining the essential skills to help them gain employment, function well in the workplace, and learn about job and career options. What is included in this skill-building program according to Indigenous Services Canada includes supporting the development and enhancement of essential employability skills and knowledge among First Nations and Inuit youth aimed at equipping them to participate and succeed in the current and future labour markets, such as communication, problem-solving, and working with others to achieve the following:

- 1) Exposing youth to a variety of career options and helping youth acquire skills by providing wage subsidies for mentored work experiences.
- 2) Supporting the provision of mentored school-based work and study opportunities such as cooperative education and internships.
- 3) Helping First Nation and Inuit youth overcome barriers to employment.
- 4) Promotes the roles of education and skills in successfully participating in the labour market.

(2) Job Vacancies and Employment Category Hypothesis Findings in 2023

Coefficient Range between Job Vacancy & Employment	Population Group	Indication
0.81	Indigenous	Positive
-0.81	Non-Indigenous	Negative

The hypothesis and findings suggest a low employment growth between 2022 and 2023 for the Indigenous



population. There is a positive coefficient of 0.81 for the Indigenous population compared to the non-Indigenous population with a negative coefficient of -0.81 in terms of available jobs between 2022 and 2023. This correlation analysis also suggests that Indigenous-designated equity jobs were filled in the job market. Other studies by researchers on Indigenous employment equity suggested there was employment growth for the Indigenous population in 2022 and 2023 which was supported by the National Research Council (NRC) which reports the progress and implementation of the Workforce and Workplace Equity, Diversity, and Inclusion (EDI) Strategy in Canada, as well as implementation of mechanisms in Employment Equity (EE) issues. The National Research Council (NRC) shows that the representation of Indigenous Peoples relative to Labour Market Availability (LMA) at the end of FY 2022-2023 was 62.5% indicating a progress move. (National Research Council publication, March 2023) Another report from a private independent research institute Statista suggested that in 2022, the employment rate of Aboriginals in Canada stood at 60.5 percent, an increase from the previous year when the employment rate stood at 56.4 percent. (Statista Research Department publication March 11, 2024)

The facts of the employment rate and job vacancies correlation hypothesis test suggest that previous research done by other researchers which I referenced, supports employment consistency growth in the Indigenous population in 2022 and 2023 regardless that non-Indigenous populations had higher growth in 2022 and 2023. The employment equity of designated job vacancies (especially in public service) represents a fairly true employment share of the Indigenous population's labour force especially among the educated and professional group.

(3) Population and Income Power Output Category Findings

My findings suggest that the Indigenous population's per capita income is \$44,300 against the non-Indigenous population with \$53,300 in 2021. The Canadian national median income is \$40,300 and the national average income is \$40,500 respectively in 2021 from Diagram 3.2. The median income reflects typical middle-of-the-road income, while the average captures collective earnings across a population or group. My analysis findings indicate that the Indigenous population's average income was higher than the national average in Canada in 2021. The Canadian national average income was \$64,844 in October 2023, a difference of \$24,344 from the 2021 data. The scope of this research will use only 2021 data because of limited available data in the 2024 year.

My analysis findings suggest that the Indigenous population's per capita income (average income) is lower than the non-Indigenous population by \$9000, indicating there is a gap. This means that certain groups of non-Indigenous population make way higher income than others when you compare the Indigenous and non-Indigenous populations. When you blend the Indigenous and non-Indigenous population income, the national average income tends to mask the average income difference between the Indigenous and non-Indigenous population. Some of the mask and hidden income differential factors could be attributed to population size differences, group income brackets, population attributes, unaccounted Indigenous populations living in unreachable remote areas, and other socio-economic factors outside this study's scope. There is still a need for a better income match between the Indigenous and non-Indigenous to justify advancement and a better standard of living within the Indigenous population. I unequivocally affirm that when you empower a community with good education and skills, more income will be generated. The generation of more income will fund the necessary food production needed as the population grows.

My research refutes the need to check population growth as Malthus's view suggests, which argues that the population grows exponentially while food production grows linearly and recommends “preventive checks” like delayed marriages, and birth control on the population to avoid a “growth trap”. Education, innovation, technological advancement, and skill enhancement bring income to sustain food production. Income is the basis of sustenance and not food. Income is a strong determinant of output from micro and macro economics viewpoints.

Income is a function of education and employment, which brings population sustenance expressed as $I = f(E, E_m) = P_s$ where I is income, E is education, E_m is employment, and P_s is population sustenance. My research makes a case with some assumptions that income is a means of sustenance; $I = \alpha + \beta E + \beta E_m = P_s$ where: I is



Income, α is a constant, βE is education, βE_m is employment, P_s is population sustenance in the face of population growth with no need to limit the population growth as Malthus proposed.

LIMITATIONS SUMMARY

I encountered several limitations in writing and analyzing data collected from different published sources. Despite these challenges, secondary data analysis remains a valuable approach in research, especially when used judiciously alongside primary data collection methods. The use of secondary data in my research analysis offered me many advantages, such as saving time and resources, accessing large datasets, and enabling comparisons across different studies or populations. However, it also comes with its own set of difficulties and limitations:

1. Reliability of Data Sources: The quality of the secondary data is highly dependent on its original source and is beyond my control. Biases, errors, or discrepancies in the data could jeopardize the reliability and validity of one's research. I took the necessary precautions to ensure that all data sources were trustworthy to avoid validity issues.

2. Data Accessibility Collection I have limited control over the collection process and the design of the original study that generated the data. This lack of control can make it challenging to ensure that the data aligns perfectly with the research needs or hypotheses.

3. Availability of Data: Some of the data I needed were unavailable during this research analysis. I can only use the Canada 2021 census data because the next census is scheduled for 2026. I did not have access to comprehensive 2024 data because most of the 2024 data was not yet published at the time of this research analysis. Other issues contributed to the inaccessibility like legal or ethical restrictions. Some of the publicly available datasets require permissions or subscriptions, limiting their accessibility.

4. Understanding of Context: Secondary data often lacks the context in which it was collected. Without a thorough understanding of the original study's methodology, sampling techniques, and population characteristics, misinterpretations or incorrect conclusions may arise.

5. Data Aggregation Issues: There are about 600 indigenous communities across Canada. My research only used inference to compensate for the large aggregate data of Indigenous communities, such as census data or industry reports, which may not capture individual-level variations within the individual Indigenous communities.

6. Missing Data Issues: Secondary data may contain missing or incomplete data from the original source which can introduce biases or inaccuracies into the analysis.

7. Remoteness of the communities: I opted to use secondary data against conducting a primary sample survey because of the inaccessibility and remoteness of some of the Indigenous reserves and communities across Canada

8. Sensitivity of Cultural Difference: Indigenous cultures often have unique protocols, traditions, and worldviews that must be respected. Conducting research without proper understanding and sensitivity to these cultural aspects can lead to misunderstanding, misrepresentation, or exploitation

9. Historical Dilemma and Trust Issues: There is a long history of colonization, exploitation, and marginalization of Indigenous communities by government officials. A pervasive mistrust of outsiders, including scholars, has resulted from this history among the Indigenous communities. In the Indigenous reserves and communities, doing individual physical primary research surveys can be challenging and time-consuming because of trust issues.

10. Community Consent and Control: Indigenous groups own the right to conduct physical research in their communities. This means that researchers must involve community members and get their approval. Different



communities have different structures, decision-making procedures, and power dynamics, so obtaining meaningful permission and guaranteeing community involvement can be difficult.

11. Communication and Language Barriers: Various Indigenous populations speak around 50 different Indigenous languages, many of which may not be commonly known to researchers who are not Indigenous. When conducting primary physical surveys within the communities, it can be more difficult to accurately transmit meanings without the assistance of translators and interpreters, which is necessary for effective communication.

12. Funding Issues: This research was self-funded without any grants or financial support from any organization, individual, or institution. The limited fund constraints and challenges limited my research analysis scope to a few socio-economic variables facing Canada's Indigenous population: income, employment, and education.

RECOMMENDATIONS

The recommendation of my findings will focus on the three key categories of my analysis findings: (1) education level impact and employment rate analysis (2) employment rate and job vacancies analysis (3) population and income power output analysis. These recommendations are aimed at addressing gaps and improving the development economics policy implementations in the study of the socio-economic affairs of the Indigenous population of Canada.

Education and employment recommendations

My findings from education level impact and employment rate analysis indicated that the Indigenous population with less education (with less than high school education) is the most affected Indigenous population group compared to their educated population (with college or university school education). According to my research analysis findings, there is a differential gap of 0.28 points (28%) employment gap between the Indigenous population and non-Indigenous population with less than a high school education in advantage for the non-Indigenous population regarding gaining stable employment. Subject to this fact, the June 2023 publication by Truth and Reconciliation Commission Canada, which represents the government of Canada in ongoing reconciliation with the Indigenous people of Canada, agreed with the challenges faced by Indigenous people in the labour market during 2022 and 2023. The Truth and Reconciliation Commission responded to the call to the Canadian government to develop with Aboriginal groups a joint strategy to eliminate educational and employment gaps between Aboriginal and non-Aboriginal Canadians by starting key education reform initiatives for the Indigenous people. Some of the key highlights of these education initiatives aimed at bridging education and employment gaps include:

1. Introduction of Skills for Success Program to provide project funding to fund 20 organizations that will support skills and employment training. The funding will map 6 of these projects exclusively to solve the education needs of Indigenous people
2. The announcement of \$197.7 Million from 2023 to 2025 to support work placement for students, aiming at creating work-integrated learning opportunities
3. Indigenous Services Canada (ISC) signing 10 regional education agreements with First Nation partners for education transformation to boost education and learning and support co-development distinctions based post-secondary education strategies for First Nations, Inuit, and Metis recipients

The government of Canada came up with various education programs to promote education and reduce skill shortages within the Indigenous communities across Canada. Some of these programs include the Post-Secondary Partnership Program. These programs support First Nations and Indigenous communities in defining their own partnerships with educational institutions and increasing the availability of post-secondary education programs tailored to First Nations cultural and educational needs. The post-secondary partnership program funding allocations are determined by a 2-step process: (1) regional allocations are made based on



First Nations population distribution (2) First Nations designated and directed organizations in each region that will work with Indigenous Services Canada (ISC) in the allocation of funds according to program guidelines – (Indigenous Services Canada ISC Publication, 2024)

I will recommend a multifaceted approach that addresses systemic barriers and promotes access to education, skills development, and employment opportunities. On top of the Canadian government's meaningful education initiatives to enhance and support the Indigenous population with less than high school and less skills, I will propose these recommendations:

1) Investment in Education: Keep re-evaluating the education funding budget to meet the needs and support for education initiatives tailored to Indigenous communities, including culturally relevant curriculum, language revitalization programs, and support for post-secondary education. This can help improve educational attainment levels among unprivileged poor Indigenous populations, leading to better job prospects.

2) Skills Training and Employment Programs: Continuous targeted skills training programs tailored to national labour market skill needs to provide Indigenous individuals with the skills and certifications needed for in-demand jobs in various sectors, such as trades, healthcare, and technology. These programs should be culturally sensitive, accessible, and responsive to the specific needs of Indigenous communities.

3) Promotion of Indigenous Entrepreneurship: Continuous support for Indigenous entrepreneurship mentorship programs and business development initiatives, including access to start-up capital with insurance protection and business training. Empowering Indigenous entrepreneurs can create job opportunities within Indigenous communities and contribute to economic growth and employment sustainability.

4) Employment Equity and Diversity Policies: Increasing the checks of mandatory adoption of inclusive hiring practices and diversity policies that prioritize the recruitment and retention of Indigenous employees with employers of job for all designated Indigenous job positions.

5) Partnerships and Collaboration: Keep partnerships and collaboration between Indigenous communities, government agencies, educational institutions, and private sector organizations to address systemic barriers to employment and create innovative solutions. Adopting an agile approach that involves Indigenous leadership, decision-making, and other stakeholders is essential for creating sustainable change.

6) Support Remote Community Accessibility: fund and keep building necessary road access into remote Indigenous communities to enhance services and give employers, policymakers, and service providers access to those Indigenous communities This can help reduce illiteracy and increase access to skill training and education and improve Indigenous people's access to employment opportunities.

Employment and job vacancy recommendations

My findings from the correlation analysis between employment and job vacancies available for the Indigenous population suggest a low employment growth between 2022 and 2023 for the Indigenous population. The Indigenous population gained some available jobs between 2022 and 2023. This correlation analysis also suggests that Indigenous-designated equity jobs were filled in the job market. The National Research Council (NRC) shows the representation of Indigenous Peoples relative to Labour Market Availability (LMA) at the end of FY 2022-2023 was 62.5%, an increase from the 60.5% reported in the previous fiscal year. Statista Research (a privately operated research institute) reported that from 2007 to 2022, the employment rate of Aboriginals in Canada has fluctuated slightly. In 2022, the employment rate of Aboriginals in Canada stood at 60.5 percent, an increase from the previous year when the employment rate stood at 56.4 percent.

There are indications of employment growth corresponding to available job vacancies among the Indigenous population but relatively lower than the non-Indigenous population's employment rate for the 2022 – 2023 year. There is still more to be done to narrow the disparity between job availability and employment among the Indigenous population to level closely with the non-Indigenous population. Here are a few recommendations to narrow the gaps:



1) Employment supports continuous monitoring and implementation of targeted job placement programs and the creation of Indigenous career centers through government agencies that connect Indigenous job seekers with employers seeking diverse talent. Such a program will foster needed help for individuals navigating career paths, developing resumes, preparing for interviews, and providing career counseling.

2) Addressing systemic barriers: Continuously address and monitor equity employment policies in both the private and public sectors. The Indigenous Centre of Expertise at the Public Service Commission in 2020 – 2021 explored barriers experienced by Indigenous people in the Federal government recruitment process and practice. The establishment of the Indigenous Centre of Expertise stemmed from the revelation made by Many Voices One Mind: A Path to Reconciliation (MVOM) which identified 50 barriers faced by Indigenous peoples seeking public service careers. The Indigenous Centre of Expertise as a way to address these identified barriers recommended audit of employment equity program representation in job recruitment. Government agencies should also increase penalties for non-compliance with equity employment policies. Such policy reforms will increase job equity transparency reduce systemic barriers, discrimination, and increase the inclusiveness of the Indigenous population in the labour market and workspace.

3) Monitoring and evaluation: increase the funding of government agencies and create strong collaboration with Indigenous partners to track progress, monitor Indigenous employment equity program outcomes, and identify challenges. Ensuring meaningful consultation and collaboration with Indigenous representatives in the development of employment and economic policies that affect them will gain credibility and acceptance among Indigenous communities. A good example of such collaboration is the 2021 report of the Management Advisory Board Taskforce on Royal Canadian Mounted Police (RCMP) Indigenous recruitment. The task force comprises Indigenous representatives who played a critical role in the development of modern RCMP representatives of the communities it serves. The task force Management Advisory Board suggests retention of First Nation, Inuit, and Metis (FNIM) employees and a change of RCMP approach to Indigenous policing. Such monitoring and evaluations will increase the effectiveness of employment equity policies in both private and public sector workspace and reduce the employment gaps between Indigenous and non-Indigenous population

Population and income power output recommendations

My analysis findings suggest that the Indigenous population's per capita income (average income) is lower than the non-Indigenous population by \$9000, indicating there is a gap. This means that certain groups of the non-Indigenous population have a much higher income than others when you compare the Indigenous. The Indigenous population's per capita income is \$44,300 against the non-Indigenous population with \$53,300 in 2021. The Canadian national median income is \$40,300 and the national average income is \$40,500 respectively in 2021. When you blend the Indigenous and non-Indigenous population income, the national average income tends to mask the average income difference between the Indigenous and non-Indigenous populations. Some of the mask and hidden income differential factors could be attributed to population size differences, group income brackets, population attributes, unaccounted Indigenous populations living in unreachable remote areas, and other socio-economic factors outside this study's scope. I will say there is still a need for a better income match between the Indigenous and non-Indigenous to justify the progress of advancement and standard of living within the Indigenous population.

Some of my suggested recommendations to evaluate the income power (output) of the Indigenous people include:

1 Re-evaluation of Income Statistics: a good evaluation of the government of Canada's Indigenous, education, and employment income enhancement initiatives. I will suggest re-evaluating current Indigenous income statistics after the 2026 Canada census. There is a need to recheck the Indigenous average income. Most of the information and data used in this research analysis is based on the 2021 Canada census

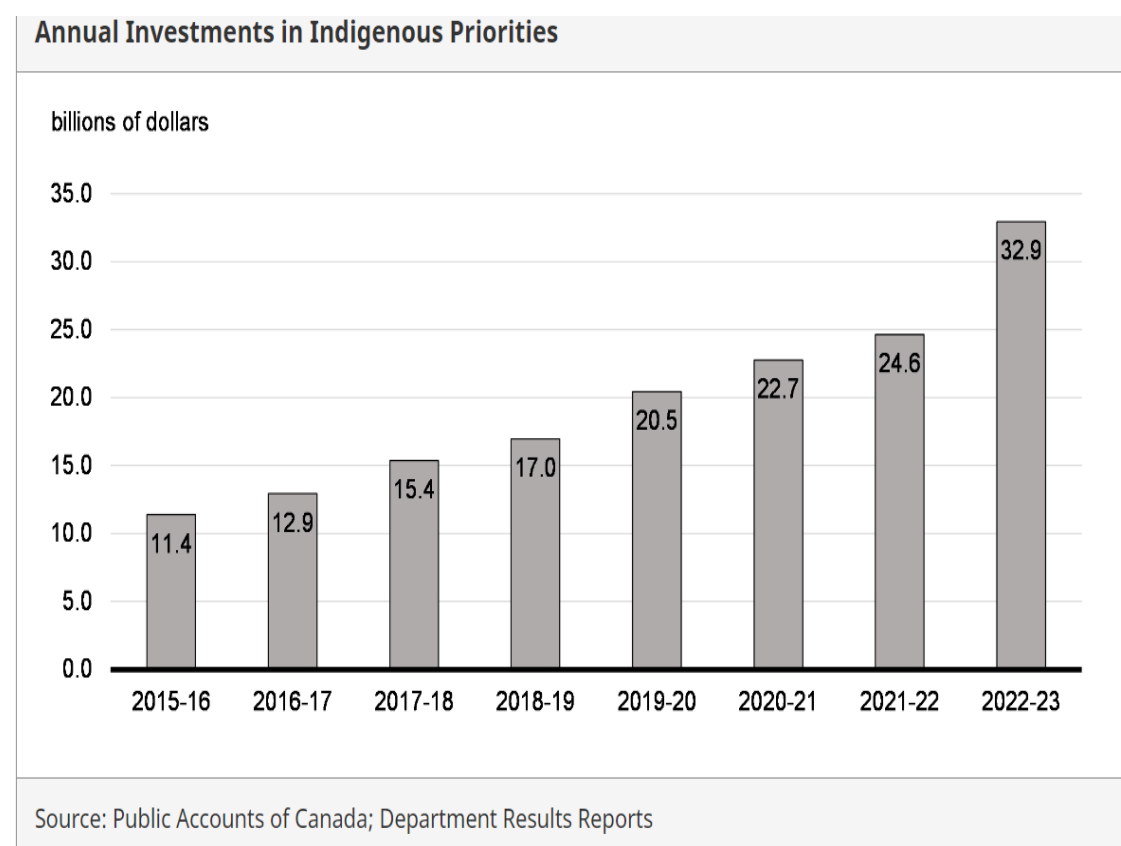
2 Financial Literacy Programs: establishing enterprise financial literacy programs tailored to Indigenous communities. Empowering individuals to manage their personal and business finances will create wealth and

capital accumulation within Indigenous communities. Such programs will help create the knowledge of innovation and productivity capacity for Indigenous entrepreneurs and business

3 Infrastructure Development: continuous infrastructure improvement (roads, schools, health care facilities, banks, internet access, utilities) in Indigenous communities. The construction of new infrastructures will facilitate economic activities and attract investment to boost the creation of wealth within Indigenous communities. Such infrastructural development will increase the advancement of agriculture, science, innovation, and socio-economic growth within Indigenous communities which disputes Malthus's theory views.

4 Recognition of Treaty Rights and Policy Reform: continuous reconciliation of treaty obligations and support of economic development initiatives. It is worth mentioning that in 2017, the federal government and First Nations partners established the Assembly of First Nations Permanent Bilateral Mechanism. This committee strengthened the government's focus on investing in First Nations-led approaches. In 2023, the federal government reaffirmed its commitment to hold its inaugural meeting of the Self-Governing and Modern Treaty Intergovernmental Leaders' Forum to advance the work to uphold the intent of Indigenous treaties. Such empowerment will ensure the autonomy and resources needed to pursue Indigenous economic goals and uphold rights and traditions towards achieving a fair future for Indigenous people.

5 Continuous Tracking of Indigenous Investment Priorities: Emphasizing the continuous check and balance of Indigenous investment priorities is crucial. It guides the fund allocation plan and development framework, ensuring that resources are implemented according to the needed new opportunities in Indigenous communities. This continuous tracking is not just a formality; it's a commitment to using resources responsibly and effectively, providing reassurance to all stakeholders about the secure and sustainable development of Indigenous communities.



Since 2015, there has been a notable 181% rise in spending on Indigenous objectives. It is anticipated that spending on Indigenous priorities will reach over \$30.5 billion in 2023–24 and around \$32 billion in 2024–25. There is a need for thorough accountability. Any initiative funding calls for continuous re-evaluation and examination of areas of priority toward achieving and meeting Indigenous people's self-determination goals



and objectives. My suggestion includes creating a group task force for every investment fund disbursement. The duties of this group task force include reporting, project field supervision, following up, auditing, risk management assessment, and compliance.

CONCLUDING REMARKS

In conclusion, I will state and dispute that population sustenance is not strictly based on “enough food production,” as Malthus's theory proposed but on the ability to generate income and wealth. I classified income as a major output from other inputs like education that supports science innovation to produce enough food without any “traps”. My view is that income and wealth power drive the economic development of a nation or community which stems from education, skill acquisition, and a high employment rate of labour, expressed as $I = f(E, Em) = Ps$ where I is income, E is education, Em is employment, and Ps is population sustenance. $I = \alpha + \beta E + \beta Em = Ps$ where: I is Income, α is a constant, βE is education, βEm is employment, Ps is population sustenance in the face of population growth with no need to limit the population growth as Malthus proposed. I will conclude the following from my findings and research analysis:

1) The government of Canada is committed to bringing true reconciliation and addressing key socio-economic issues of the Indigenous people. This keen effort by the government of Canada, particularly in its various Indigenous education initiatives, employment-equity programs, skill training programs, and other Indigenous poverty alleviation programs handled through government agencies like Indigenous Services Canada (ISC), is worthy of appreciation. These initiatives work collaboratively with Indigenous partners to support and provide needed services for First Nations, Inuit, and Metis in their communities.

2) There has been a noticeable trajectory growth from 2015 to 2023 in the various multifaceted socio-economic Indigenous activities and initiatives. It is worth mentioning that three key focus areas of this research namely employment, education, and income are part of the driving force of economic development growth and population sustenance. The government has recorded some meaningful focus on the Indigenous education, employment, and income needs. A landmark Regional Education Agreement was signed in July 2022 with the First Nations Education Council in Quebec for a \$310.6 million budget cost over five years to support 22 First Nations communities in Quebec, funding over 6,000 students based on their communities. Since 2016, the government of Canada has invested over \$2 billion to build or improve 310 school facilities, of which 180 are completed and 130 are ongoing, benefitting 319 First Nations communities. Other significant Indigenous economic achievements to boost income and wealth include Indigenous loan guarantees with lower borrowing costs aimed to assist Indigenous projects within their communities. The government also proposes, starting in 2024, to create business capital through a \$350 million budget (over five years) to create Indigenous financial institutions to assist Indigenous entrepreneurs and businesses. On the employment and labour market front, the government proposes \$4.4 million (over two years) starting in 2024 to support a market information survey and skill Inventory program to keep necessary track of labour data. We have also seen increasing growth in budget funding from 2015 to 2023 on Indigenous priorities from \$ 11.4 billion in 2015-2016 to \$ 32.9 billion in 2022-2023.

3) It is worth mentioning that other areas of Indigenous concerns outside the scope of this research that warrant thorough evaluation and analysis, like health care, housing, utilities, policing, family welfare, infrastructural amenities, and other social-economic needs, are not covered in this research. There is a need to have a retrospective assessment of other Indigenous socio-economic program implementations to relate to the status of the current state of progress. This research has established, that there is still a gap between the Indigenous and non-Indigenous populations in the key focus areas of this research namely income, education, and employment as it affects the Indigenous population. There has been progress in narrowing the gaps since 2007 with the establishment of the True and Reconciliation Commission (TRC) Canada. My findings have validated, that there is inclusiveness of the Indigenous population of Canada in the current economic development space of Canada, although there is a need for sustainable research tests to be done after the 2026 Canadian population census to check the impact of the 2024 to 2026 newly implemented government Indigenous initiatives and programs.



REFERENCE / BIBLIOGRAPHY

1. **Jason Brown and David Hannis Publication** / auth. Hannis Jason D Brown and David. - 2012.
2. **8 Key Issues for Indigenous People in Canada** / auth. Inc. Indigenous Corporate Training. - 2022.
3. **Aboriginal Affairs and Northern Development Information Publication** / auth. Development Aboriginal Affairs and Northern. - 2020.
4. **AFN Publication Reference** / auth. (AFN) Chief RoseAnn Archibald - Assembly of First Nation. - 2023.
5. **AFN Publication Reference on Indigenous Matters** / auth. (AFN) The Assembly of First Nation. - 2022.
6. **AFN Publication Reference Report** / auth. (AFN) Terry Teegee - Assembly of First Nation. - 2023.
7. **Applied Welfare Economics - Cost Benefit Analysis of Projects and Policies** [Book] / auth. Pancoti Massimo Florio and Chiara. - New York: Routledge, USA, 2023.
8. **Average Total Income of Indigenous and non-Indigenous Population in Canada 2012 - 2021** / auth. Department Statista Research. - March 2024.
9. **Barriers to Economic Development in Indigenous Communities** / auth. Affairs Canada House of Commons Committee on Indigenous and Northern. - April 2022.
10. **Barriers to Indigenous Recuritment** [Report]: Public Publication Report / auth. Publication Government of Canada. - 2021.
11. **Canadian Research Data Centre Network Publication Reference on Indigenous People** / auth. Network Canadian Research Data Centre. - 2022.
12. **Canadians most at risk of living in poverty publication** / auth. Canada Government of Canada - Statistics. - 2016.
13. **Christian Aboriginal Infrastructure Publication** / auth. Infrastructure Christian Aboriginal. - 2015.
14. **CIRNAC Publication on Indigenous people of Canada** / auth. (CIRNAC) Crown Indigenous Relations and Northern Affairs Canada. - 2019.
15. **Committee on Indigenous and Northern Affairs Publication Reference Report** / auth. Affairs Chief Jules - Committee on Indigenous and Northern. - 2022.
16. **Community Development in Canada** [Book] / auth. Hannis Jason D Brown and David. - Toronto: Pearson, Canada, 2012.
17. **Corporate Governance and Economic Development - Identifying Critical Institutional Reforms** [Book] / auth. Lanoszka Anna. - New York: Routledge, USA, 2023.
18. **Debraj Ray** [Book] / auth. Economics Development. - New Jersey: Princeton University Press, 1998.
19. **Department of Finance 2022 -2023 Budget Publication** / auth. Canada Government of. - 2023.
20. **Development Economics Reference** / auth. Kremer Banerjee and. - 2004.
21. **EEDB Indigenous Publication Reference** / auth. Canada Employment Equity Data Bank (EEDB). - 2023.
22. **Employment and Social Development Canada (ESDC) Indigenous Publication Report** / auth. Canada Government of. - 2023.
23. **FNIGC Publication Reference on Indigenous People of Canada** / auth. (FNIGC) Dr Andrew Bear Robe - First Nation Information Governance Centre. - 2008.
24. **India and Northern Affairs publication References** / auth. Canada Government of. - 1996.
25. **Indigenous Service Canada Report on Indigenous People** / auth. (ISC) Indigenous Services Canada. - 2021.
26. **Innovative Research Survey Publication on Indigenous People of Canada** / auth. Group INNOVATIVE Research. - 2023.
27. **Labour Force Survey Canada Publication** / auth. Canada Government of. - 2023.
28. **Makivik Corporation Publication on Indigenous Affairs** / auth. Corporation Makivik. - 2021.
29. **Management Advisory Board RCMP Recuritment Report** [Report]: Public Publication Report / auth. Canada Government of. - [s.l.]: Government of Canada Publication, 2021.
30. **Mindy Denny - Publication Reference on Indigenous Issues** / auth. Scotia Mindy Denny - from Eskasoni Mikmaw Nation Nova. - 2008.
31. **National Research Council Canada Publication Reference on Indigenous People** / auth. Canada National Research Council. - 2023.



32. **NEAHR Publication Reference** / auth. (NEAHR) Network Environment for Aboriginal Health Research. - 2023.
33. **Northern Inter-Tribal Health Authority Reference Publication** / auth. Authority Northern Inter-Tribal Health. - 2022.
34. **Opportunity for All Canada's First Poverty Reduction Strategy** / auth. Poverty The Canada National Advisory Council on. - Aug 2018.
35. **Population Reference** / auth. Kremer Miguel and. - 2004.
36. **POVERTY ALLIEVIATION** [Book] / auth. CIRCULATION ECONOMIC. - Calgary: Tom & Jane Doe, 2024.
37. **Proof to Scalable Policies: Challenges and Solutions, With an Application** [Journal] / auth. Banerjee Abhijit, Rukmini Banerji, James Berry, Esther Duflo, Harini Kannan, Shobini Mukherji, Marc Shtland and Michael Walton // Journal of Economic Perspective. - 2017.
38. **Public Accounts of Canada Department Result Report** / auth. Canada Government of. - 2023.
39. **Regional Health Survey (RHS) Phase 2 Publication** / auth. Centre First Nations Information Governance. - 2008.
40. **Social Science and Humanities Research Council Publication Reference on Indigenous People** / auth. Social Sciences and Humanities Research Council Canada. - 2022.
41. **Statistics Canada - Indigenous education and employment Publication** / auth. 2021 Statistics Canada - Census. - 2023.
42. **Statistics Canada 2021 Census on Indigenous Labour Force and Employment** / auth. Census Statistics Canada - 2021. - 2021.
43. **Tackling Poverty in Indigenous Communities in Canada** / auth. Wien Dr. Fred. - 2017.
44. **Understanding Development and Poverty Alleviation** [Report] / auth. Nobel Committee for the Prize in Economics Sciences in Memory of Alfred. - 2019.
45. **Union of Nova Scotia Indians Publication Reference** / auth. Indians Union of Nova Scotia. - 2023.
46. **Voice of Our Nation Publication - The Unemployment Crisis of Indigenous People in Canada** / auth. Prabhudesai Ilesha. - July 26, 2022.
47. **Yellowhead Institute Publication Reference** / auth. Institute Yellowhead. - 2021.

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