CIMII CONTROLS AND FILTERS: WHY THEY MATTER

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The Canadian Index for Measuring Integration and Inclusion (CIMII) offers an innovative, data-driven approach to evaluating immigrant outcomes across four dimensions: economic, social, civic, and health. By employing 22 indicators and advanced statistical modeling, CIMII enables precise comparisons between immigrants and non-immigrants while accounting for key sociodemographic variables such as age, language, education, income and mobility status. This article highlights the importance of control variables and adjusted data in isolating the true impact of immigration status on outcomes, demonstrating the limitations of unadjusted data in accurately reflecting gaps. The CIMII's capacity for temporal, geographic, and customizable analysis enhances its utility as a tool for policymakers and stakeholders seeking to foster inclusion and equity. The inclusion of sex and gender-based analysis plus (SGBA+) further ensures the framework addresses the intersectional needs of diverse immigrant groups, contributing to a nuanced understanding of integration and inclusion in Canada.

BACKGROUND

While there are several indices related to newcomer integration into the Canadian labour market and society, few go beyond using descriptive statistics to demonstrate social or economic gaps between immigrants and non-immigrants. Other indices focus on the "welcome-ability" of receiving communities (Ravanera et al. 2013) or on national policies related to multiculturalism (Multiculturalism Policy Index 2024) or integration (Solano et al. 2020). New American Economy's Cities Index examines the landscape of local policy toward immigrants as well as immigrants' economic, social, and political outcomes. The OECD's How's Life? Index allows users to compare well-being across countries in the areas of material living conditions and quality of life.

While these measures of newcomer integration and welcoming communities are useful and informative tools, they have limited scope and tend to be period-specific. In other words, they rarely go beyond a national or provincial scope and are typically cross-sectional studies of immigrant integration for a specific year or time period. They also tend to focus solely on *integration* and not *inclusion*, which is defined here as a process whereby all members of society have equitable access to opportunities and resources necessary to participate fully in economic, social and political aspects of life. Inclusion

also embraces diverse cultural expressions and practices while reducing barriers to healthcare access and vital settlement services. Inclusion, from a methodological standpoint, assesses immigrant outcomes using a sex and gender-based analysis plus (SGBA+) to unveil gaps in outcomes for specific groups of migrants across a variety of identity markers (e.g., gender, age, ethnicity, immigration categories, etc.).

The Canadian Index for Measuring Integration and Inclusion (CIMII) fills in many of these observed "gaps" by providing a comprehensive measure of 22 indicators for immigrants relative to the Canadian-born population (and for recent and established immigrants) across four key dimensions: economic, social, civic and democratic participation and health. All of these measures are obtained through Statistics Canada datasets to include the Census of the population, the General Social Survey and the Canadian Community Health Survey. The CIMII tool is unique in that it allows users to compare integration outcomes across time (from 1991 to 2021 and beyond) in 35 census metropolitan areas and 10 provinces.[1] Users are also able to adjust the weight of each CIMII dimension according to their own needs and priorities. Moreover, the CIMII uses advanced statistical modeling (e.g., multiple and logistic regression) to assess outcomes for immigrants and non-immigrants while controlling for a number of socio-demographic controls (see Table 1 for a full list of controls across dimensions; see also "unadjusted" vs "adjusted" discussion below).

CIMII CONTROLS[2]

CIMII control variables include relevant socio-demographics such as the respondent's sex, age, knowledge of official languages, visible minority status, education level, occupation, income and mobility status. Other dimension-specific thematic controls were incorporated into the models as needed. The consistent use of these controls across all CIMI models ensures an "apples to apples" comparison of immigrant and non-immigrant outcomes across time for Canadian geographies. Table 1 summarizes all control variables used for each dimension of integration. These control measures were selected using conceptual and methodological considerations and guided by the recommendations of an Expert Advisory Committee.

Control Variable, defined. A control variable in regression analysis is a variable that is not of primary interest but is included in the analysis to account for potential confounding effects. These variables are used to isolate the relationship between the independent variables (e.g., immigrant status and geography) and the dependent variable (e.g., wages) by holding constant other factors that could influence the outcome. Control variables are also called "covariates" because they "covary" with the independent and dependent variables and therefore may confound the analysis (Newton & Rudestam, 2013). By controlling for these variables, researchers can more accurately estimate the true effect of the independent variable(s) on the dependent variable, reducing bias and enhancing the validity of the results.

ADJUSTED VS. UNADJUSTED DATA

Using an adjusted or controlled approach in lieu of an unadjusted or descriptive approach to the analysis of immigrant outcomes allows us to make stronger inferences about the observed gaps between immigrant and non-immigrants across the CIMII's 22 indicators.

- Unadjusted or descriptive data looks at the relationship between two variables – an independent variable or predictor (e.g., immigrant status) and a dependent variable or outcome (e.g., wages). Unadjusted data can answer the question: What is the raw difference or 'gap' in wages between immigrants and non-immigrants? Descriptive data does not control for pre-existing differences between immigrants and non-immigrants such as their age, gender, ethnicity or education levels. It simply measures the raw difference (in wages) between immigrants and the Canadian-born.

- Adjusted or controlled data, on the other hand, looks at the relationship between two variables while taking into consideration some third variable (or set of variables, i.e., the CIMII controls) that influence both the independent AND the dependent variable. For example, adjusted data can answer the question: What is the difference or 'gap' in wages between immigrants and non-immigrants, after controlling for their level of education?

Figure 1 demonstrates the difference between using adjusted and unadjusted data for wages (refers to gross wages and salaries before deductions for such items as income taxes, pension plan contributions and employment insurance premiums during the reference period).

1 In the near future, the CIMII will cover the Territories and three major cities in Canada's North: Yellowknife, Whitehorse and Iqaluit. The tool will also assess economic outcomes at a sub-CMA level for the first time in Canada's largest metropolitan areas: Montreal, Toronto, Ottawa, Winnipeg, Calgary, Edmonton, Vancouver.

2 For more details on the CIMI controls, please refer to the Codebook on the Resources page of the CIMII website. www.integrationindex.ca/resources-initiatives

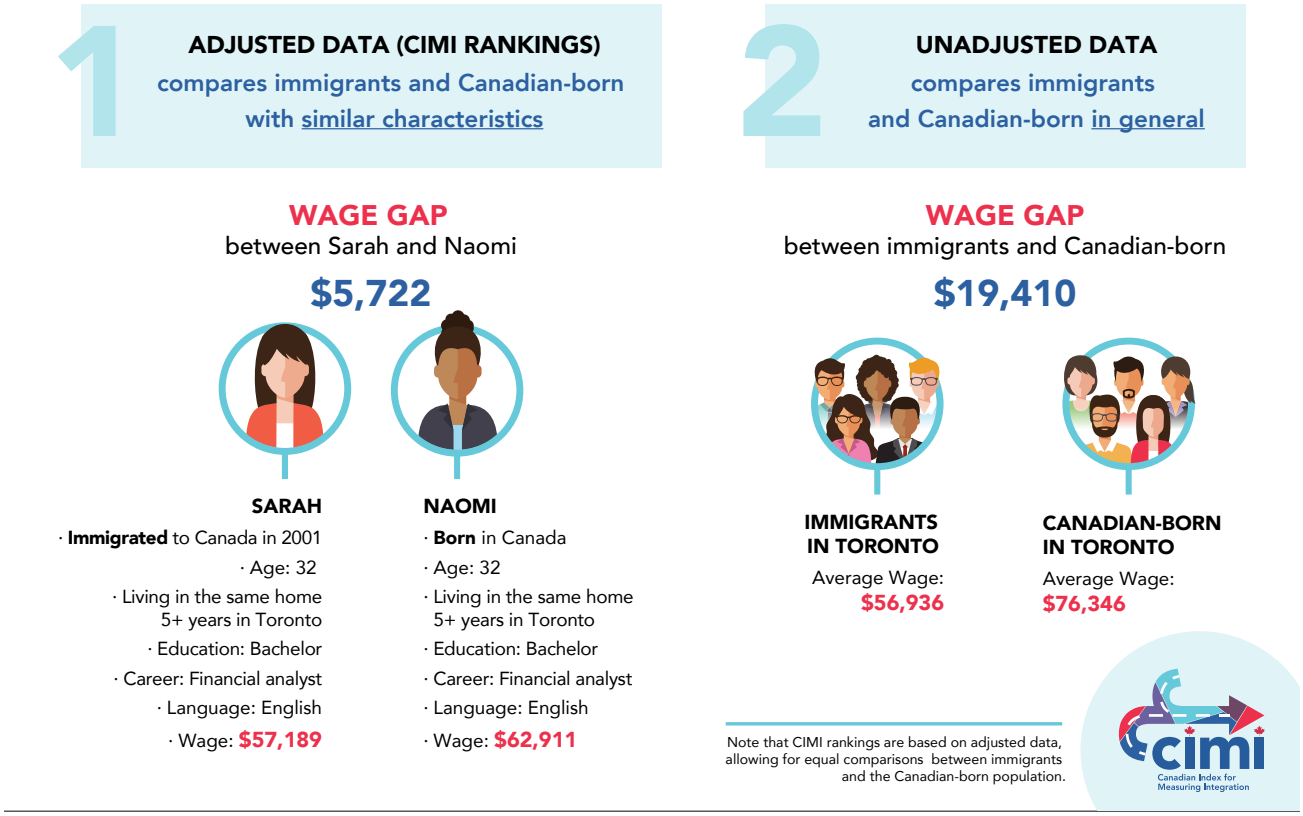
TABLE 1. SUMMARY OF CONTROL VARIABLES EMPLOYED ACROSS CIMII DIMENSIONS.

Control Variable	Definition	Economic	Social	Civic	Health
Sex	Refers to whether the person is male or female.	✓	✓	✓	✓
Age	Refers to the age (in years) at last birthday before the reference date.	✓	✓	✓	✓
Visible Minority Status	Includes persons, other than Indigenous peoples, who are non-Caucasian in race or non-white in colour.	✓	✓	✓	✓
Knowledge of Official Languages	Refers to the ability to conduct a conversation in English only, in French only, in both English and French, or in neither English nor French.	✓			✓
Mother Tongue	Refers to the first language learned at home in childhood and still understood by the person		✓	✓	
Education	Information indicating the person's most advanced certificate, diploma or degree.	✓	✓	✓	✓
Occupation	Refers to the kind of work performed by employed persons based on the National Occupational Classification System.	✓	✓	✓	✓
Income	Total personal income from all sources in the past 12 months, before taxes and deductions.		✓	✓	✓
FT Employment status	Refers to the percentage of individuals who are working full-time.	✓	✓	✓	✓
Mobility status (5-year)	Refers to the person's usual province or city of residence five years prior to the reference day.				✓
Self-perceived Physical Health	Refers to the percentage of people who reported that their (physical) health is very good or excellent.				✓

CONCLUSION

The Canadian Index for Measuring Integration and Inclusion (CIMII) represents a significant advancement in the evaluation of immigrant outcomes in Canada. By utilizing a comprehensive set of 22 indicators across economic, social, civic and democratic participation, and health dimensions, CIMII provides a nuanced and dynamic view of integration and inclusion. The tool's ability to offer both adjusted and unadjusted data enhances its analytical power, allowing for more accurate comparisons between immigrants and the Canadian-born population by accounting for various socio-demographic factors. The inclusion of a sex and gender-based analysis plus (SGBA+) ensures that the specific needs and challenges of different groups of migrants are acknowledged and addressed. Furthermore, CIMII's adaptability in weighting dimensions according to user priorities and its extensive temporal and geographic scope make it an invaluable resource for policymakers, researchers, and community stakeholders dedicated to fostering a more inclusive and equitable society.

FIGURE 1. ADJUSTED (CONTROLLED) VS. UNADJUSTED (DESCRIPTIVE) DATA.



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