Indexing: Canada and USA Feasibility Study

PRESENTED BY THE ASSOCIATION FOR CANADIAN STUDIES (ACS) AND THE CANADIAN INSTITUTE FOR IDENTITIES AND MIGRATION (CIIM)

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Institut canadien pour les identités et les migrations | The Canadian Institute for Identities and Migration

cimi Canadian Index for Measuring Integration

An index ideally provides for the following:

- A composite measure that combines multiple indicators to represent a concept (e.g., immigrant integration).
- Rankings that user friendly and easily accessible to civil society researchers and policy-makers.
- Flexibility in weighting so as to place more or less emphasis on specific dimensions and indicators of the index thereby allowing more than one barometer of integration
- Readily-interpretable data, permitting understanding of the overall situation of groups identified within the index.
- A parsimonious model: THE NUMBER OF INDICATORS DOES NOT MAKE FOR A BETTER INDEX.
- The challenge of index-building is to offer a logic and rationale for how the various indicators are related to one another.

Indexes are becoming more and more popular in the social sciences

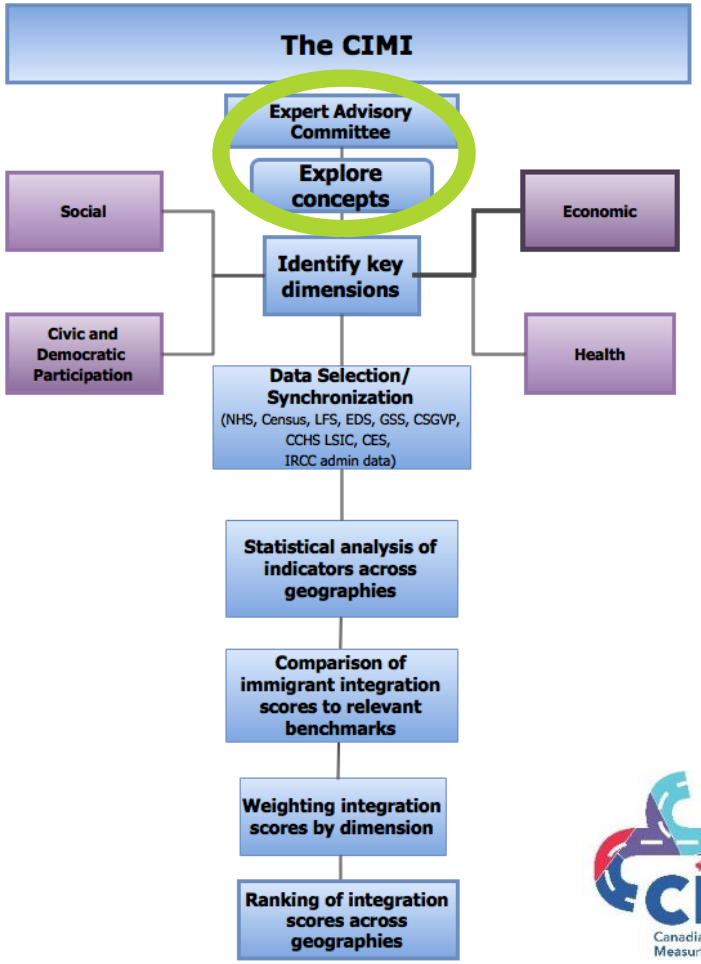
- **The Canadian Index for Measuring Integration (CIMI)** fills an existing knowledge gap by providing a composite measure to evaluate the relative performance of immigrants compared to their receiving society across four dimensions of integration: economic, social, civic and democratic participation, and health.
- **The Migrant Integration Policy Index (MIPEX)** is a unique tool which measures policies to integrate migrants in all EU Member States, Australia, Canada, Iceland, Japan, South Korea, New Zealand, Norway, Switzerland, Turkey and the USA. 167 policy indicators have been developed to create a rich, multi-dimensional picture of migrants' opportunities to participate in society.
- **The Multidimensional Measure of Immigrant Integration** is a project of the Immigration Policy Lab at Stanford University and ETH-Zurich. The index was developed by testing and reducing hundreds of questions culled from existing surveys, and poses two questions for each of the six dimensions of integration: psychological, social, economic, political, linguistic, and navigational.

Indexes are becoming more and more popular in the social sciences

- **Settling In 2018: Indicators of Immigrant Integration** – This publication presents a comprehensive international comparison of the integration outcomes of immigrants and their children across all EU and OECD countries (and selected G20 countries), using 74 indicators based on: labour market and skills; living conditions; and civic engagement and social integration.
- **The California Immigrant Integration Scorecard (2012)** measured immigrant integration and progress across ten California regions. The Scorecard highlighted regions to which others might look for best practices, those that have room to improve, and emphasized the need for statewide strategies.
- **NAE Cities Index** – The NAE Cities Index systematically evaluates immigrant integration by measuring local policies and socioeconomic outcomes across the 100 largest cities in the United States. The Index aims to help answer two of the questions at the heart of the immigration debate: How well are immigrants integrating into the fabric of American life, and what role do cities play in that process?

What are the broad steps in constucting an index?

1. Indicators should be selected based on their content validity, unidimensionality, the degree of specificity in which a dimension is to be measured, and their amount of variance.
2. Items should be empirically related to one another, which leads to the second step of examining their multivariate relationships.
3. Indices scores are designed, which involves determining their score ranges and weights for the items.
4. Indices should be validated, which involves testing whether they can predict indicators related to the measured variable not used in their construction.



Relationships between the dimensions of integration

- Although we typically want our index' indicators to be "unidimensional" (i.e., measure a single construct), this can be difficult to achieve using sociodemographic measures.
- For instance, employment status is a clear measure of economic integration, but could it not also affect the degree and quality of social relationships an immigrant has within society? Those who are employed are surrounded by a network of colleagues whereas the unemployed are more likely to experience social isolation…
- We might want to consider alternative methods to assess the relationships *between* dimensions as well as the relationships *within* each dimension (Structural Equation Modelling).
- We may also want to look at the influence of different levels of geography (province vs. CMA) on the overall statistical models using HLM (Hierarchical Linear Modelling).

Should indicators weigh the same?

- Statistically documenting connections across index variables is not in and of itself a justification for combining them into an index. In many instances, an index may in fact "muddy the waters" more than illuminate.
- The risk is that the links between variables can be superficial; combining them may hide useful information, and may actually produce rather artificial estimates of integration.
- In the construction of any cumulative index a strong rationale is needed for the weighting attributed to each item.
- Is income disparity "worth" the same as variation in educational achievement, or associational membership? There is no simple answer to this kind of question, but an index requires that we may exactly this kind of assumption.

NAE and CIMI: Measuring Disparities: Similar Concept

- To measure disparities in socioeconomic outcomes, for each indicator, we calculate the ratio of the value for immigrants to that for their U.S.-born counterparts in the same city, e.g. the ratio of employment rate for immigrants to the rate of the U.S.-born in Dallas

- To measure disparities in economic outcomes, for each indicator we control for a number of socio-demographic factors (we make descriptive data available and a similar ratio-based calculation can be performed with the CIMI but that is not the basis for the scores that are generated for comparative purposes

Indicators: NAE and CIMI

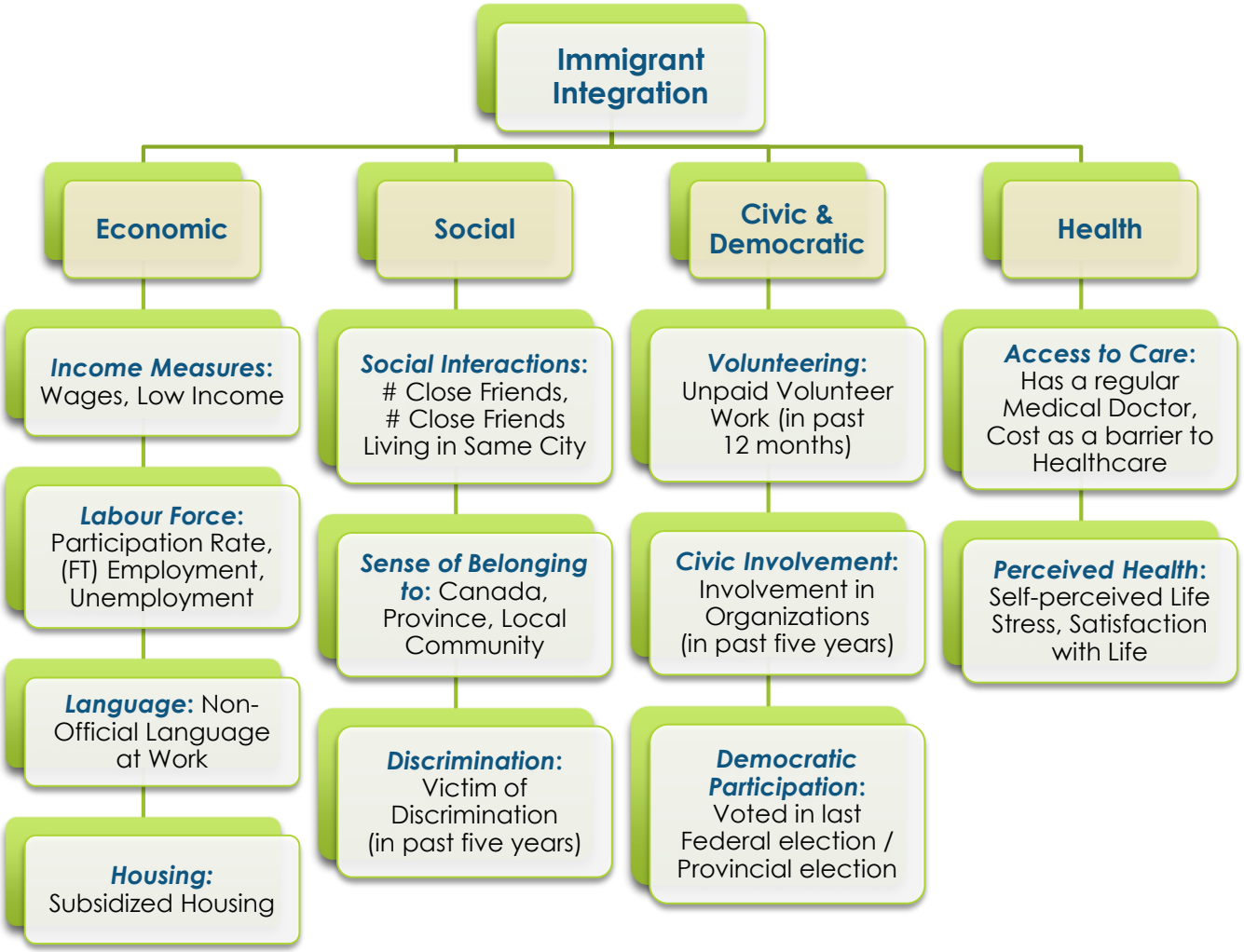
NAE

- Uses 31 policy metrics and **20 outcome metrics or indicators** across 4 subcategories of the socio-economic section: job opportunities, economic prosperity, livability, and civic participation
- **Civic participation** is part of their socio-economic dimension
- **Home ownership** is an indicator
- Expert Assessment of Local Policies (similar to MIPEX and California integration Score card)

CIMI

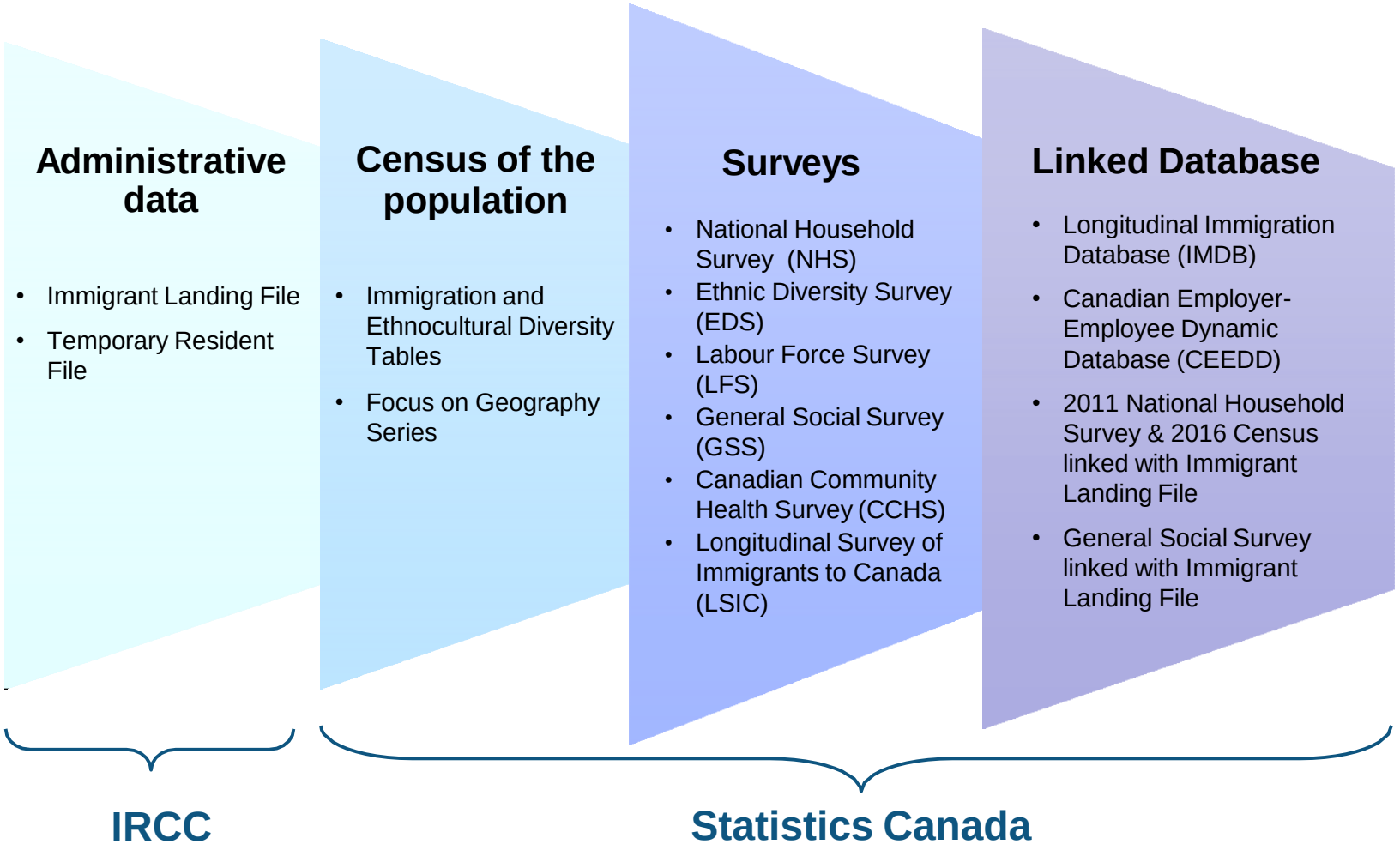
- **23 indictors** across 4 dimensions (we do not use the term sub-categories): economic, social, civic and democratic, and health
- **Civic participation** is part of its own separate dimension
- **Home ownership** is not included as an indicator, but subsidized housing is
- No expert assessed dimensions

CIMI Dimensions and Indicators



Major data sources on immigration and ethnocultural diversity

Source: Hélène Maheux, Statistics Canada, Dec. 2016, "Census Immigration Data at Your Fingertips."



Comparison of NAE Cities Index and ACS' CIMI

NAE Cities Index Socioeconomic Section	CIMI Indicator Comparison
Job Opportunities	
Labour force participation rate	☑
Employment rate	☑
High-prestige occupations	Included as control
Part-time workers	Included as control
Entrepreneurship rate	Not included, but could measure via CFIB/Industry Canada
Economic Prosperity	
Median income	☑
Poverty Rate	Low-Income Measures
Social Security recipients	Not included, but could measure via Canada Pension Plan (CPP).
Welfare recipients	Not included, but could measure via Social Assistance.
Medicaid recipients	Not included, but could measure via Medicare.
Food Stamp recipients	N/A

NAE Cities Index Socioeconomic Section	CIMI Indicator Comparison
Livability	
Home ownership rate	Subsidized housing
Rate of rent burden	Not included, but could be measured via Core Housing Need (Census)
Overcrowded dwellings	
Health insurance holders	Universal healthcare
High school diploma	Education level is included as a control, but could be an indicator
Bachelor's degree	
Advanced degree	
Civic Participation	
Naturalization rate	Not included, but could be measured via Census.
Public-sector workers	Not included, but could be measured via Labour Force Survey.
Social-sector workers	
Military service	

Filtered data vs. Regression

NAE Cities Index

- For indicators that are broken down by skill level, we calculate the ratio of the value for immigrants to that for their U.S.-born counterparts *with the same skill level* in the same city, e.g. the ratio of employment rate of high-skilled immigrants to the rate of high-skilled U.S.-born residents in Riverside, California.
- We also calculate the ratio of the share of immigrants at a certain level of educational attainment to that of their U.S.-born counterparts in the same city, e.g. the ratio of the share of immigrants with a bachelor's degree to the share of U.S.-born residents with such a degree in New York City.

ACS CIMI

- The CIMI uses advanced statistical methods (multiple and logistic regression) to assess immigrant outcomes and trends over time (1991 to 2016) relative to Canadian-born outcomes.
- Our statistical models also control for socio-demographic factors to include gender, age, visible minority status, knowledge of official languages, socioeconomic status (education, occupation, income) and mobility status.

CIMI Analytic Model

- **Immigrant status** and **geography** are the key independent variables.
- In future versions of the CIMI, we will also consider **year of immigration** to compare integration outcomes for recent vs. established immigrants.
- An **immigrant * geography interaction term** is used to measure parity between immigrants and non-immigrants across Canadian geographies.
- **Regression Equation**:

  $Y = b_0$ constant + b_1 immigrant + b_2 geography + b_3 immigrant x geography + … controls

  - A = Immigrant status (Immigrant or Canadian-born)
  - B = Province or City of residence
  - A x B = Immigrant status x Province or City of residence

CIMI Controls

Variable	ECONOMIC	SOCIAL	CIVIC & DEMOCRATIC	HEALTH
Gender	*	*	*	*
Age	*	*	*	*
Visible Minority	*	*	*	*
Knowledge of Official Languages	*	*	*	*
Education	*	*	*	*
Occupation	*	*	*	*
Income		*	*	*
Mobility (5-year)	*			
Physical Health (self-perceived)				*
Mental Health (self-perceived)				*

Benchmarking: Measuring against who and/or what?

- What are the advantages and disadvantages in establishing benchmarks? When it comes to measuring certain phenomenon no one size fits all approach.
- Does Societal Average = Integration?
- When immigrants perform similarly to non-immigrants in terms of economic or civic and democratic participation, does this = assimilation?
- In other words, should the target for immigrants be the overall unemployment rate or unemployment rate of Canadian-born population as indicator of immigration?

Our suggested way forward for a Canada-USA Index

- Focus on top 20 North American Immigrant Cities Index (North American Migration Index)
- In addition to economic condition we can look at:
  - Time of Arrival
  - Immigration Category
  - Second Generation
  - Interprovincial and interstate migration

Top 10 immigrant receiving census metropolitan areas in the United States and Canada

Top 10 immigrant receiving census metropolitan areas in the United States and Canada	2016 Total Population	2016 Foreign-born	% Foreign-born	Employment Status		
				NBP	FBP	GAP
New York-Newark-Jersey City	20,153,634	5,897,656	29%	59.9%	63.2%	-3.3%
Los Angeles-Long Beach-Anaheim	13,310,447	4,475,769	34%	61.4%	60.8%	0.6%
Toronto	5,928,040	2,705,550	46%	66.2%	59.2%	7.0%
Miami-Fort Lauderdale-West Palm Beach	6,066,387	2,458,591	41%	57.1%	60.4%	-3.3%
Chicago-Naperville-Elgin	9,512,968	1,675,434	18%	61.9%	64.7%	-2.8%
Houston-The Woodlands-Sugar Land	6,772,470	1,588,661	23%	60.7%	65.2%	-4.5%
San Francisco-Oakland-Hayward	4,679,166	1,444,037	31%	64.4%	64.6%	-0.2%
Washington-Arlington-Alexandria	6,133,552	1,407,787	23%	66.1%	71.6%	-5.5%
Dallas-Fort Worth-Arlington	7,232,599	1,319,883	18%	64.4%	68.6%	-4.2%
Vancouver	2,463,431	989,545	40%	66.1%	59.3%	6.8%
Montreal	4,098,927	936,305	23%	62.2%	58.6%	3.6%

Top 10 immigrant receiving census metropolitan areas in the United States and Canada

Top 10 immigrant receiving census metropolitan areas in the United States and Canada	Median Earnings for FT Workers					
	Native born			Foreign born		
	Male	Female	GAP	Male	Female	GAP
New York-Newark-Jersey City	$ 68,475	$ 54,073	$ 14,402	$ 45,005	$ 40,683	$ 4,322
Los Angeles-Long Beach-Anaheim	$ 58,330	$ 47,694	$ 10,636	$ 36,105	$ 33,296	$ 2,809
Toronto	$ 67,557	$ 58,591	$ 8,966	$ 55,318	$ 46,685	$ 8,633
Miami-Fort Lauderdale-West Palm Beach	$ 48,767	$ 40,770	$ 7,997	$ 34,699	$ 30,260	$ 4,439
Chicago-Naperville-Elgin	$ 61,648	$ 46,912	$ 14,736	$ 40,911	$ 34,068	$ 6,843
Houston-The Woodlands-Sugar Land	$ 59,292	$ 43,541	$ 15,751	$ 37,215	$ 29,349	$ 7,866
San Francisco-Oakland-Hayward	$ 79,502	$ 62,513	$ 16,989	$ 56,618	$ 50,725	$ 5,893
Washington-Arlington-Alexandria	$ 79,724	$ 62,647	$ 17,077	$ 50,301	$ 43,092	$ 7,209
Dallas-Fort Worth-Arlington	$ 56,093	$ 43,791	$ 12,302	$ 33,286	$ 27,977	$ 5,309
Vancouver	$ 65,388	$ 53,145	$ 12,243	$ 54,612	$ 44,992	$ 9,620
Montreal	$ 56,824	$ 46,707	$ 10,117	$ 45,308	$ 38,994	$ 6,314