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Longitudinal Immigration Database (IMDB)

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Other key immigration data sources

■ **Census of Population (and 2011 NHS)**

- Large sample cross-sectional survey covering usual residents of Canada
- Immigration variables:
 - Immigrant status; year of immigration
 - Citizenship
 - Place of birth
- Other variables of interest:
 - Language, ethnocultural, and demographic characteristics
 - Education, labour, income, and housing

■ **Other household surveys**

- Canadian Community Household Survey
- Labour Force Survey
- General Social Survey



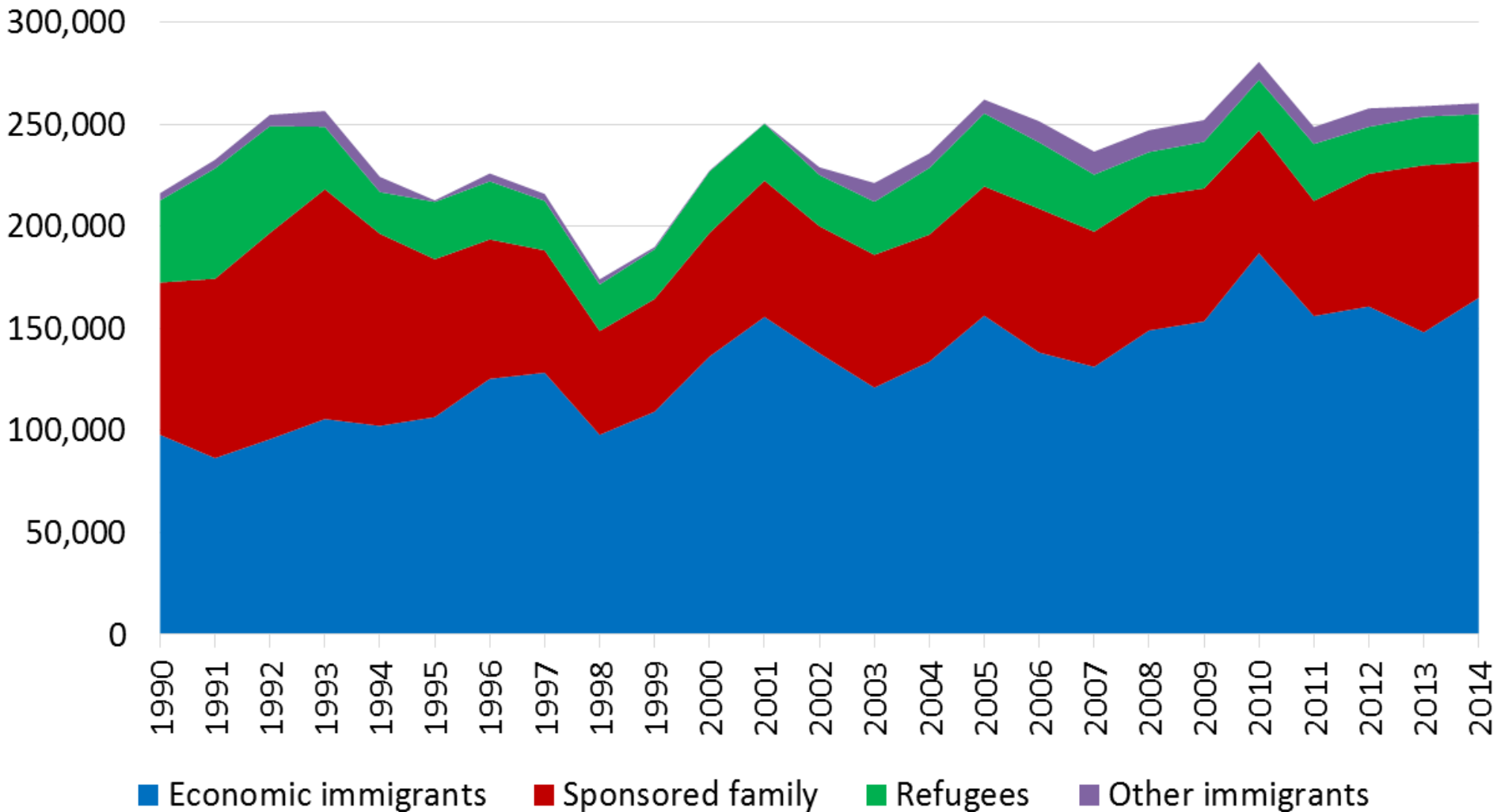
Immigrant admission category

- **Immigrants are admitted into Canada for different reasons**
 - Economic immigrants: Contributing to Canada's economy
 - Skilled workers
 - Business class
 - Canadian experience class
 - Provincial nominees
 - Caregivers
 - Sponsored family: Reuniting with family members
 - Refugees: Seeking protection and escaping persecution

- **Admission category is correlated with socio-economic characteristics of immigrants at landing**



Canada - Permanent residents by category, 1990-2014



Source: Facts and Figures 2014, IRCC



Background

- **The Longitudinal Immigration Database (IMDB) is produced and managed by Statistics Canada on behalf of a federal-provincial consortium led by Immigration, Refugees and Citizenship Canada (IRCC).**
 - Created to respond to the need for detailed and reliable data on the performance and impact of immigration policies and programs.
 - Adds to data holdings provided by the Census of Population:
 - Connects outcomes directly with immigration programs and policies
 - Increased frequency
 - Increased sample size
 - Longitudinal design



Background - 2

- **The IMDB combines linked administrative immigration and tax data files:**
 - Provides detailed and reliable information on socio-economic outcomes of immigrants after landing such as:
 - Income measures by source
 - Mobility
 - Connects short- and long-term outcomes with characteristics at admission such as:
 - Immigrant admission category
 - Source country
 - Knowledge of official languages
 - Intended occupation
 - Permits longitudinal analysis following immigrants from temporary residency (e.g. international students, temporary foreign workers, etc.) through admission and beyond



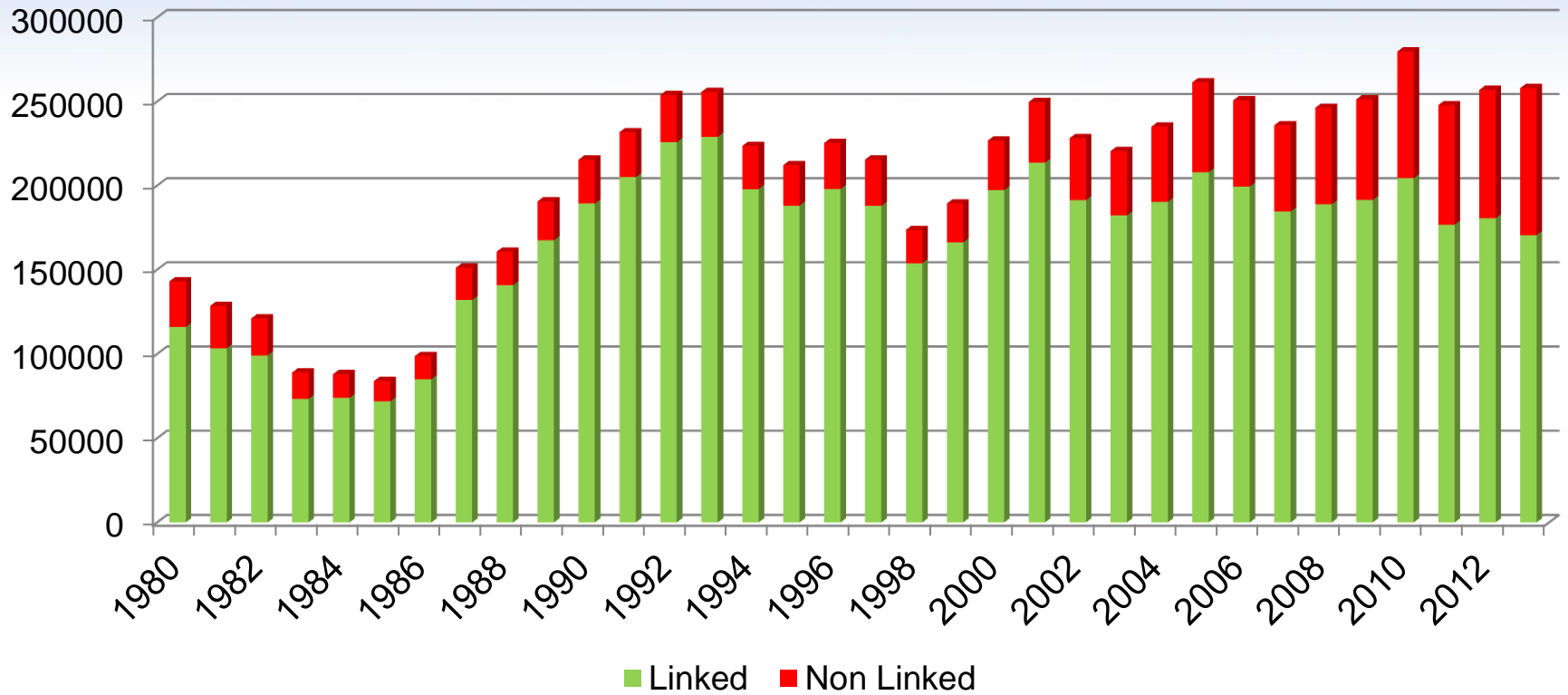
Record linkage database

- **Record linkage between administrative immigration data and annual tax files**
 - Immigrant landing file: Immigrants who have landed in Canada since 1980
 - Non-permanent resident files since 1980:
 - Temporary foreign workers
 - International students
 - Refugee claimants
 - Annual T1FFs: Includes tax files since 1982
 - Amalgamated Mortality Database (AMDB)
- **87% of immigrants who landed from 1980-2013 linked to at least one tax record from 1982-2013**



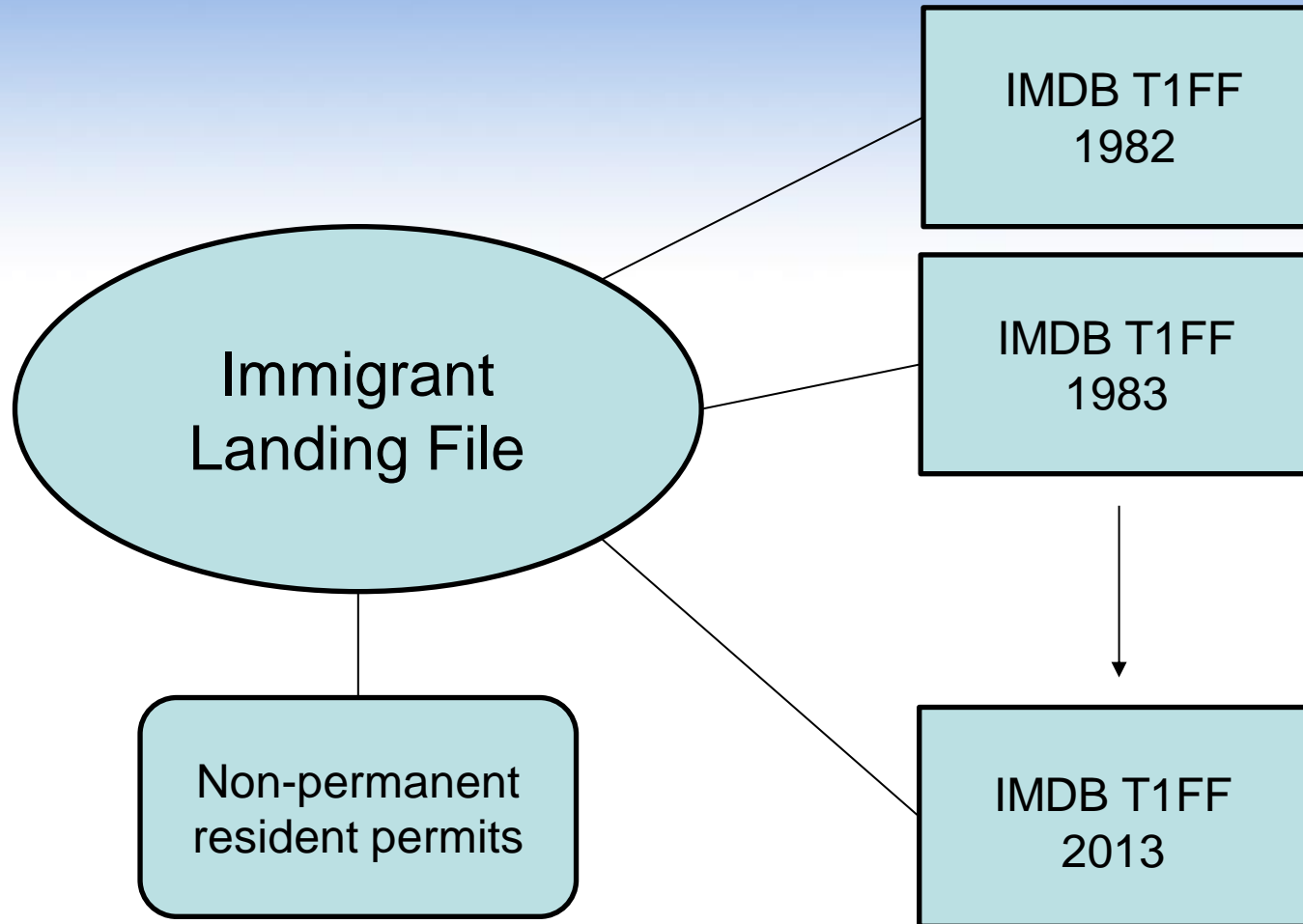
Record linkage results

Number of immigrants by year of immigration and linkage status





IMDB components





Immigrant landing file (ILF)

- **Person-level database of immigrants admitted into Canada ('landing') prepared using administrative records from Immigration, Refugees, and Citizenship Canada (IRCC)**
 - Covers all immigrants who landed in Canada from 1980 to present
 - Includes over 6.8 million records as of 2013
 - Does not account for deaths, out-migration or any other updates
 - Includes characteristics of immigrants as collected at the time of immigration: Admission category, destination, knowledge of official languages, country of origin, intended occupation, and level of education



Annual IMDB tax files

■ Annual T1FFs since 1982

- Individual and family identifiers (from immigration files and T1FFs) permit longitudinal analysis
- Socio-economic topics of interest include:
 - Income by source (e.g., employment, government, etc.)
 - Industry
 - Education amounts
 - Family structure and marital status
- Current residence
 - Province or Territory on December 31st of reference year
 - Postal code geography for time of filing



Non-permanent resident permits file

- **Includes information specific to non-permanent resident permits since 1980:**
 - Permit type
 - Temporary foreign workers
 - International students
 - Refugee claimants
 - Temporary residents (Minister's permits)
 - Effective and valid dates
 - Intended destination
- **Connected with ILF – pre-landing experience**
- **Longitudinal nature of IMDB extended to immigration experience**



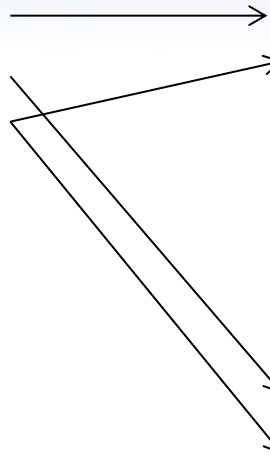
Analysis with the IMDB

- **Select cohort of interest from Immigrant landing file**
 - Landing year
 - Geography (if not national)
 - Other variables of interest -
 - Demographics: age, gender, source country
 - Admission category
 - Family status – principal applicant vs. spouse/dependents
 - Pre-landing experience
- **Select outcomes from relevant annual tax files for identified cohort**



Analysis with the IMDB - 2

Landing file			
<i>imdb_id</i>	<i>age</i>	<i>category</i>	...
1			
2			
3			
...			



Tax file 1982			
<i>imdb_id</i>	<i>income</i>	<i>province</i>	...
1			
3			
5			
...			

Tax file 1983			
<i>imdb_id</i>	<i>income</i>	<i>province</i>	...
2			
3			
7			
...			

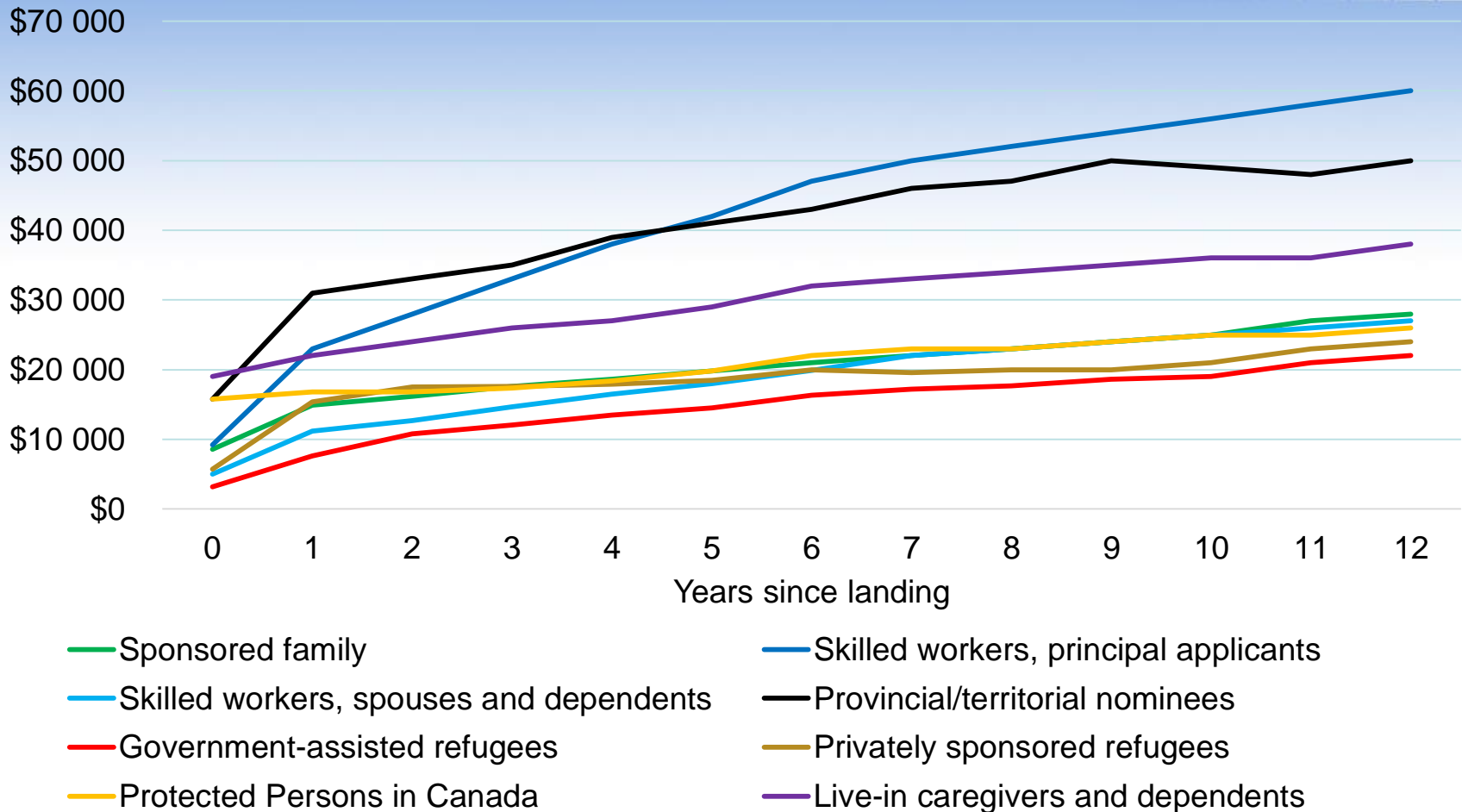


Example: Income trajectories

- Example: compare the median employment income of women aged 24-54 at landing who landed in 2000 at 5 years since landing to 1 year since landing

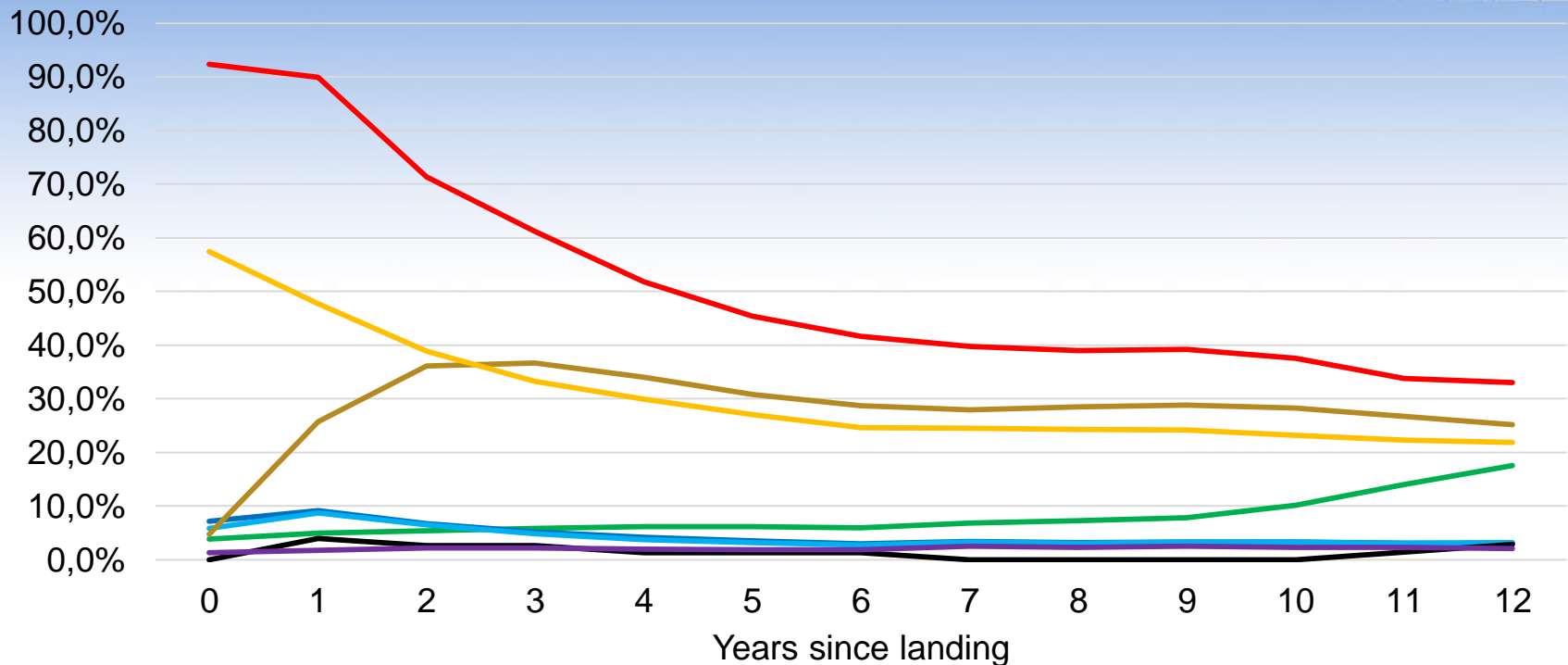
IMDB_ID	Landing Year	Age at landing	Gender	Employment Income 2001	Employment Income 2005
IM583	2000	34	F	\$20,500	\$49,000
IM145	2000	53	F	.	\$56,000
IM548	2000	29	F	\$11,500	\$33,800
IM798	2000	31	F	\$36,000	\$0
IM961	2000	42	F	\$10,000	.
IM967	2000	40	F	.	.
IM110	2000	35	F	\$0	\$59,000

Median employment income for immigrant tax filers, 2001 cohort, 2013 IMDB (2013 constant dollars)



Source: Statistics Canada, IMDB, 2013, CANSIM 054-0001

Percentage receiving income from social assistance for immigrant tax filers, 2001 cohort, 2013 IMDB



- Sponsored family
- Skilled workers, principal applicants
- Skilled workers, spouses and dependents
- Provincial/territorial nominees
- Government-assisted refugees
- Privately sponsored refugees
- Protected Persons in Canada
- Live-in caregivers and dependents

Source: Statistics Canada, IMDB, 2013, CANSIM 054-0001



Example: Mobility

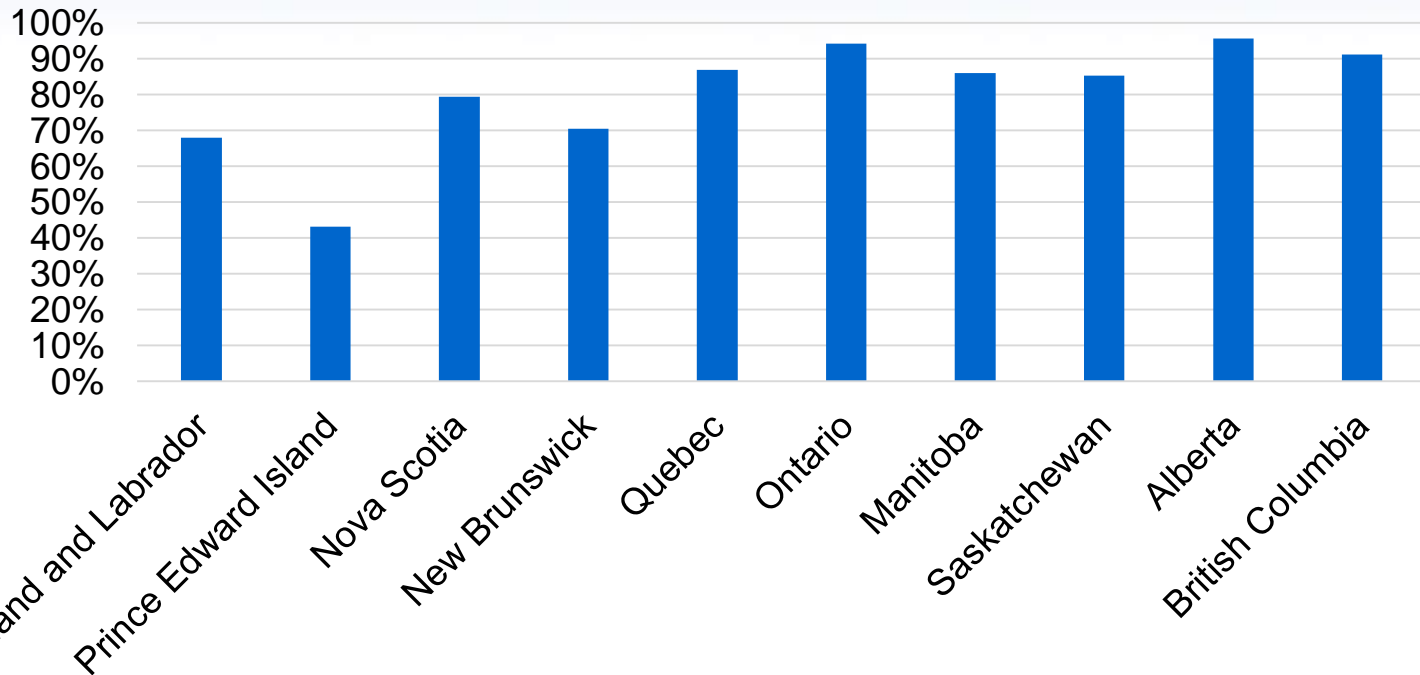
- Example: What proportion of immigrants who landed in 2000 file taxes in their destination province until 2002?

IMDB_ID	Landing Year	Destination Province	PRCO 2000	PRCO 2001	PRCO 2002
IM583	2000	SK	SK	SK	SK
IM145	2000	AB	AB	SK	SK
IM548	2000	QC	ON	ON	SK
IM798	2000	SK	.	SK	SK
IM961	2000	NS	NS	NS	.
IM967	2000	SK	.	BC	SK
IM110	2000	QC	.	.	.



Provincial mobility: Destination versus residence

- **91% of 2013 immigrant taxfilers who landed in 2012 reported residing in their province of landing**
 - Percentage by province of landing, 2012 cohort, 2013 IMDB



Source: Statistics Canada, IMDB, 2013, CANSIM 054-0003



Some current limitations

- **Socio-economic outcomes restricted to tax file content**
 - Labour force rates, current occupation not available
 - Education attainment, language acquisition incomplete
- **Limited information on out-migration**
 - Entry/exit variable from tax files
 - Discontinued filing
- **Universe restricted to immigrants landed since 1980**
 - No pre-1980 data currently included
 - No information on second generation
- **Coverage determined by record linkage and quality of administrative data files**
 - Methods always improving



Dissemination: How to access IMDB data?

■ **CANSIM tables**

- 28 national/provincial tables released annually
- Income and mobility outcomes

■ **Research articles, examples:**

- “The earnings advantage of landed immigrants who were previously temporary residents in Canada, 1982 to 2011” – Bonikowska and Hou
- “Changing immigrant characteristics and entry earnings” – Hou and Picot

■ **Custom tabulations**

- Tables produced by Statistics Canada upon request
- Synthetic microdata files permit remote users to submit programs to be run for more complex requests



Upcoming activities

- **2014 IMDB production and annual release (December 2016)**
- **Technical report / User Guide**
 - Describe the IMDB, components, and data quality
 - Provide guidance to data users on how to analyse results from the IMDB
 - Supply examples of analysis with relevant instruction
 - Plan to release: Spring 2017
- **Pilot project to make IMDB available to RDC network**
 - More information to come in the future



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