

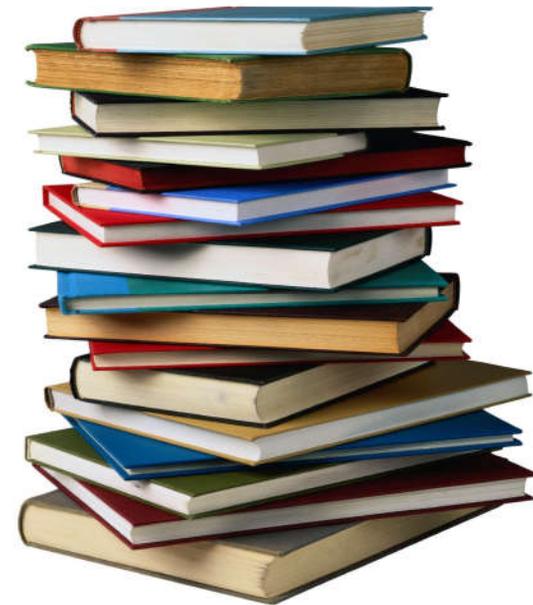
Information Session: TEMPORARY FOREIGN WORKER PROGRAM DATA PLATFORM

July 10, 2019

The views expressed are those of the evaluators at the Evaluation Directorate and do not necessarily reflect the opinions of ESDC or of the federal government.

Federal Government needs reliable, credible and comprehensive analysis of the impacts of the Temporary Foreign Worker Program on the Canadian labour market and economy.

- Empirical Research
- Program Evaluation
- Sound data sources



Fostering Collaboration

- By providing access to new data and new research opportunities, connecting with other key files, and partnering with researchers we hope to:



Fostering Collaboration



Temporary Foreign Worker Program Overview

- To fill temporary labour shortages when Canadians / permanent residents are not available, and help ensure that foreign workers are protected.
- Governed by the Immigration and Refugee Protection Act and its Regulations; shared responsibilities with other departments:
 - ESDC conducts Labour Market Impact Assessments
 - Immigration, Refugees and Citizenship Canada (IRCC) authorizes work permits
 - Canadian Border Services Agency (CBSA) issues work permits.
- Several streams under which employers can submit a Labour Market Impact Assessment (LMIA) application including high-wage, low-wage, agriculture, global talent and permanent residence stream.
- Significant reforms were made to the Program in 2014 due to concerns that it was not being used as intended.

Auditor General's Report

- Report from the Office of the Auditor General (2017): not enough reliable research on the potential effects of the TFW Program on the labour market, including wages and displacement of Canadians.
- Certain sectors (e.g., fish processing, trucking) - have high concentrations of TFWs leading to specific concerns.
- To address some concerns:
 - new Program policies introduced
 - TFW Program Evaluation – case studies of specific sectors / occupations/ regions included (completion in spring 2020).

Research Network

- ESDC committed to work with researchers to effectively address impact of Program on labour market.
- Focus of this research is an in-depth analyses on the Program impact across sectors / occupations / regions
- Preliminary findings of Research Network to be included in Program Evaluation.



Request for Proposals - Purpose

- To address current evaluation/research limitations:
 - Limited access to key administrative data, research is largely theoretical
 - Lack of connections between data files with key variables
 - Limited co-ordination between GoC departments and researchers
 - Continued debate on valid methodologies
 - Inability to separate foreign workers coming through TFW Program vs Immigration Refugee and Citizenship Canada's (IRCC) International Mobility Program in the available administrative data

Request for Proposals - Expectations

- Identify the budget allocation (max. \$85K) and expected level of effort for each of the research issues identified
 - Potential impacts of the Temporary Foreign Worker Program's low-wage stream on the Canadian labour market, focussing on the potential suppression of Canadian wages and displacement of Canadian workers. **(No more than \$55K of the budget for the project).**
 - The extent to which the Temporary Foreign Worker Program is meeting the needs of Canadian firms and the labour market as a whole. **(No more than \$15K of the proposed budget for the project).**
 - The effects of the reformed Temporary Foreign Worker Program on Canadian businesses and the labour market. **(No more than \$15K of the proposed budget for the project).**
- Identify expected start date and duration of the research at the Canadian Centre for Data Development and Economic Research



Request for Proposals - Expectations

- ESDC and Statistics Canada will collaborate on assessing the proposed methodologies
- Assessment Criteria
 - Understanding of objectives and issues
 - The Program
 - The data
 - The level of effort
 - Relevant Experience and Expertise
 - experience and expertise conducting advanced econometric analysis of socio-economic issues
 - experience using large analytical data files from Statistics Canada

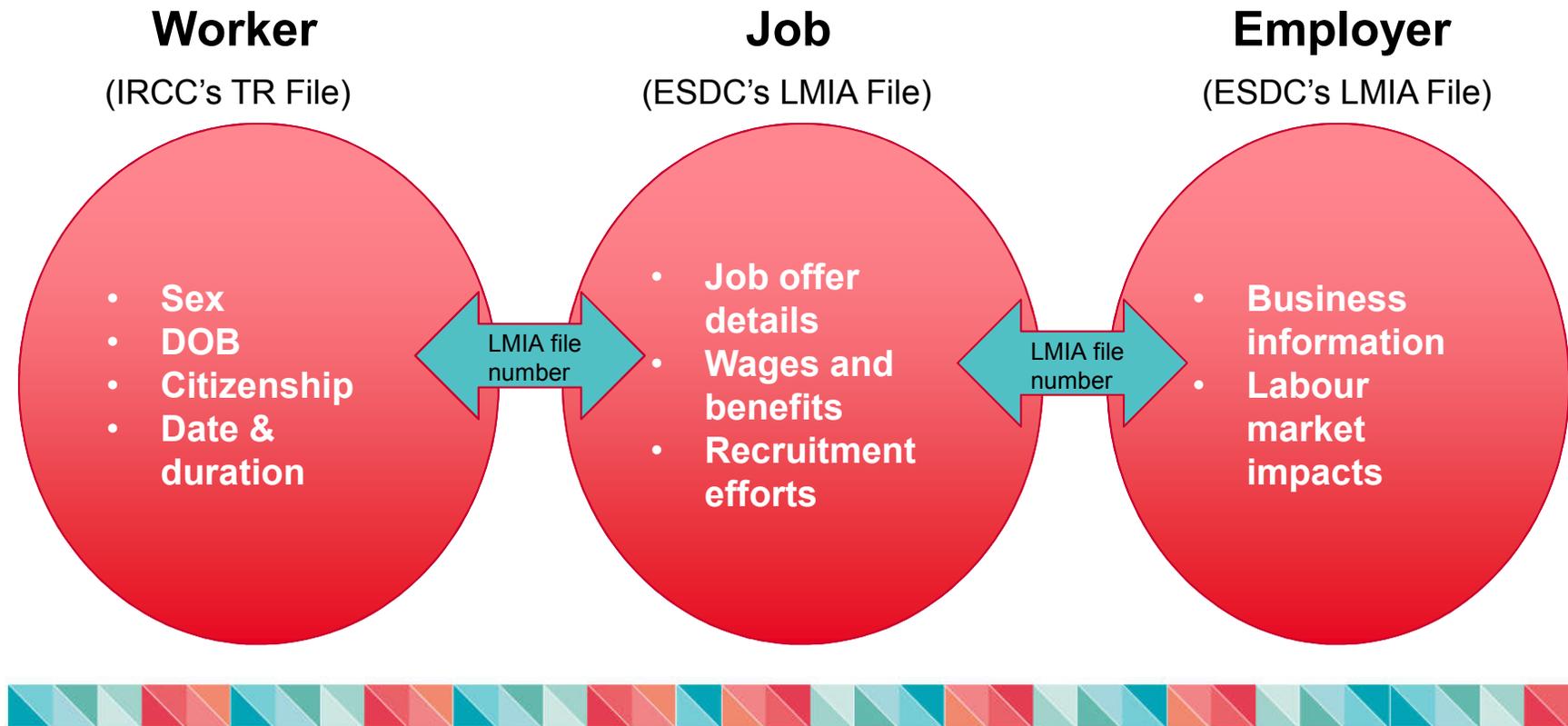


Request for Proposals - Expectations

- Assessment Criteria (cont.)
 - Research relevance
 - Situate proposal for each issue in relevant literature and identify gaps in knowledge that the research will address
 - Demonstrate relevance of proposal to Program policy/research
 - Methodological quality
 - Detailed explanation of the analytical framework and methodology, including justification for using the micro data
 - Identify expected outputs from CEEDD analysis, software and data requirements

Temporary Foreign Worker Data

- Connect IRCC's Temporary Residents (TR) file and ESDC's LMIA file
- Establish the three-way linkage between employers, workers and jobs
- Workers and Employers can be tracked in Statistics Canada data



Data Elements for Worker

- Unique worker ID
- Sex
- Date of birth
- Country of citizenship
- Country of last residence
- Marital status
- Native language
- Work permit effective/expiry date
- Work permit serial number
- Program classification

Data Elements for Employer

Business Information

- 9-digit Business Number
- Employer names
- Business activity
- Business location
- Website
- # of employees

LMIA Information

- Create Jobs
- Transfer skills
- Fill a labour shortage
- Other labour market benefits
- # of Canadians laid off in the last 12 months
- # of TFWs laid off in the last 12 months
- Reason for layoffs
- # of positions requested
- Rationale for requested positions

LMIA Information at Job Location

- # of Canadians
- # of Canadians last year
- # of TFWs
- # of TFWs last year
- Reasons for changes in workers



Data Elements for Job Offer

Job Offer Details

- 4-digit NOC
- Job title, location
- Wage streams
- 4-digit NAICS
- Start date/Duration
- Language
- Education/Certification
- Experience
- Hours per day/week
- Seasonal

Wage and Benefits

- Wage range
- Hourly wage
- Overtime wage
- Contingent wage
- Insurances
- Holidays
- Union
- Rent

Recruitment Efforts

- Recruitment variation/exemption, and rationale
- Efforts to recruit Canadians



Important Information on Data

- The ESDC and IRCC administrative data is linked for years between 2010 and 2016, and potentially 2017.
- The matching rate between the two files is close to 100% for data after 2013. However for data prior to 2013, about one-third could not be matched due to data quality issues. All positive LMIA records will be provided, from which researchers can still use number of positions to estimate the number of workers as well as other variables.
- In cases where the two files have similar fields such as employer name and job location, TFWP data will complement the work permit data to recover missing values.
- The linked data is only prepared for temporary foreign workers coming through TFWP. No data from International Mobility Program (IMP) is included.
- Wage requirements for Agriculture Stream is based on the commodity that employers produce (reference document will be provided).
- Complete list of data elements will be provided.



QUESTIONS?





Canadian Employer-Employee Dynamics Database (CEEDD)

Social Analysis and Modelling Division

July 10, 2019



Statistics
Canada Statistique
Canada

Canada

The CEEDD --- Overview

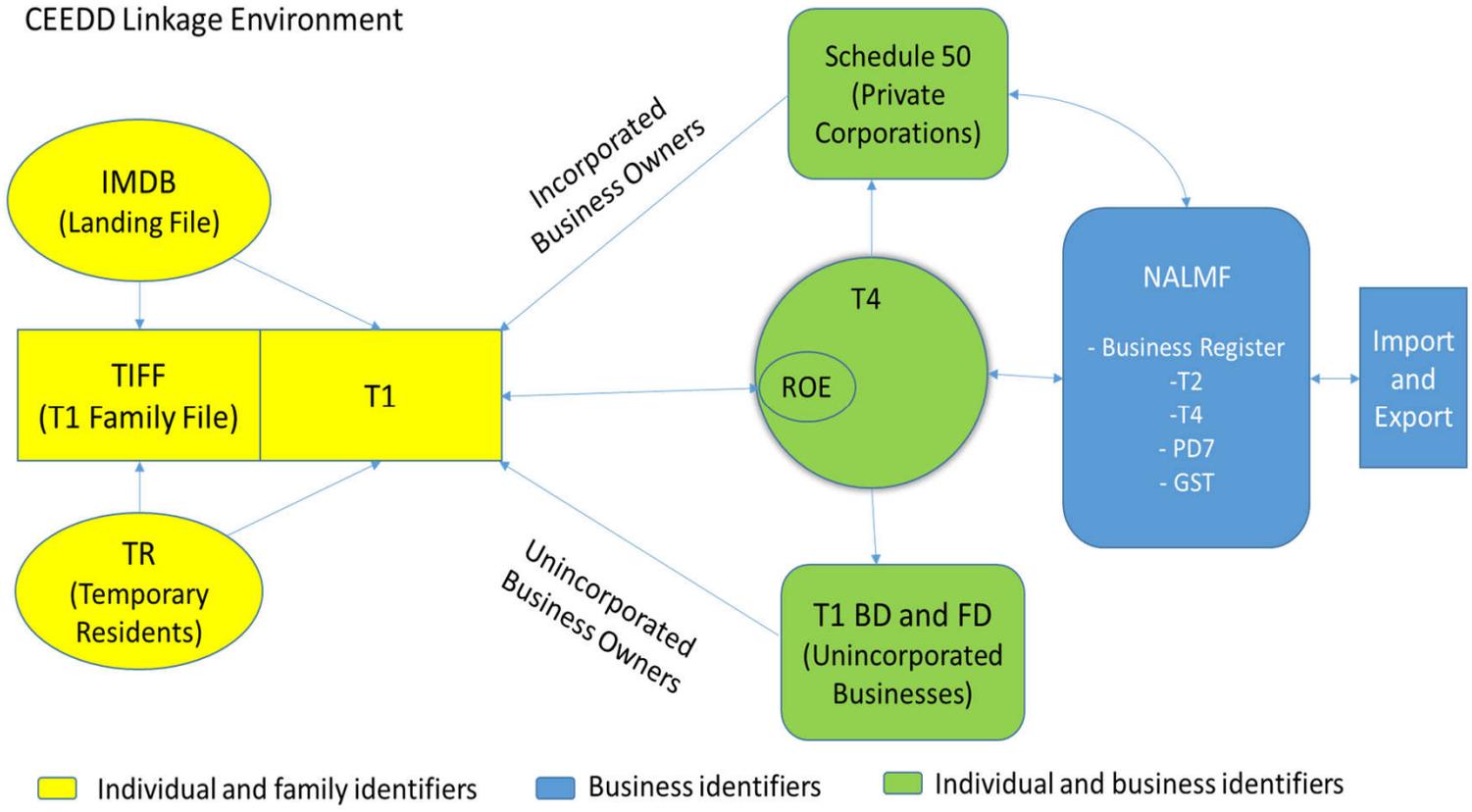
- A set of linkable files to provide matched data between employees and employers in the Canadian labour market.
- Analysis can be done with the CEEDD data at
 - Cross-sectional basis: at a given point in time based on covariates drawn from the same year across different component files; or
 - Longitudinal basis: tracking firms and employees over time across different component files
- All CEEDD files contain 100% of the respective population from the administrative sources.

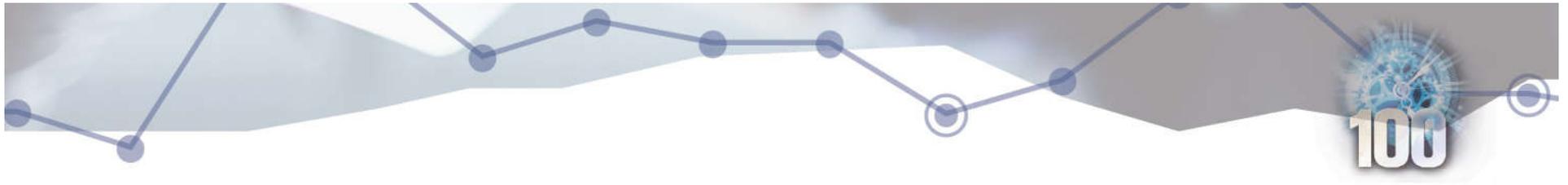
The CEEDD – Component files

- The CEEDD linkage environment contains information from the following component files from 2001 onwards:
 1. T1 Personal Master File (T1PMF)
 2. T1 Historical Personal Master File (T1H)
 3. T1 Family File (T1FF)
 4. T1 Financial Declaration File (T1FD)
 5. T1 Business Declaration File (T1BD)
 6. T2 Corporation Income Tax Return (T2Corp)
 7. T4 Statement of Remuneration Paid Files (T4)
 8. Record of Employment (ROE)
 9. Trade by Importer Characteristics (TIC)
 10. Trade by Exporter Characteristics (TEC)
 11. National Accounts Longitudinal Microdata File (NALMF)
 12. Longitudinal Immigration Database (IMDB)
 13. Temporary Residents File (TR)

The CEEDD --- Linkage environment

CEEDD Linkage Environment



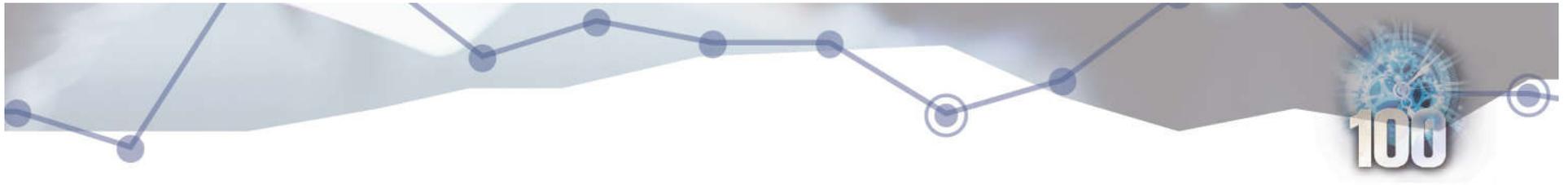


The CEEDD --- Linkage environment

- Individual-level data:
 - *From T1 files*: Demographic information and reported earnings of individual tax filers. Multiple SIN holders are processed in the files so that information from different SINs of the same individual can be linked over time.
 - *From IMDB files*: Immigration-related information for foreign-born individuals who became landed immigrants in Canada.
- Family-level data:
 - *From T1FF files*: Individual tax filers can be linked to their spouse and children at the census family level

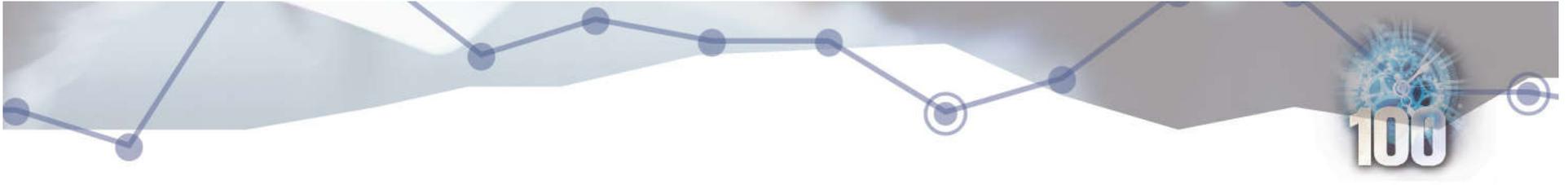
The CEEDD --- Linkage environment

- Job-level and Firm-level data:
 - **For employees:** *From T4 and ROE files*, information related to payroll and job separation is available
 - **For incorporated business owners:** Information *from T2 Schedule 50, T1, and T4* are linked to identify information related to the business owners and their businesses including employment, revenue, profit, and industry code.
 - **For unincorporated business owners:** Information *from T1* self-employment income report is used to identify information related to the unincorporated business owners and information *from T1BD* can be used to extract information for the unincorporated businesses (2005 onwards).
 - **For firms:** Information *from the NALMF and Import and Export files*. The NALMF is a comprehensive longitudinal database of Canadian enterprises that links annual employment and administrative data from T4, PD7, T2, T2 Schedule 50, GST, and Import & Export files.



The CEEDD --- Linkage environment

- Geography data:
 - Province variables are available from the T1 files for individual tax filers.
 - Province of employment is available from the T4 files.
 - Province of business for unincorporated firms is available from T1BD files.
 - Province of operation for incorporated firms is available from Business Register through the NALMF.
 - Sub-provincial variables based on standard geographical classification from Census are also available at individual level.



The CEEDD --- Data structure

- A key feature of the CEEDD is that it is *a set of linkable files* from different sources instead of being *a single linked file* containing all variables.
- A single linked file contains one line of record for each unit of analysis with all available variables.

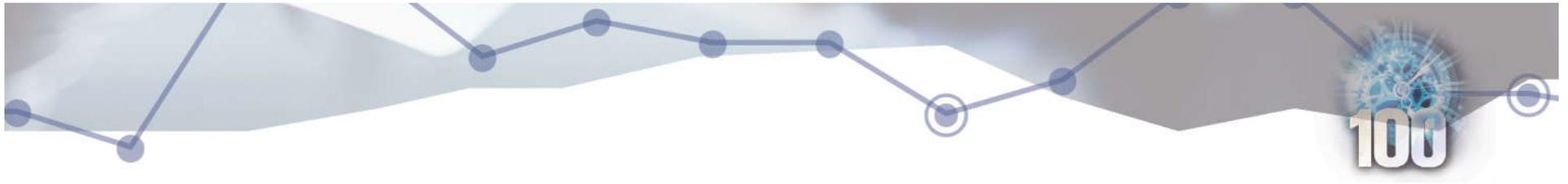
	File 1		File 2		File 3	
	Variable A1	Variable A2	Variable B1	Variable B2	Variable C1	Variable C2
Person A						
Person B						

The CEEDD --- Data structure

- A set of linkable files contains one or more lines of records for each unit of analysis in separate component files.

	File 1	
	Variable A1	Variable A2
Person A		
Person B		

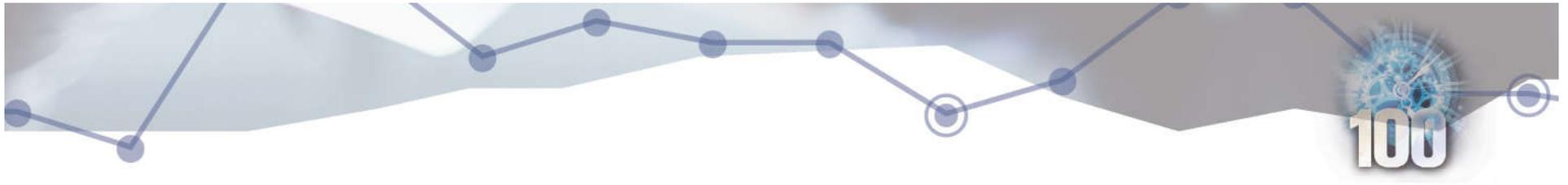
	File 2	
	Variable B1	Variable B2
Person A		
Person B		



The CEEDD --- Data structure

	File 3	
	Variable C1	Variable C2
Person A		
Person B		

- The set of linkable files under the CEEDD allow researchers to add and process variables from different component files separately.
- Using the unique personal and firm identifiers available on each linkable file, information at the employee and employer level can be linked across different component files over time.



The CEEDD --- Output analytical files

- Selected variables from different component files are available for CEEDD users.
- Variable lists for each output analytical files are available in the CEEDD overview document.
- A summary table with all output analytical files for 2018 CEEDD data is in the next slide.

Output Analytical Files	Source Files	Linkage keys	2018 vintage
<i>Individual-level data</i>			
T1 Personal Master Files	T1 PMF	Individual: casenum2018	2001 to 2016
T1 Historical Files	T1 H	Individual: casenum2018	2001 to 2014
IMDB Files	Landing Files & Non-Permanent Residents Files	Individual: casenum2018	1980 to 2016
<i>Family-level data</i>			
T1 Family Files	T1FF master file based on T1 PMF, T4, and Canada Child Tax Benefit (CCTB) Files	Individual: casenum2018; Family: fin	2001 to 2016
<i>Job-level data</i>			
Edited T4 - ROE - NALMF	Edited T4, ROE, and NALMF	Individual: casenum2018; Firm: EntID	2001 to 2016
Business owners' module	T1FD, T1BD, and T2 Corporation Income Tax Return Schedule 50	Individual: casenum2018; Unincorporated business: business identifier, BN, Parent operating entity number; Incorporated business: BN	2001 to 2014
Raw T4 - ROE - LEAP	T4, ROE, and LEAP	Individual: casenum2018; Firm: lbrid	2001 to 2016
<i>Firm-level data</i>			
NALMF	BR, T2, T4, PD7, and GST	Firm: EntID	2001 to 2016
Import Files	Trade by Importer Characteristics	Firm: EntID	2010 to 2016
Export Files	Trade by Exporter Characteristics	Firm: EntID	2010 to 2016
<i>Geography data</i>			
Sub-provincial indicators	Postal Code Conversion File	postal code	2001 to 2016



The CEEDD --- TFWP research network

- It is the first time linking in the TFWP admin file from ESDC to the CEEDD linkage environment --- the data integration work is ongoing and researchers need to be prepared when data situations arise along the process.
- Most of the CEEDD analytical files are available already up to tax year 2016, but processing to include tax year 2017 is now starting and there is a possibility for researchers to be able to work with data up to tax year 2017.
- The three teams (ESDC, StatCan, and IRCC) have worked together to identify variables that can be useful for analytical work related to TFWP files from what the three teams have related to the workers and firms.

More information

- Website
 - The CEEDD-IMDB page on StatCan webpage is coming soon
- E-mail
 - li.xue@canada.ca , Director, Social Analysis and Modelling Division
 - winnie.chan@canada.ca , Senior Economist, Social Analysis and Modelling Division



Business microdata for economic research

Canadian Center for Data Development and Economic Research (CDER)

Economic Analysis Division

July 10, 2019



Statistics
Canada Statistique
Canada

Canada

CDER background

- CDER was created to allow Statistics Canada to make better use of its business data holdings without compromising security
- Set up at Statistics Canada HQ in Ottawa and launched in June 2011 for federal government researchers
- Access to CDER extended to academic and non-federal government researchers in October 2012

CDER activities

- Provide analysts with secure access to business micro data for research-oriented projects that serve the mandate of Statistics Canada
- Serve as a repository for business microdata
- Lead the development of new business micro data
- Provide analytical consulting services

Key information

- CDER approval process is similar to that of the RDCs
- Access is provided at Statistics Canada's headquarters in Ottawa
- All costs are covered on a cost-recovery basis

Application process for this project (1)

Step 1: (Once project is approved), initiate screening processes

a) Security screening

- Researchers require a valid **reliability status level**. StatCan will verify it.
- Specific requirements for non-Canadian citizens or Canadians who have lived outside of Canada for at least six consecutive months
 - E.g., Requires police clearance certificates or letters from law enforcement agencies

b) Conflict of interest form

- Fill the form sent by CDER
 - E.g., list self-administered RRSP, RESPS, stocks, political activities
- In case of a conflict, our labour-relation team will try to resolve the conflict
 - E.g., agreement to freeze assets holdings

Application process for this project (2)

Step 2: Official support from ESDC

- Includes a letter of support at the Assistant Deputy Minister level
 - A template of such letter will be provided

Step 3: Become a deemed employee of Statistics Canada

- Sworn in as deemed employees of Statistic Canada
- Sign a micro data research contract

Challenges with business data

- Projects using household data are carried out in the Research Data Centre (or Federal Research Data Centre), while projects using business data are carried out in the CDER
- Due to the nature of business data, the access conditions are slightly different
 - For both household and business data, there is a requirement that the identity of the individual units be protected. This is more challenging for business data.
 - A confidentiality breach related to business data is potentially more damaging to the statistical system because of the importance of key respondents that are more likely to be identifiable.
 - The financial gains related to identifying a respondent are potentially greater.

Challenges with business data (2)

- Measures in place to mitigate the higher risk to the statistical system when business microdata are accessed:
 - Access is only in StatCan headquarters in Ottawa
 - Synthetic data is provided to aid with programming
 - A batch-submit system is used when accessing the actual data
 - Allows to run codes against real data without seeing the real data
- A dummy file could be requested (at a cost) to facilitate programming outside of CDER

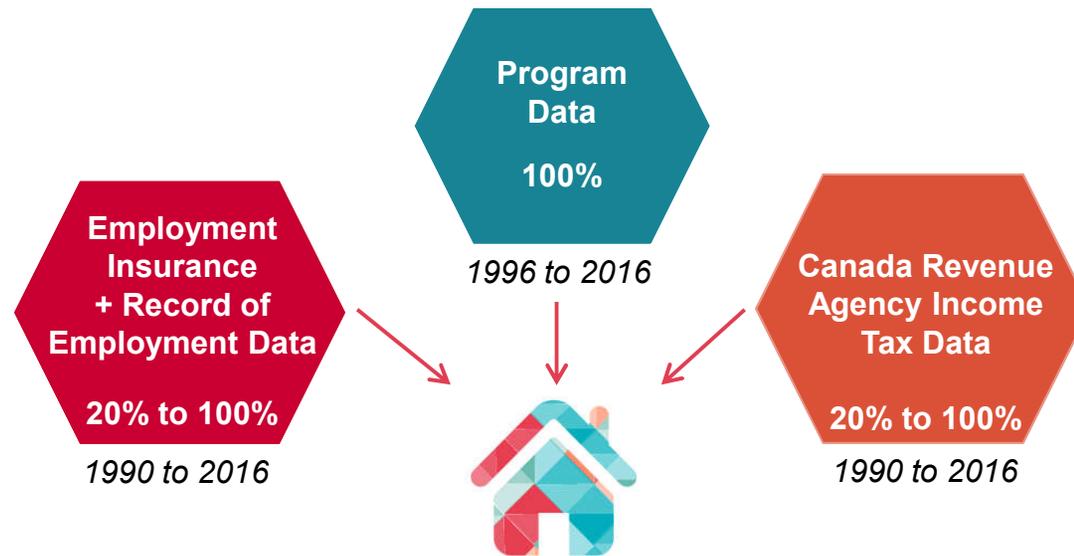
More information

- Website
 - <https://www.statcan.gc.ca/eng/cder/index>
- E-mail
 - statcan.cder-cdre.statcan@canada.ca
 - Danny.Leung@canada.ca , Director, Economic Analysis Division
 - Douwere.Grekou@canada.ca , Acting CDER program manager

QUESTIONS?



Lessons Learned from Similar Data Platforms at ESDC



Labour Market Program Data Platform

captures five areas of interest:

- Patterns of eligibility to participate in Labour Market Programming.
- Patterns of actual participation in Labour Market Programming.
- Patterns of claiming Employment Insurance (EI) benefits.
- Annual sources of income.
- Annual job patterns.

QUESTIONS?



CLOSING REMARKS

- ESDC and Statistics Canada will collaborate with the successful bidders to ensure the methodology is viable with the CEEDD
- ESDC will cover the costs to access the CEEDD
- There will be flexibility in the scheduled project milestones when the contracts are being put in place
- Detailed lists of variables to be available on the Buy and Sell site in approximately one week
- Please continue asking any questions about the Request for Proposals to nc-solicitations-gd@hrsdc-rhdcc.gc.ca

THANK YOU

