

UNECE, Work Session on Migration Statistics

18 - 20 May 2016



Developing, integrating and producing administrative data for the purpose of enabling Statistics Canada estimate migration flows.

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Immigration, Refugees and Citizenship Canada



Immigration, Refugees
and Citizenship Canada

Immigration, Réfugiés
et Citoyenneté Canada

Canada

Purpose & Outline

Purpose:

- To describe Immigration, Refugees and Citizenship Canada's (IRCC's) data holdings and highlight IRCC's collaboration with Statistics Canada (STC).

Outline:

- **IRCC's Data holdings**
 - Main administrative data system
 - Administrative data development & repurposing
 - Data use and dissemination
 - Enabling data integration
- **IRCC-STC Collaboration**
 - Communication
 - Data linkage projects

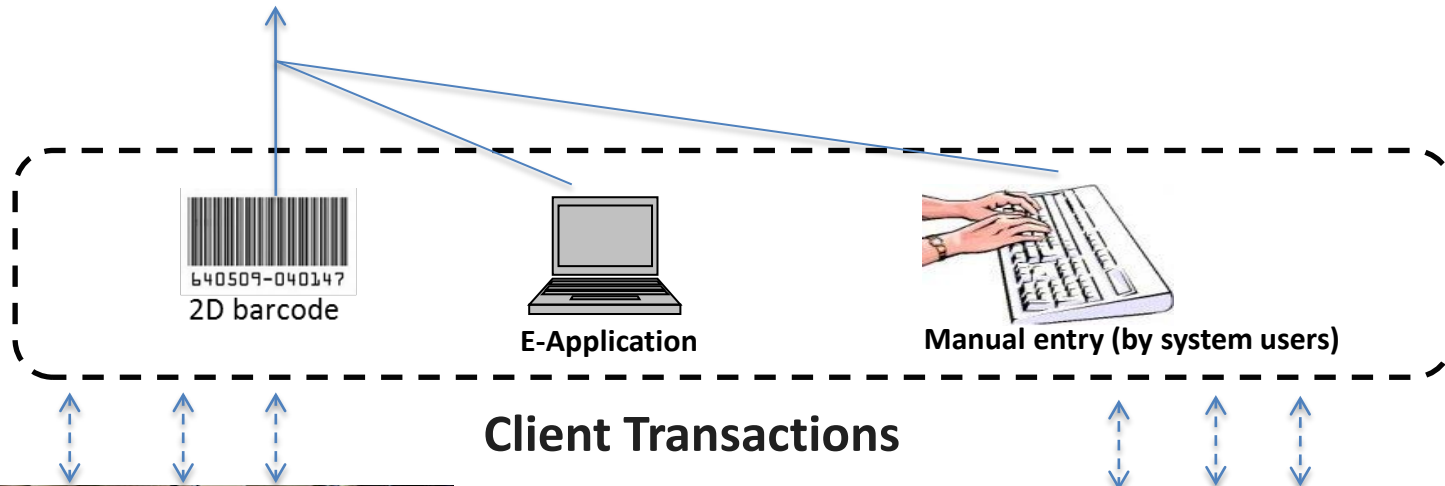
About Immigration Refugees and Citizenship Canada (IRCC)

- IRCC's mandate comes from the [Department of Citizenship and Immigration Act](#). The Minister for Citizenship and Immigration Canada is responsible for the [Citizenship Act](#) of 1977 and shares responsibility with the Minister of Public Safety for the [Immigration and Refugee Protection Act](#)(IRPA).
- Effective July 2, 2013, primary responsibility for the administration of the [Canadian Passport Order](#) and the [Order Respecting the Issuance of Diplomatic and Special Passports](#) moved to IRCC.

Data flow: IRCC Main Administrative Data Collection System



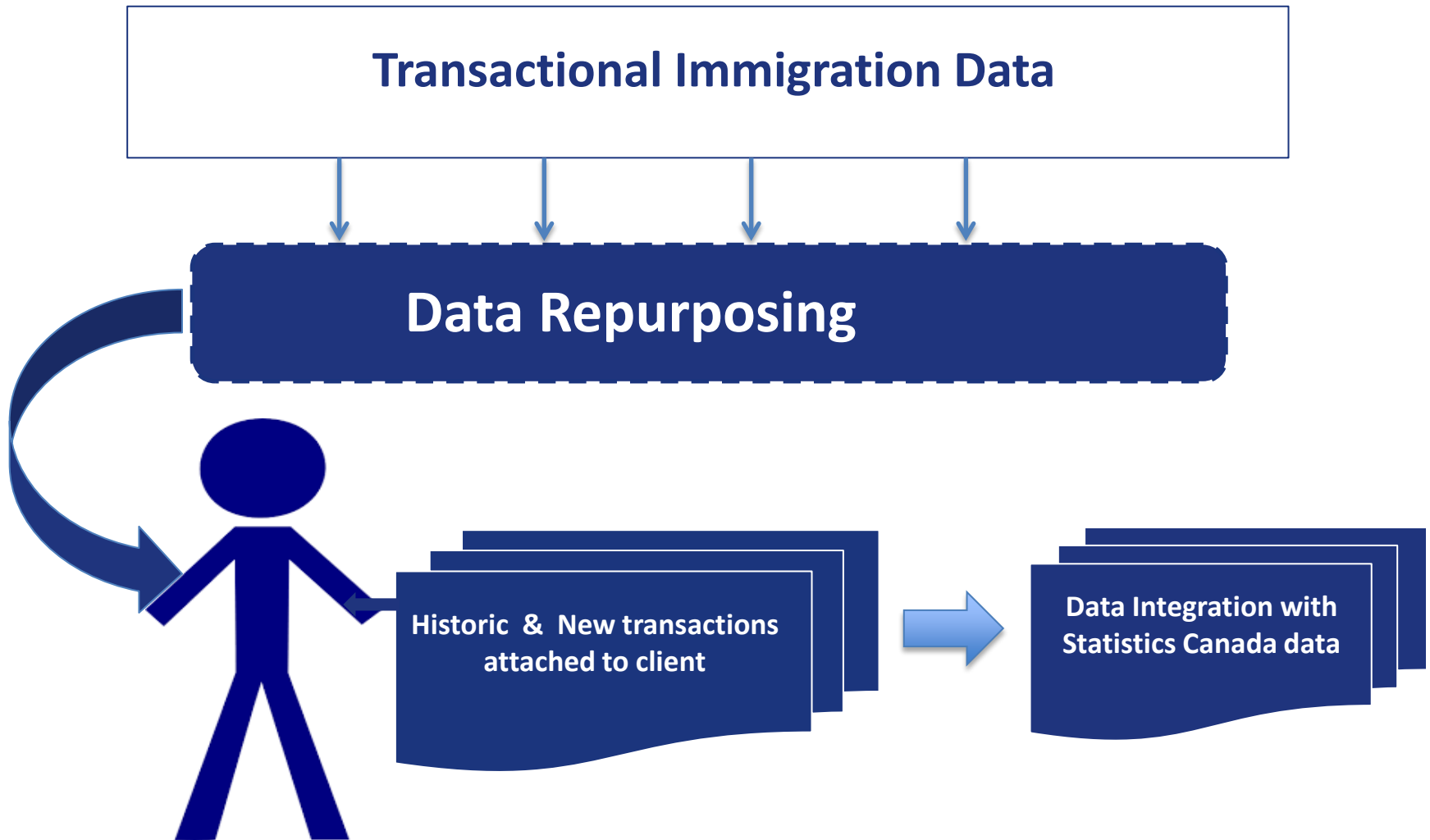
The Global Case Management System (GCMS) is IRCC's single, integrated and worldwide system used internally to process applications for citizenship and immigration services.



Developing and Repurposing IRCC's Administrative Data

- **IRCC strategic leverages administrative data for use beyond the primary reason for which the data was originally collected**
 - IRCC administrative data systems primarily collect data required to process applications for citizenship and immigration services.
- **Extensive data development, production and analysis is carried out on transactional administrative data to prepare it for further use**
 - Leveraging various data sources (internal and external) and implementing data linkages, imputation and other methodological techniques.
 - Allowing for IRCC to be nimble in responding to complex, multi-dimensional “*what if*” questions.
 - Allowing for streamlined data sharing and integration.

◆ Data flow: From transactional data to longitudinal client data



Creation of person based longitudinal databases

Enabling Integration through data consistency and Integrity

- **IRCC Data Governance Program**
 - Ensuring that IRCC's data assets are formally managed throughout the Department, with considerations made regarding the need for secondary data use.
- **Data quality monitoring**
 - Iteratively developing and applying methodological algorithms and multidimensional comparative analysis of data points.
 - Longitudinally linking data points through time to client, distributional analysis , i.e. analysis of changes through time.
- **Standardization of concepts, data cleansing**
 - Data harmonization, geography classifications, country names, operational and policy concepts, etc.

Operations management reporting / Tactical Decision making



Data Linkages



Research

Data Modeling/Forecasting

Policy Development



Program Monitoring



Financial reporting
Outcome measurement
Performance Measurement

External Data Releases

- ✓ IRCC Clients
- ✓ Other Government Departments
- ✓ Provincial/Territorial Governments
- ✓ International Partners
- ✓ Academic Institutions
- ✓ Media
- ✓ Consultants/Lawyers
- ✓ Researchers
- ✓ Embassies
- ✓ General Public

Predictive Analytics



Data Analysis

Disseminating IRCC data

- The Government of Canada's **Open Data Portal** is a public website with structured data that is machine-readable, freely shared, used and built on without restrictions.
 - IRCC strategically and proactively releases high value and regular data releases to the public and stakeholders, through the [Open Data Portal](#) and [IRCC website](#).
- IRCC develops and maintains **collaborative research partnerships** which support relevant research in policy and program development.
 - Access to data through: Research Undertaking, Letters of Agreement, Memorandum of Understanding, custom requests (Statistics-statistiques@cic.gc.ca).

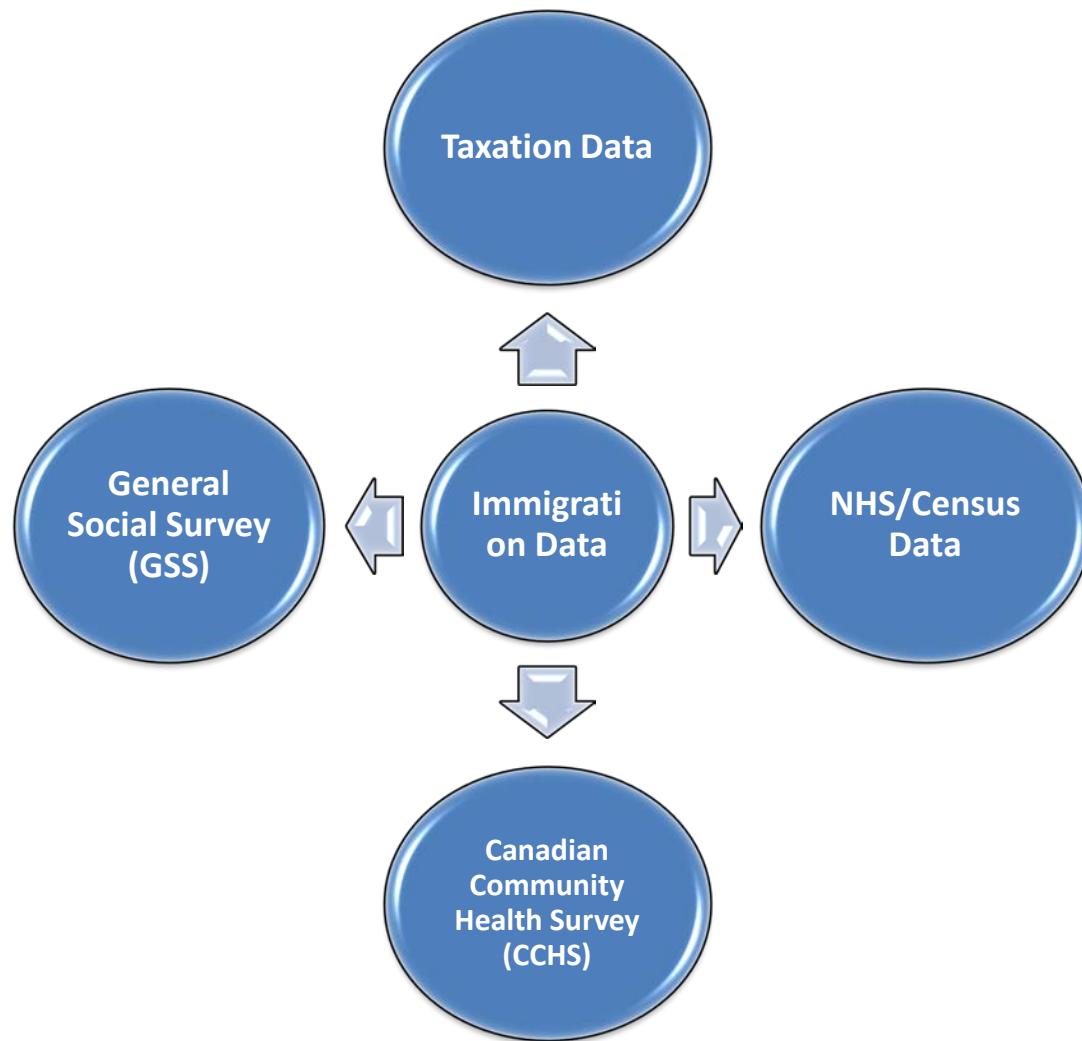
Current Collaboration with Statics Canada

- **IRCC has built a strong collaborative partnership with Statistics Canada (STC)**
 - Monthly data to enable estimation of migration flows.
 - Systematic approaches to data linkages to ensure an immigrant angle in social statistics and studies, (e.g. incorporating Immigration category to the 2016 Census)
- **IRCC has partnered with STC to work towards enhancing and expanding immigration data in the Research Data Centers (RDC)**
 - Leading to increased access to immigration data; thus, enabling research by academia and the public to inform the government policy and program development.

IRCC-STC Communication and Engagement

- **Communicating on a regular basis at various levels**
 - Regular working level meetings
 - IRCC-STC Interdepartmental committee structure
 - Support on subject matter questions.
- **Departmental Data Governance structures**
 - Streamlined communications with regular feedback loop.
 - Joint exchanges, data reconciliation activities during system transition.
 - Memorandums of Understandings, Letters of Agreement, etc.
- **Keeping the Department informed on data trends**
 - Trend analysis and briefing notes prepared for all STC data releases using IRCC data.
 - Data guidelines, notes and caveats are included in data releases to mitigate the risk of misinterpretation of datasets.

IRCC – STC Data Linkages



- Longitudinal Immigration Data Base (IMDB)
- Canadian Employer Employee Dynamic Database (CEED)
- Incorporation of the immigration category into the 2016 Census

Thank you!

Remember to check out [IRCC's datasets on the Government of Canada's Open Data Portal](http://open.canada.ca/data/en/dataset?q=CIC&sort=metadata_modified+desc)
(http://open.canada.ca/data/en/dataset?q=CIC&sort=metadata_modified+desc)

**Developing and producing administrative data for
the purposes of estimating migration flows.**

Ima Okonny, Acting Director, Data Management and Reporting
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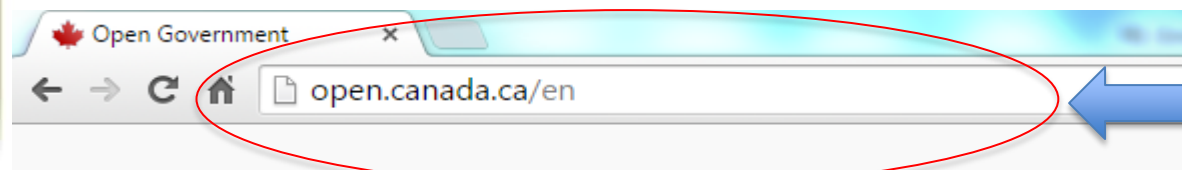
Canada

Annex

Examples of IRCC Data published on the Government of Canada's Open Data Portal (http://open.canada.ca/data/en/dataset?q=CIC&sort=metadata_modified+desc)

Note: All datasets in this presentation are considered preliminary data

Accessing the Government of Canada's Open Data Portal



<http://open.canada.ca/en>

Open Government

Welcome to Canada's new Open Government portal. Here you can explore how the Government of Canada is working with the national and international open government community to create greater transparency and accountability, increase citizen engagement, and drive innovation and economic opportunities through Open Data, Open Information, and Open Dialogue.

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Search

Open Data

Open Government

Open Information

Search through our Open Data Portal.

Immigration



Search function is based on tagging data to facilitate data discovery

CSV = Comma Separated Values format is widely supported multiple applications

Type in keyword to search for, example, *Immigration, cic, Permanent Residents, etc*

The Government of Canada releases datasets under the [Open Government Licence – Canada](#) agreement. The license is designed to increase openness and minimize restrictions on the use of the data.

Example of IRCC Data sets

Canada - Permanent residents by immigration category, 2005-2015*

Immigration category	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Spouses and partners	46,084	46,065	45,739	45,040	44,751	41,271	39,063	40,034	43,862	43,099	42,568
Sons and daughters	3,233	3,192	3,339	3,254	3,029	2,960	2,739	2,714	2,769	3,264	3,045
Fiancé(e)s											
Parents and grandparents	12,482	20,014	15,823	16,608	17,184	15,336	14,093	21,810	32,320	18,200	15,481
Others	2,209	2,016	2,180	1,520	1,100	1,176	1,094	946	4,429	3,080	4,346
Family class Total	64,008	71,287	67,081	66,422	66,064	60,743	56,989	65,504	83,380	67,643	65,440
Entrepreneurs - p.a.	749	820	580	446	370	292	184	126	114	131	72
Entrepreneurs - s.d.	2,095	2,273	1,577	1,255	943	796	522	349	312	368	187
Self-employed - p.a.	302	320	204	164	182	174	113	89	95	159	257
Self-employed - s.d.	714	632	376	341	360	326	236	153	170	240	420
Investors - p.a.	2,592	2,202	2,025	2,832	2,874	3,224	2,980	2,617	2,364	2,080	1,507
Investors - s.d.	7,023	5,831	5,422	7,370	7,433	8,493	7,607	6,745	6,043	5,370	3,948
Start-up Business - p.a. and s.d.	0	0	0	0	0	0	0	0	0	9	62
Skilled workers - p.a.	52,302	44,203	41,263	43,381	40,754	48,842	36,788	38,598	34,208	28,848	29,663
Skilled workers - s.d.	77,994	61,824	56,613	60,393	55,245	70,555	51,996	52,859	49,020	38,744	40,429
Canadian Experience Class - p.a.	0	0	0	0	1,775	2,534	3,972	5,943	4,357	14,197	10,410
Canadian Experience Class - s.d.	0	0	0	0	770	1,384	2,054	3,416	2,851	9,586	9,621
Skilled trades - p.a.	0	0	0	0	0	0	0	0	11	62	896
Skilled trades - s.d.	0	0	0	0	0	0	0	0	6	76	1,073
Provincial/territorial nominees - p.a.	2,643	4,672	6,329	8,343	11,802	13,856	15,298	17,185	18,794	20,997	20,399
Provincial/territorial nominees - s.d.	5,404	8,665	10,764	14,075	18,581	22,580	23,121	23,697	21,109	26,620	24,106
Live-in caregivers - p.a.	3,063	3,547	3,433	6,157	6,273	7,664	5,033	3,691	4,854	11,691	9,694
Live-in caregivers - s.d.	1,489	3,348	2,685	4,354	6,186	6,248	6,215	5,322	3,945	5,998	17,358
Caregivers - p.a.	0	0	0	0	0	0	0	0	0	0	83
Caregivers - s.d.	0	0	0	0	0	0	0	0	0	0	90
Economic immigrants Total	156,370	138,337	131,271	149,111	153,548	186,968	156,119	160,790	148,253	165,176	170,275
Government-assisted refugees	7,425	7,327	7,572	7,296	7,429	7,266	7,363	5,426	5,727	7,626	9,487
Uncategorized Resettled Refugees	0	0	0	0	0	0	0	0	0	0	7
Privately sponsored refugees	2,976	3,338	3,588	3,512	5,037	4,833	5,584	4,227	6,328	5,072	9,733
Refugees landed in Canada	19,934	15,883	11,696	6,995	7,206	9,038	10,743	8,586	8,204	7,944	8,676
Refugee dependants	5,441	5,953	5,099	4,057	3,183	3,562	4,183	4,853	3,716	3,248	3,386
Blended Visa Office-Referred refugees	0	0	0	0	0	0	0	0	153	177	810
Refugees Total	35,776	32,501	27,955	21,860	22,855	24,699	27,873	23,092	24,128	24,067	32,099
Other immigrants	6,092	9,522	10,455	9,868	9,751	8,320	7,749	8,425	3,277	3,379	3,848
Category not stated	0	0	0	0	0	0	0	0	0	0	0
Total	262,246	251,647	236,762	247,261	252,218	280,730	248,730	257,811	259,038	260,265	271,662

p.a. = principal applicants

s.d. = spouses and dependants

Note that some categories were implemented in different years and that is why there might be 0's for some of the earlier years.

* Data for 2015 are preliminary estimates and are subject to change. For 1980-2014, these are updated numbers and different from those of Facts and Figures 2014.

Source: Citizenship & Immigration Canada, RDM, February, 2016.

Example of IRCC Data sets:

Canada - Permanent residents by Country of Citizenship, 2005-2015*

Country of Citizenship	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Philippines	18,137	18,400	19,833	24,884	28,572	38,614	36,760	34,301	29,532	40,030	50,816
India	36,179	33,772	28,731	28,257	29,452	34,226	27,490	30,920	33,077	38,326	39,495
China, People's Republic of	42,568	33,493	27,630	30,031	29,622	30,381	28,491	33,012	34,116	24,624	19,512
Iran	5,837	7,481	6,974	6,474	6,581	7,478	7,479	7,525	11,288	16,773	11,665
Pakistan	14,314	13,127	10,123	8,984	7,215	6,812	7,467	11,208	12,611	9,110	11,320
Syria	1,458	1,145	1,056	919	917	1,040	1,005	649	1,007	2,051	9,848
United States of America	8,392	9,612	9,460	10,187	8,995	8,142	7,674	7,870	8,486	8,491	7,519
France	4,429	3,999	4,289	4,532	5,051	4,648	4,080	6,271	5,623	4,716	5,802
United Kingdom and Colonies	7,253	7,136	8,213	8,976	8,872	8,719	6,128	6,172	5,814	5,758	5,446
Nigeria	2,236	2,593	2,371	2,108	3,156	3,907	3,102	3,441	4,171	4,160	4,131
Korea, Republic of	5,826	6,210	5,912	7,291	5,874	5,537	4,588	5,315	4,509	4,458	4,087
Iraq	2,226	1,788	2,406	3,543	5,452	5,941	6,196	4,036	4,912	3,894	3,980
Egypt	2,495	2,190	2,355	3,347	3,495	5,984	4,663	5,550	4,165	3,159	3,760
Jamaica	1,945	1,722	2,141	2,334	2,457	2,321	2,059	2,175	2,480	3,050	3,423
Bangladesh	4,171	4,012	2,897	2,939	2,106	4,721	2,694	2,634	3,792	2,231	3,301
Mexico	2,837	2,844	3,240	2,854	3,092	3,862	3,948	4,227	3,996	4,477	3,228
Algeria	3,625	4,806	3,623	4,007	5,391	4,753	4,326	3,762	4,325	3,653	2,832
Morocco	2,939	3,321	4,019	4,225	5,532	6,244	4,391	3,878	3,276	2,491	2,736
Haiti	1,681	1,619	1,598	2,488	2,079	4,733	6,476	5,856	4,147	3,315	2,725
Vietnam	1,852	3,152	2,574	1,784	2,171	1,942	1,723	1,732	2,112	2,494	2,588
Afghanistan	3,436	3,010	2,652	2,110	1,745	1,758	2,204	2,635	2,003	1,489	2,587
Ukraine	2,269	1,970	2,218	1,935	2,364	3,159	2,516	2,263	2,484	2,539	2,377
Colombia	6,424	6,535	5,358	5,449	4,655	5,218	4,366	3,736	3,632	2,855	2,178
Eritrea	528	699	699	797	903	931	1,182	1,335	1,719	1,974	2,171
Russia	3,972	3,117	2,983	2,690	2,931	2,288	1,963	2,077	2,462	1,772	2,143
Lebanon	3,708	3,802	3,467	3,565	3,078	3,433	3,071	1,614	2,175	2,224	2,134
Israel	2,446	2,618	2,401	2,559	2,316	2,756	1,967	2,132	1,945	1,896	2,132
Ireland, Republic of	224	283	300	412	395	548	524	725	1,015	1,977	2,081
Cameroon, Federal Republic of	594	681	1,025	1,278	1,344	1,802	1,636	2,503	2,438	2,107	2,032
Sri Lanka	4,918	4,651	4,097	4,751	4,543	4,420	3,310	3,338	2,394	2,604	1,794
Brazil	969	1,181	1,745	2,137	2,510	2,598	1,508	1,641	1,712	1,916	1,749
Congo, Democratic Republic of the	1,508	1,621	1,466	1,396	1,580	1,238	1,217	1,711	2,050	1,749	1,712
Nepal	607	540	511	581	561	1,392	1,129	1,185	1,308	1,219	1,499
Australia	887	850	1,010	1,010	1,015	927	847	982	1,116	1,290	1,412
Ethiopia	1,505	1,799	1,508	1,611	1,287	1,865	2,163	1,859	1,608	1,339	1,364
Ivory Coast, Republic of	294	431	619	647	668	1,067	636	1,023	1,170	1,522	1,359
Tunisia	756	1,065	869	950	1,195	1,299	1,443	1,495	1,624	1,472	1,283
Federal Republic of Germany	2,226	2,767	2,448	3,834	3,886	2,955	2,016	1,699	1,216	1,273	1,245
Romania	5,048	4,468	3,834	2,836	2,076	1,922	1,776	1,588	1,512	1,553	1,183
Somalia, Democratic Republic of	1,198	1,061	1,161	1,014	1,214	1,526	1,532	1,574	2,030	1,491	1,156
Jordan	1,939	1,826	1,421	1,579	1,235	1,831	1,635	1,206	1,255	1,158	1,112
Japan	1,067	1,212	1,250	1,284	1,193	1,167	1,265	1,210	982	1,127	994
Poland	1,405	1,263	1,235	1,267	1,013	795	720	779	853	773	981
South Africa, Republic of	988	1,111	1,200	1,122	1,190	1,239	959	1,244	1,238	1,001	961
Burundi	625	468	614	448	566	529	604	682	480	517	938
Venezuela	1,211	1,192	1,335	1,240	1,352	998	1,450	1,366	1,022	1,483	929

Example of IRCC Data sets:

Source Countries - Applications Received for Permanent Residents (in Persons)

	CALENDAR YEAR					YEAR TO DATE	
	2010	2011	2012	2013	2014	2014(Jan-Dec)	2015(Jan-Dec)
Philippines	63,069	47,312	38,794	44,930	42,341	42,341	38,049
Syria	1,455	1,024	860	1,794	5,654	5,654	31,215
India	65,456	38,154	23,946	30,226	52,343	52,343	25,979
China, People's Republic of	41,265	32,523	24,704	23,416	33,876	33,876	22,506
Iraq	7,529	9,183	2,731	3,239	3,692	3,692	7,979
United States of America	8,305	8,928	7,795	7,516	7,624	7,624	6,317
France	5,847	6,764	6,595	5,518	6,188	6,188	5,918
Pakistan	24,378	12,884	7,255	7,624	13,198	13,198	5,898
British Citizen	7,475	5,362	4,320	5,476	6,263	6,263	5,347
Iran	21,526	11,592	7,479	7,415	7,705	7,705	4,632
Jamaica	4,651	4,204	3,355	3,763	4,157	4,157	4,370
Haiti	12,409	11,342	6,538	4,021	3,430	3,430	4,189
Korea, Republic of	7,540	5,498	4,428	4,360	4,836	4,836	3,835
Eritrea	3,546	4,739	2,758	2,074	3,117	3,117	3,809
Nigeria	8,308	6,170	4,176	3,925	7,639	7,639	3,535
Mexico	6,073	6,479	5,849	4,243	3,914	3,914	3,411
Ukraine	3,421	2,653	2,521	2,357	3,144	3,144	3,304
Algeria	4,951	3,906	4,219	3,831	3,210	3,210	2,747
Colombia	6,690	5,650	4,742	3,060	2,910	2,910	2,666
Afghanistan	4,464	4,079	3,833	2,163	2,216	2,216	2,463
Cameroon, Federal Republic of	3,199	2,885	2,972	2,275	2,045	2,045	2,337
Vietnam, Socialist Republic of	3,522	3,301	2,551	2,764	2,326	2,326	2,289
Morocco	4,363	4,228	3,269	2,797	2,816	2,816	2,276
Ireland, Republic of	936	809	1,109	2,211	2,346	2,346	2,217
Congo, Democratic Republic of the	1,917	1,732	2,843	2,370	3,708	3,708	2,101
Egypt	6,863	5,509	2,508	2,921	4,991	4,991	2,080
Israel	3,058	2,624	1,950	2,212	2,485	2,485	2,029
Bangladesh	8,547	4,502	1,978	2,439	5,261	5,261	1,976
Brazil	2,418	2,274	1,249	1,535	1,791	1,791	1,854
Ivory Coast, Republic of	1,453	1,096	1,882	1,604	1,263	1,263	1,848
Russia	3,584	2,671	1,987	1,740	2,259	2,259	1,821
Ethiopia	2,781	3,047	2,127	1,490	1,761	1,761	1,768
Sri Lanka	5,133	3,670	2,608	2,059	2,246	2,246	1,678

Example of IRCC Data sets:

Permanent Residents by Province/Territory, Census Metropolitan Area

Province	Census Metropolitan Area	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Alberta	Brooks	120	100	105	300	400	545	1,040	285	205	170
	Calgary	11,830	11,250	13,055	13,730	16,115	15,065	16,825	17,620	19,540	21,695
	Camrose	15	10	80	65	45	65	85	85	105	150
	Canmore	80	105	75	110	110	110	145	170	135	125
	Cold Lake	15	15	15	25	25	30	55	60	85	180
	Edmonton	6,450	6,545	7,520	8,515	11,015	10,460	11,980	12,860	15,455	16,740
	Grande Prairie	110	165	130	230	325	220	315	335	510	670
	High River	45	45	30	55	135	220	245	210	255	75
	Lacombe	15	25	45	40	50	55	70	60	70	65
	Lethbridge	290	310	360	515	625	560	615	555	650	600
	Lloydminster	35	55	115	85	90	55	90	110	135	280
	Medicine Hat	170	165	180	170	205	190	220	190	275	350
	Okotoks	75	130	160	195	190	125	160	145	165	170
	Other - Alberta	745	825	1,040	1,610	1,810	1,535	1,995	2,030	2,510	3,230
	Outside of defined CMA	35	25	40	40	60	85	155	80	35	10
	Red Deer	295	565	675	535	585	760	1,065	715	925	990
	Strathmore	10	35	35	65	45	25	40	50	70	60
	Sylvan Lake	15	25	20	35	35	40	25	40	50	55
	Wetaskiwin	45	30	40	20	95	80	95	70	45	130
	Wood Buffalo	320	430	480	680	690	735	850	950	1,290	1,435
Alberta Total		20,715	20,860	24,200	27,025	32,655	30,960	36,080	36,625	42,510	47,185