



Canadian Urban Environmental Health Research Consortium

CANUE Metadata Canadian Access to Employment
2018-10-31

DATA SET INFORMATION

Data Set Title:	Measures of Access to Employment for Canadian Cities
Description:	<p>Measures of access to employment, circa 2016, for the eight largest urban regions in Canada were created by Jeff Allen and Steven Farber at the University of Toronto SAUSY Lab (http://sausy.ca/). Data for census dissemination areas are freely available at: https://github.com/SAUSy-Lab/canada-transit-access</p> <p>Measures of access to employment are key indicators for analyzing the characteristics of transport networks and urban form. Metrics include cumulative measures (number of jobs reachable within 30, 45, and 60 minute commutes), gravity measures, as well as a competitive measure of accessibility which is standardized to allow for comparisons between regions. These are generated at the census Dissemination Area level for two travel modes, car and transit, including accounting for minute-by-minute variations in transit schedules. The code to generate this data is openly on GitHub (https://github.com/SAUSy-Lab/canada-transit-access), and data can be explore on an interactive map (https://sausy-lab.github.io/canada-transit-access/map.html).</p> <p>ArcGIS was used by CANUE staff to associate the single link DMTI Spatial postal codes to the Statistics Canada dissemination areas boundary files, and then join the Access to Employment data to the postal codes, using dissemination area unique identifiers. There may be many postal codes within a single dissemination area - these will have the same index values and may not be suitable for summation, etc.</p>
Theme Keywords:	neighbourhood environments, employment, transportation
Place Keywords:	Canada national
Data preparation date:	10/30/2018
File Names	NAE_A_16.csv
File Type:	comma separated values
Beginning Date:	2016
End Date:	2016
Sampling Frequency of Data:	N/A
Number of Data Files:	1
File Size	79 MB.
Data Sources:	2016 Census Dissemination Area and Census Traact boundaries and location of employment, Open
Spatial Resolution:	Dissemination Areas (DA) - all postal codes within a DA are assigned the same values
Detection Range or Limit:	N/A
Log of Changes:	N/A
Maintenance Description:	Indices will be added when available
GEOSPATIAL REFERENCE	
Geographic Coverage	Canada
West Bounding Coordinate	N/A
East Bounding Coordinate	N/A
North Bounding Coordinate	N/A
South Bounding Coordinate	N/A
Geometry Type:	Areal
Point Data Source:	N/A
Coordinates have Z values:	N/A
Geographic Coordinate System:	N/A
Datum	N/A
Unit:	N/A



Canadian Urban Environmental Health Research Consortium

CANUE Metadata Canadian Access to Employment
2018-10-31

QUALITY ASSESSMENT

QA/QC procedures:	CANUE did not assess the quality of the Access to Employment data. Users should review the
Geographic Coordinate Positional Accuracy:	These metrics can be linked to the corresponding annual postal codes files for mapping and analysis purposes, using the 6-digit postal code as a unique identifier in both files. Refer to the following CANUE Metadata Postal Codes.pdf
Vertical Positional Accuracy:	N/A
Attribute Accuracy:	N/A
Data Validity :	NoData = -9999 for numeric fields and NULL for text fields - only postal codes within selected CMAs have data.
Associated Files:	N/A
Data Comment:	N/A
Data Comment:	N/A

SUPPORTING DOCUMENTATION

Additional documentation:	Canada Access to Jobs Technical Report
---------------------------	--

DATA DICTIONARY

Field Name	Description	Data Type
POSTALCODE16	6 digit postal code with no space between the FSA and LDU. (i.e. L1R2H2)	Text
NAE16_01	Unique identifier of the dissemination area (DA) (eight digits)	Numeric
NAE16_02	Census metropolitan area (CMA) unique identifier (three digits). Codes for eight largest urban areas: Toronto(535), Montreal (462), Vancouver (933), Calgary(825), Ottawa (505), Edmonton (835), Quebec City (421), Winnipeg (602)	Numeric
NAE16_03	Census metropolitan area name: Toronto, Montreal, Vancouver, Calgary, Ottawa, Edmonton, Quebec City and Winnipeg	Text
NAE16_04	Population of the dissemination area	Numeric
NAE16_05	Area of dissemination area in square km	
NAE16_06	Population density - population of DA per square kilometre	Numeric
NAE16_07	CTRAN: Measure of competitive accessibility to jobs by transit from 0 (lowest) to 1 (highest)	Numeric
NAE16_08	CCAR: Measure of competitive accessibility to jobs by car from 0 (lowest) to 1 (highest)	Numeric
NAE16_09	CTRAN2: Measure of competitive accessibility to jobs by transit from 0 (lowest) to 1 (highest) where the impedance function is squared	Numeric
NAE16_10	CCAR2: measure of competitive accessibility to jobs by car from 0 (lowest) to 1 (highest) where the impedance function is squared	Numeric
NAE16_11	GTRAN: Measure of accessibility to jobs by transit using a gravity function	Numeric
NAE16_12	GCAR: Measure of accessibility to jobs by car using a gravity function	Numeric
NAE16_13	T30: Number of jobs reachable within a 30 minute transit commute	Numeric
NAE16_14	T45: Number of jobs reachable within a 45 minute transit commute	Numeric
NAE16_15	T60: Number of jobs reachable within a 60 minute transit commute	Numeric
NAE16_16	C30: Number of jobs reachable within a 30 minute car commute	Numeric
NAE16_17	C45: Number of jobs reachable within a 45 minute car commute	Numeric
NAE16_18	C60: Number of jobs reachable within a 60 minute car commute	Numeric
NAE16_19	CTRAN/ CCAR: Ratio of competitive accessibility by transit/competitive accessibility by car	Numeric
NAE16_20	CTRAN2/ CCAR2: Ratio of competitive accessibility by transit/competitive accessibility by car where the impedance function is squared	Numeric
NAE16_21	GTRAN/GCAR: Ratio of gravity-weighted accessibility by transit/gravity-weighted accessibility by car	Numeric
NAE16_22	T30/C30: Ratio of jobs within 30 minutes by transit/jobs within 30 minutes by car	Numeric
NAE16_23	T45/C45: Ratio of jobs within 45 minutes by transit/jobs within 45 minutes by car	Numeric
NAE16_24	T60/C60: Ratio of jobs within 60 minutes by transit/jobs within 60 minutes by car	Numeric



Canadian Urban Environmental Health Research Consortium

CANUE Metadata Canadian Access to Employment
2018-10-31

DATA SET CONTACTS

Data Support:	Contact CANUE via the email below.
Email:	info@canue.ca
Affiliated Organization:	CANUE (Canadian Urban Environmental Health Research Consortium)
	Dalla Lana School of Public Health, University of Toronto
Website:	www.canue.ca
City:	Toronto
Prov/State:	Ontario
Country:	Canada
Exposure Data Source Contact:	Jeff Allen; Steven Farber
Email:	jeff.allen@utoronto.ca
Phone:	
First Name:	Jeff
Last Name:	Allen
Affiliated Organization:	University of Toronto
City:	Toronto
Prov/State:	Ontario
Country:	Canada

DATA USE CONDITIONS

Conditions of Use:	The Data User is REQUIRED: (i) to acknowledge data sources listed under Acknowledgement(s); (ii) cite the publication(s) listed under Recommended Citation(s) as the providers and source of these data when using them in support of research, analysis, operations, policy decision or any other undertaking including publication; and (iii) complete and sign the CANUE Data Use and Sharing Agreement (available at http://canue.ca/data/), in which the name and signature of the researcher/analyst who takes responsibility for ensuring all conditions are met.
Data Sharing Restrictions:	These data files are provided solely for the purposes stated in the CANUE Data Sharing and Use Agreement and should not be re-distributed for any reason. These data also contain proprietary postal code data and may only be used for the project named in the CANUE Data Sharing and Use Agreement. Data can be shared only within a project team for the exclusive purposes of teaching, academic research and publishing, and/or planning of educational services in accordance to DMTI End User Agreement associated with the Spatial Mapping Academic Research Tools (SMART) Program.
Required Citation:	Include the following references in any publications resulting from the use of these data: [1] Allen J, Farber S. (2018). Generating measures of access to employment fo Canada's eight largest urban regions. Technical Report (V2). (available at https://osf.io/huj65/). [2] CanMap Postal Code Suite v2016.3. [Computer file] Markham: DMTI Spatial Inc., 2016.
Acknowledgment:	Include the following acknowledgements: 1. Access to Employment metrics, indexed to DMTI Spatial Inc. postal codes , were provided by CANUE (Canadian Urban Environmental Health Research Consortium)