

Information Education Environment

Level: Census_Tract_Level

Definition:

The information and education environment refers to: 1) broadband availability; 2) broadband adoption; and 3) proximity to public libraries in a census tract.

Coverage for all data: 10-county Detroit-Warren-Ann Arbor Combined Statistical Area in the State of Michigan, USA.

Dataset Version : 1.1

Dataset Release History: First Published 2017

Initial Release : 01/13/2016

Data set Name: Neighborhood_Information_Education_Environment_Census_Tract_Level.csv

Sources: U.S Department of Commerce, National Telecommunications and Information Administration (NTIA), Federal Communications Commission (FCC), Michigan Department of Education

Other Notes:

- Coverage for all data: 10-county Detroit-Warren-Ann Arbor Combined Statistical Area (State of Michigan, USA).
- Coverage: 2008-2014.

Variable	Description	Year	Notes
Identifier			
GEOID10	2010 Census tract number		
CountyCode	County Code		
CountyName	County Name		
Broadband internet Access			
Broadband Availability			
Broadband_Avg_Typical_Download_Speed_Wired	Average typical download speed by tract - Wired (Sum of Typical Download speeds)/# Internet Service Providers serving the tract)	2010 to 2014	Calculated variable based on Michigan data for National Broadband Map. Number of Internet Service Providers serving the tract determined by unique FRN - FCC

Variable	Description	Year	Notes
			<p>Registration Number for each Internet Service Provider.</p> <p>Variables for each year from 2010-2014.</p> <p>NULL=Data not available for this census tract.</p>
Broadband_Avg_Typical_Upload_Speed_Wired	Average typical upload speed by tract – Wired (Sum of Typical Upload speeds)/# Internet Service Providers serving the tract)	2010 to 2014	<p>Calculated variable based on Michigan data for National Broadband Map.</p> <p>Number of Internet Service Providers serving the tract determined by unique FRN - FCC Registration Number for each Internet Service Provider.</p> <p>Variables for each year from 2010-2014.</p> <p>NULL=Data not available for this census tract.</p>
Broadband_total_prov	Total Providers of Fixed High-Speed Connections over 200 kbps in at least one direction	Status of December 31 2013	<p>Continuous variable at the census tract level for both residential and non-Residential Providers. Note:</p> <p>"1" denotes 1 to 3 providers. 4 denotes 4 providers, 5 denotes 5 providers, etc.</p> <p>NULL=Data not available for this census tract.</p>
Broadband_total_residential_prov	Total Residential Providers of Fixed High-Speed Connections over 200 kbps in at least one direction	Status of December 31 2013	<p>Continuous variable at the census tract level for both Residential Internet Service Providers only. Note:</p> <p>"1" denotes 1 to 3 providers. 4 denotes 4 providers, 5 denotes 5 providers, etc.</p> <p>NULL=Data not available for this census tract.</p>
Broadband_tmw_prov	Providers of Mobile High-Speed Connections over 200 kbps in at least one direction.	Status of December 31 2013	<p>Continuous variable at the census tract level for both Residential and Non-Residential Mobile High-Speed Internet Service Providers only. (at least 600 residential fixed connections over 200 kbps in at least one direction per 1000 households)</p>

Variable	Description	Year	Notes
			"1" denotes 1 to 3 providers. 4 denotes 4 providers, 5 denotes 5 providers, etc. NULL=Data not available for this census tract.
<i>Broadband Adoption</i>			
Broadband_rfhsc_per_1000_hhs	Residential Fixed High-Speed Connections over 200 kbps in at least one direction per 1000 households	2008-2013	<p>Tract-Level Data from FCC Form 477 - https://www.fcc.gov/general/form-477-resources-filers.</p> <p>Ordinal variable at the census tract level with the following values:</p> <p>Code Connections per 1000 Households:</p> <p>0 Zero 1 Zero < x <= 200 2 200 < x <=400 3 400 < x <=600 4 600 < x <=800 5 800 < x</p>
Broadband_rfhsc_per_1000_hhs_bt_op	Residential Fixed High-Speed Connections at least 3 Mbps downstream and at least 768 kbps upstream per 1000 Households	2008-2013	<p>Tract-Level Data from FCC Form 477 - https://www.fcc.gov/general/form-477-resources-filers.</p> <p>Ordinal variable at the census tract level with the following values:</p> <p>Code Connections per 1000 Households:</p> <p>0 Zero 1 Zero < x <= 200 2 200 < x <=400 3 400 < x <=600 4 600 < x <=800 5 800 < x</p>
Broadband_High_broadband_adoption_rate	Census Tract with High Broadband Adoption Rate	2008-2013	<p>Binary variable: Y=yes, N=no, NULL=data not available.</p> <p>Yes=Census tract has at least 600 residential fixed connections over 200 kbps in at least one direction per 1000 households.</p>

Variable	Description	Year	Notes
			Calculated based on FCC data such that If rfc_per_1000_hhs = >=4, this variable=1.
Public Libraries			
Spatial_Measures_PubLibs_Density	Public Libraries -Kernel Density by census tract	2014	Continuous spatial variable based on 2014 Public Library location data obtained from the Michigan Department of Education. NULL=data not available. Calculated using ArcMap software's Kernel Density Tool using Zonal Statistics. Radius setting =1320 feet.
Spatial_Measures_PubLibs_Distance	Public Libraries - Average Distance by census tract	2014	Spatial variable based on 2014 Public Library location data obtained from the Michigan Department of Education. NULL=data not available. Calculated using ArcMap software's Euclidean Distance Tool using Zonal Statistics. Radius setting =1320 feet.