US Counties Geographical Correspondence and Crosswalk

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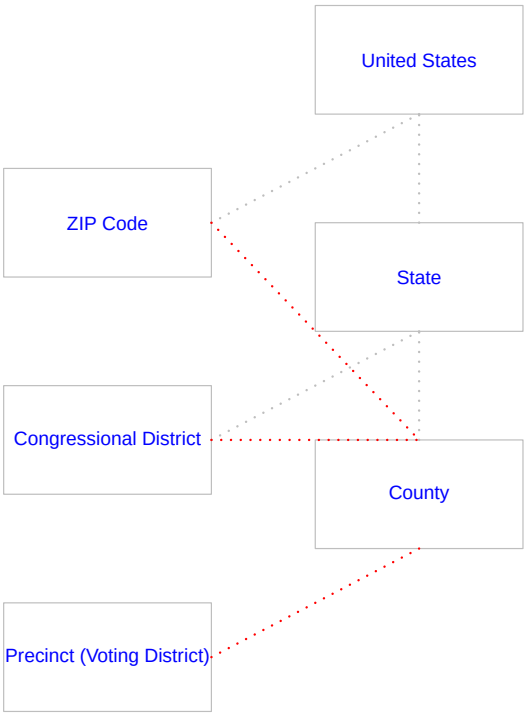
1 Geographical Hierarchy

The hierarchy of geographic entities displays the relationships between administrative and statistical boundaries in the United States. Figure 1 depicts how different geographic entities relate to one another. Dotted red lines depict the correspondences and crosswalks that this dataset covers.

Figure 1: Geographical Levels



Political divisions include the following four levels: (1) states, (2) counties/ parishes/ boroughs, (3) townships and (4) voting districts/wards/precincts. As the figure shows, there is no direct correspondence between geographical units collecting demographic statistics, political units where citizens vote and administrative units where the number of congressional districts are decided. As much election and statistical data is available at county level but most public opinion surveys, candidate characteristics are available at other geographical entities, this dataset provides crosswalks between counties and ZIP codes, congressional districts and precincts. The data is collected and assembled from several sources from United States Census Bureau (ndb) and United States Census Bureau (ndc).[1] Unless otherwise specified, the data reflects the 2010 US Census units and boundaries.

[1]To see the source code, report a bug, or ask a question about the data, please feel free to file an issue from the source code repository. Alternatively, please contact me by email. To obtain the individual datasets, search the US Census Bureau website based on the links provided in the bibliography or check the accompanying source code, available upon request.

2 Basic County Level Geographical Data

2.1 County FIPS

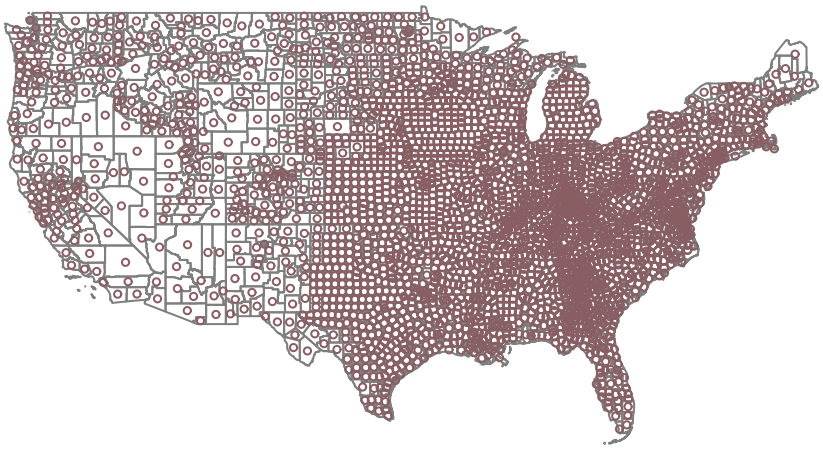
The correspondence between counties and FIPS is based on data provided by the United States Census Bureau (ndc). The resulting dataset, `countyfips.csv`, includes the following variables:

- state – state 2-letter abbreviation
- statelong – state full name
- county – us county name
- FIPS – the combination of state and county FIPS

2.2 County Centroids

US county shapefiles come from United States Census Bureau (ndb). The resulting dataset, `countycentroids.csv`, can be used to plot the centroids in FIGURE 2 and includes the following variables:

Figure 2: Mainland US Counties Centroid



- STATE – state FIPS
- COUNTY – county full name

- longitude – longitude coordinates of the county's centroid
- latitude – latitude coordinates of the county's centroid

3 County-Congressional District

Data assembled from the United States Census Bureau (ndc) covers the period 2004 to 2014.

Table 1: Election Year and Congress Number

Election Year	Congress
2004	109
2006	110
2008	111
2010	112
2012	113
2014	114

The corresponding data file is `countycdcrosswalk.csv` which includes:

- FIPS – the fips
- state – the state
- county – the county
- concate109 – 109 congressional district mapping
- concate 110 – 110 congressional district mapping
- concate113 – 113 congressional district mapping

Changes to county-congressional district correspondences occurred in 109, 110 and 113 congresses (United States Census Bureau, nda). Based on Table 1, yearly correspondences can be derived between 2004 and 2014.

4 County-ZIP

Data comes from United States Census Bureau (ndc) and the dataset `countyzipcrosswalk.csv` includes:

- STATE – 2 letter abbreviation of state name
- COUNTY– full name of county
- FIPS – the combination of state and county FIPS
- ZCTA5 – zipcode

5 County-Precinct

Data on the correspondence between US county names and voting district (precincts) comes from the US Census.

The resulting dataset, countyvtdcrosswalk.csv, includes the following variables:

- STATE – 2 letter abbreviation of state name
- STATEFP – FIPS code for state
- COUNTYFP – FIPS code for county
- COUNTYNAME – full name of county
- VTDST – voting district (precinct) code
- VTDNAME – voting district (precinct) full name

References

United States Census Bureau (n.d.a). 109th - 112th Congressional District Maps. Data Retrieved From https://www.census.gov/geographies/reference-maps/2005/geo/109th-112th-congressional-district-maps.html.

United States Census Bureau (n.d.b). Cartographic Boundary Files. Data Retrieved From https://www.census.gov/geographies/mapping-files/time-series/geo/carto-boundary-file.html.

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