Jewish Population of Congressional Districts

2013 Berman Jewish DataBank Research Fellowship Project

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Summary

I used the data files in the Berman Jewish DataBank at the The Jewish Federations of North America, U.S. Census Bureau American Community Survey (ACS) and 2010 Census data, and geographic information systems software to create estimates and maps of the American Jewish population by the congressional districts (CDs) effective as of the 113th Congress (2013). This is a complement to two other DataBank products, the *Jewish Population in the United States* (JPUS) report and Jewish Maps of the United States by Counties (The National Jewish Population Map or NJPM),

This product is entirely non-political and non-partisan. There was no consideration of partisan factors (e.g., the party affiliation of current elected officials) or use of voting data. Rather, the goal was to see whether available data could be used to estimate the Jewish population of a complex set of geographic regions whose spatial configuration is very different from the areas for which data are provided in Jewish survey reports (states, counties, cities, neighborhoods, and/or zip codes).

Results

The data table and GIS files contain an estimate of the 2011 Jewish population of each of the 436 CDs in effect as of the start of the 113th Congress. The Jewish estimates range from 30 to 270,000. New York's 10th district (parts of Manhattan and Brooklyn) has the largest number, while the least Jewish district is in rural eastern Oklahoma.

Because CDs are supposed to have roughly the same numbers of people nationwide, most have roughly 700,000 people. This means that the districts with the largest and smallest number of Jews also have the highest and lowest percentages of Jews: 37.6% in New York's 10th CD and 0.004% in the Oklahoma district mentioned above.

The American Jewish population is simultaneously more densely clustered geographically than the overall American population and very geographically diverse—at least a few Jews live in every one of the 436 CDs. Half of all American Jews live in just 38 CDs; 93 contain three-quarters of all Jews; the 266 districts with the fewest Jews collectively have only 10% of the Jewish population. The most-Jewish district, New York's 10th, has as many Jews (270,000) as the 192 least-Jewish CDs combined.

There are 12 CDs with 100,000 or more Jews, eight in New York and two each in California and Florida—the three states with the highest total Jewish populations. In general, the most-Jewish

CDs are in the northeastern states, California, Florida, and a few other large urban areas such as Chicago and Atlanta. The least-Jewish CDs are mostly in the rural parts of southern states.

Jews constitute just over 2% of the U.S. population. The Jewish population is widely distributed geographically in that more than 40% of all CDs are at least 1% Jewish, but only 22 CDs are 10% or more Jewish. Jews are also clustered: over 80% of all American Jews live in 120 CDs; the remaining 316 CDs collectively have few Jews. The 100 CDs with the fewest Jews have only 62,000 combined—not enough to comprise even 10% of a standard Congressional district's population if all moved to live in just one of the 100 least-Jewish CDs.

Individual states vary widely in the degree to which Jews are clustered within districts. In those states with more than a handful of CDs, there are a few in which most Jews live in just one CD. For example, 62% of the Jews in Missouri live in the 2nd CD (St. Louis area), while the remaining 7 CDs contain just 38% of that state's Jews. A similar pattern is found in Georgia, Kentucky, and Oregon. This is evidently the result of redistricting processes or the tendency of Jews to live in larger urban areas, rather than a regional trend, because individual districts stand out less in most other states around the country.

EXPLANATION OF DATA FILES

1. Table in Microsoft Excel format: The table below defines the data columns found in the Excel format data table.

Data Table column	Explanation
State	State name
District	District number within the state or "at large" if state has only one district
DistrictCode	FIPS (Federal Information Processing Standard) code. First two digits indicate the state, second two are the district number
DistrictCode2	Long-form FIPS code, useful for linking with other data using GIS or statistical software
Berman Jewish Estimate	2011 Jewish population estimate for each district. Used for the Jewish Population by District map posted on the DataBank.
Census 2010 Population	2010 Census total population count for district
Percent Jewish	District's percent Jewish population, calculated by dividing the Berman Jewish Estimate by the Census 2010 Population. Used for the Percent Jewish Population by District map posted on the DataBank

2. GIS data: For GIS software users, the base map and data are provided in zip files containing two formats:
- CongressionalDistrictMap.zip – MapInfo format
- CongressionalDistrictMap_region.zip – ArcGIS shapefile format

The base map and data posted on the DataBank contain the same information as the Excel table, with the exception of the percent Jewish column. There are minor differences in the column headers. The table below lists the attributes (data fields) attached to each district polygon.

The PDF maps posted on the DataBank site were created in MapInfo. The Jewish Population by District map uses the data in the BermanEst column. The Percent Jewish Population by District map divides BermanEst by Census2010Pop.

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BermanEst	2011 Jewish population estimate for each district
Census2010Pop	2010 Census total population count for district

METHODS

Congressional District Geography

Although the number of CDs (436, including the District of Columbia) is smaller than the number of counties (more than 3,000), calculating CD Jewish populations is more difficult because of the irregularity of CD geography. The NJPM draws from JPUS data—some of which is at county or sub-county level—and U.S. Census Bureau data sets, all of which are available at county level. In contrast, while some CDs consist of sets of entire counties, the majority cross county boundaries. Most American Jews live in densely-populated urban areas. The urban regions with the largest Jewish populations—New York, southern California, south Florida—contain many of the most-populated counties in the country. Each of these counties contains all or part of multiple CDs. The same is true of some counties in other urban areas with high Jewish populations such as Boston, Chicago, Philadelphia, San Francisco, and Washington. Therefore the CDs with the largest Jewish populations are mostly located in parts of the country where it is most difficult to estimate the Jewish population of CDs. Overall, the typical margin of error on the present set of estimates is larger than it was for NJPM.

The methods used for estimating CD Jewish populations varied according to their geographical configuration and the availability of Jewish demographic survey data in the DataBank. In general, a CD estimate was constructed by: first summing the NJPM Jewish estimates for any whole counties included in the CD, and then using zip-code level data from other sources to estimate the portion of the NJPM Jewish county estimate for each county partially included in the CD that should be assigned to that CD. In a few large urban areas, recent zip code-level Jewish population estimates were available in DataBank; elsewhere, Census Bureau ACS zip code data (American Community Survey data for zip code tabulation areas, which closely approximate zip codes) on Russian and Israeli ancestry was used as a proxy for Jewish population.

Jewish Population Estimation

The following list describes the variety of CD geographical configurations and how Jewish populations were estimated in each area. A **split county** is one whose area is divided among multiple CDs.

- Alaska, Delaware, Montana, North Dakota, South Dakota, Vermont, Wyoming, and the District of Columbia have relatively small populations and therefore consist of only one CD. The state population from NJPM was used.
- In Iowa and West Virginia, all CDs are constructed of sets of whole counties. County NJPM estimates were summed to obtain CD estimates.
- Many other states contained one or more CDs (mainly in rural areas) that consisted of sets of whole counties. As above, NJPM county estimates were summed. The same was true if any split counties had a Jewish estimate of zero in NJPM.
- Similarly, there were many CDs that consisted almost entirely of whole counties, and where any split counties contained very few Jews according to NJPM—so summing NJPM county estimates was in effect just as accurate as in the above categories.

- Many CDs consist of a mix of whole counties and parts of split counties. The whole county populations were summed from NJPM. The Jewish populations of split counties were divided by use of ACS zip code ancestry data (see below).
- Particularly in large urban areas, many CDs consist entirely of portions of split counties. The Jewish populations of split counties were divided by use of ACS zip code ancestry data (see below).
- Zip code estimates were available for four urban areas—Boston, New York, Washington, and south Florida (Miami-Fort Lauderdale-Palm Beach)—from relatively recent Jewish demographic surveys. In three of these the data came from reports in the DataBank. In the fourth (New York), only zip code data was available from the 2011 survey research team[1] for the original version of this map; in January 2014, a geo-coding project for the New York study provided improved estimates for NY CDs 1-16. These revised estimates for the New York area CDs are essentially the only data changed from the original version of the maps.

CDs are constructed of census blocks (small units with about 100 people) and within each state are required to be of roughly equal population. No Jewish population data was available for census blocks or any comparable geography. Zip code estimates are included in only a portion of the demographic survey reports available in the DataBank, but at least these data specifically estimate the number of Jews. In contrast, ACS data are available nationwide at both census tract (average about 4,000 people) and zip code levels but do not include estimates of population by religion. The ACS does have several proxy variables that indicate the presence of Jews:
- Yiddish or Hebrew home language – extremely few non-Jews report speaking these
- Israeli ancestry, Israel as birthplace – on the assumption that most non-Jews who could identify themselves this way do not, because they identify as Arab or Palestinian
- Russian home language, Russian ancestry, Russia as birthplace – most but by no means all immigrants to the U.S. from Russia or the former Soviet Union have been Jewish. A sizable Russian-speaking or Russian-ancestry community very likely contains some Jews

To approximate the distribution of Jews, therefore, there are three possibilities: one can look at the geographic distribution of "Jewish" languages, ancestries, or birthplaces. For this study, ancestry was used because the indicators of Jewish ancestry (Russian 32%; Israeli 2%)[2] together greatly outnumber the indicators of language or birthplace (under 20% total in either case). Also, Jews who are identifiable by language or birthplace are more likely to be clustered in specific areas: neighborhoods with clusters of immigrants from the former Soviet Union or Israel, or ultra-Orthodox neighborhoods (many Yiddish speakers). Although not all people of Russian ancestry are Jewish, the geographical distribution of people with probable/possible Jewish ancestry more closely matches the distribution of all Jews than does any other variable available from the ACS.

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[1] I am a member of the team that conducted this study, but was not involved in calculating the Jewish population zip code estimates used for the current project.

[2] The ACS ancestry question allows people to list up to two ancestries. Only first ancestry responses were used here, on the assumption that people whose second ancestry response is Russian or Israeli, but whose first ancestry is something else, are somewhat less likely to be Jewish.

Use of tract-level ACS data would have increased the time needed to complete this set of estimates, so zip code data on Russian and Israeli ancestry was obtained for the entire country. Split counties were split on the basis of the approximate share of the county's Russian plus Israeli ancestry population living in each CD, according to the ACS. However, not all zip codes are contained in one CD. Split zip codes were assumed to have their population evenly distributed, e.g., if half of the area of the zip code was located in a CD, that CD received half of its Russian/Israeli ancestry population.

The above method determined the distribution of Jewish population among CDs in split counties, except for the four large urban areas mentioned above. In Boston, New York, south Florida, and Washington, the same procedure for handling split counties and split zip codes was employed, except that it was possible to compare the results based on both ACS data and the Jewish population estimates by zip code obtainable from demographic surveys. The two methods roughly validated each other but at the same time the comparison suggested a few ways in which a survey that asks directly about religion improves on the use of proxy data:

- ACS Russian ancestry counts in neighborhoods with a large number of Russian immigrants exceed demographic survey Jewish estimates. This is likely because non-Jewish Russians also choose to live in Russian Jewish immigrant neighborhoods.
- ACS-based estimates are lower than survey estimates where the ultra-Orthodox population is high. This may reflect lower ACS response rates among the ultra-Orthodox, or the non-Russian origin of some Hasidic communities.
- To the extent that Jews of Sephardic, African, German, or other non-Russian, non-Israeli origin live in separate geographic areas from people of Russian or Israeli origin, Jewish demographic survey estimates will be more accurate.
- On the other hand, ACS data are more recent than most survey results, so will capture the most recent changes in the neighborhood-level distribution of Jews.

Rounding

In general, in CDs containing split counties, Jewish estimates were rounded to the nearest 100 where the number of Jews was 1,500 or fewer; to the nearest 500 where the number of Jews was below 20,000; and to the nearest 1,000 for CDs with more than 20,000 Jews. In CDs consisting of whole counties, the Jewish estimate was rounded to the nearest 100 regardless of Jewish population size. However, in some cases where the zip code data appeared more or less uncertain, the rounding threshold was varied, e.g., a county with over 20,000 Jews might be rounded to the nearest 500.

The sum of the Jewish estimates for all CDs varies slightly from the NJPM sum because of this rounding. As noted in the NJPM document, the NJPM national Jewish population differs from that in JPUS for a number of reasons, including the addition of estimates for small or rural counties that do not have any Jewish population listed in JPUS.

Future Improvements

As mentioned above, these data are subject to greater error than was the NJPM because in many cases the NJPM's county-level estimates needed to be split among multiple CDs. This level of error could be reduced:

- If more zip-code level estimates could be obtained from Jewish demographic surveys. Not all surveyors publish zip code estimates. It would be especially helpful to have current zip data for large urban areas with many Jews, such as Los Angeles.
- By using census tract rather than ZCTA-level ACS data. This was too time-consuming for the current project.
- Through use of one of the large national Jewish mailing lists used by marketing companies. These contain zip code and lower-level geographic identifiers for a sizable fraction of the national Jewish population, which would allow for more accurate estimation of both county and sub-county Jewish populations.

Data Sources

1. Berman Jewish DataBank: *JewishDataBank.org*

National reports

- Joshua Comenetz, Jewish Maps of the United States by Counties (The National Jewish Population Map)
- Ira Sheskin and Arnold Dashefsky, Jewish Population in the United States, 2011

Many Jewish community studies—in particular:

- Boston 2005
- Broward, FL 1997/2008
- Houston 2001
- Martin/St. Lucie, FL 1999/2004
- Miami 2004
- New York 2011
- South Palm Beach 2005
- Washington, DC 2003
- West Palm Beach 2005

Previous congressional district study:

- David Paul, Jewish Population Survey of Congressional Districts: 2000 and 2006

2. U.S. Census Bureau: *Factfinder2.census.gov*

- American Community Survey 5-year data for 2007-2011
- 2010 Census data
- Cartographic Boundary File (113th Congress district map) available at: *www.census.gov/geo/maps-data/data/tiger-line.html*

3. Google resources

- Google Maps: *maps.google.com*
- Congressional district map overlaid on Google Maps, posted at: *www.google.com/fusiontables/DataSource?snapid=S506424n-DY*

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Permission for Use of Data

The data tables and maps of Jewish population by congressional district are hereby provided for free distribution on the DataBank website. The data and map files may be freely reused for any research or other non-profit purpose providing that the data source is acknowledged.

Suggested citation:

Comenetz, Joshua. 2014. *Jewish Population of Congressional Districts,* 2nd ed.

Data set and maps available at the Berman Jewish DataBank.

Online: http://www.jewishdatabank.org/Studies/details.cfm?StudyID=719