

# Understanding and Using Puerto Rico Community Survey Data

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*What All Data Users Need to Know*

Issued April 2020



U.S. Department of Commerce  
U.S. CENSUS BUREAU  
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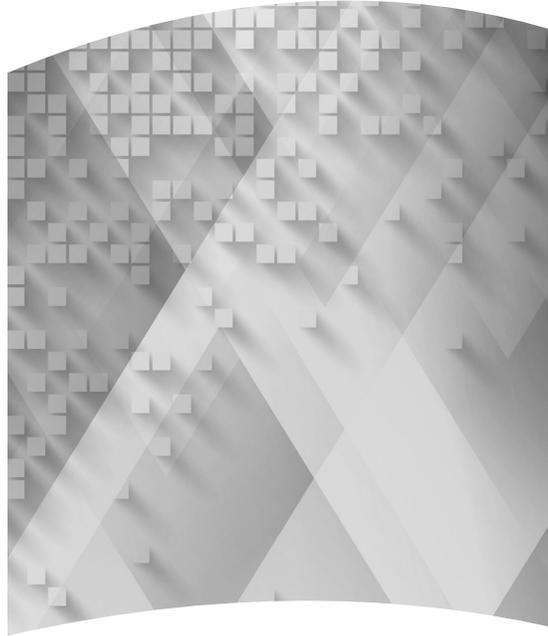
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**U.S. Department of Commerce**  
**Wilbur Ross,**  
Secretary

**Karen Dunn Kelley,**  
Deputy Secretary

**U.S. CENSUS BUREAU**  
**Steven Dillingham,**  
Director

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### **U.S. CENSUS BUREAU**

**Steven Dillingham,**

Director

**Ron Jarmin,**

Deputy Director and Chief Operating Officer

**Albert E. Fontenot Jr.,**

Associate Director for Decennial Census Programs

**James B. Treat,**

Assistant Director for Decennial Census Programs

**Donna M. Daily,**

Chief, American Community Survey Office

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# UNDERSTANDING AND USING PUERTO RICO COMMUNITY SURVEY DATA: WHAT ALL DATA USERS NEED TO KNOW

Suppose a mayor wants to know if a job training initiative has reduced the level of unemployment in a municipio. A business owner in San Juan wants information about the changing characteristics of workers and their commuting patterns. A public health agency is interested in identifying vulnerable populations that may need evacuation assistance during an emergency. Where could they go for this information?

The U.S. Census Bureau's Puerto Rico Community Survey (PRCS) is designed to meet the needs of policymakers, business leaders, planners, and others who need good data to make informed decisions. The PRCS is part of the Census Bureau's American Community Survey (ACS) program, providing a detailed portrait of the social, economic, housing, and demographic characteristics of communities throughout Puerto Rico.

This guide provides an overview of what data users need to know about working with PRCS data—particularly how the PRCS differs from the ACS and the major geographic areas for which PRCS data are available. It also includes some recent case studies that show how PRCS data are being used to help address important policy and program issues in Puerto Rico.

## What Is the American Community Survey?

The ACS is a nationwide survey designed to provide communities with reliable and timely social, economic, housing, and demographic data every year. The U.S. Census Bureau uses data collected in the ACS to provide estimates on a broad range of population, housing unit, and household characteristics for states, counties, cities, American Indian and Alaska Native areas, tribal subdivision areas, school districts, congressional districts, census tracts, block groups, and many other geographic areas.

The ACS has an annual sample size of about 3.5 million addresses, with survey information collected nearly every day of the year. Data are pooled across a calendar year to produce estimates for that year. As a result, ACS estimates reflect data that have been collected over a period of time rather than for a single point in time as in the decennial census, which is conducted every 10 years and provides population counts as of April 1 of the census year.

ACS 1-year estimates are data that have been collected over a 12-month period and are available for geographic areas with at least 65,000 people. Starting with the 2014 ACS, the Census Bureau is also producing "1-year Supplemental Estimates"—simplified versions of popular ACS tables—for geographic areas with at least 20,000 people. The Census Bureau combines 5 consecutive years of ACS data to produce multiyear estimates for geographic areas with fewer than 65,000 residents. These 5-year estimates represent data collected over a period of 60 months.

For more detailed information about the ACS—how to judge the accuracy of ACS estimates, understanding multiyear estimates, knowing which geographic areas are covered in the ACS, and how to access ACS data on the Census Bureau's Web site—see the Census Bureau's handbook on *Understanding and Using American Community Survey Data: What All Data Users Need to Know*.<sup>1</sup>

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<sup>1</sup> U.S. Census Bureau, *Understanding and Using American Community Survey Data: What All Data Users Need to Know*, <[www.census.gov/programs-surveys/acs/guidance/handbooks/general.html](http://www.census.gov/programs-surveys/acs/guidance/handbooks/general.html)>.

# 1. UNDERSTANDING THE PRCS: THE BASICS

## What Is the Puerto Rico Community Survey?

The U.S. Census Bureau first conducted the Puerto Rico Community Survey (PRCS) in 2005—the same year the American Community Survey (ACS) was implemented for the 50 states and the District of Columbia. The 2005 PRCS covered the household population and was expanded to cover the full population (including people living in group quarters such as college dormitories) the following year. In 2010, the PRCS, like the ACS, replaced the decennial census long form as the nation’s source of social and economic data for population and housing characteristics. The Census Bureau uses data collected in the PRCS to provide estimates for Puerto Rico, municipios, neighborhoods, and many other geographic areas.

The PRCS has an annual sample size of about 36,000 addresses. Because the PRCS is based on a sample, rather than all housing units and people, PRCS estimates have a degree of uncertainty, called sampling error, associated with them. In general, the larger the sample, the smaller the level of sampling error. To help

users understand the impact of sampling error on data reliability, the Census Bureau provides a “margin of error” for each published PRCS estimate. The margin of error, combined with the PRCS estimate, gives users a range of values within which the actual, “real-world” value is likely to fall.

*TIP: In general, data users should be careful in drawing conclusions about small differences between two PRCS estimates because they may not be statistically different.*

For more information about margins of error in the PRCS—and determining statistical significance—see the Census Bureau’s Accuracy of the Data documentation for PRCS multiyear and 1-year estimates.<sup>2</sup>

Users also should note that the PRCS was designed to provide estimates of the characteristics of the population, not to provide counts of the population in different geographic areas or population subgroups. For

<sup>2</sup> U.S. Census Bureau, American Community Survey (ACS), Code Lists, Definitions, and Accuracy, <[www.census.gov/programs-surveys/acs/technical-documentation/code-lists.html](http://www.census.gov/programs-surveys/acs/technical-documentation/code-lists.html)>.

Table 1.1. Population and Housing Data Included in Puerto Rico Community Survey

<b>Social Characteristics</b>	<b>Economic Characteristics</b>	Plumbing Facilities <sup>6</sup>
Ancestry	Class of Worker	Rent
Citizenship Status	Commuting (Journey to Work)	Rooms/Bedrooms
Disability Status <sup>1</sup>	Employment Status	Selected Monthly Owner Costs
Educational Attainment	Food Stamps/Supplemental Nutrition Assistance Program (SNAP) <sup>4</sup>	Telephone Service Available
Fertility	Health Insurance Coverage <sup>2</sup>	Tenure (Owner/Renter)
Grandparents as Caregivers	Income and Earnings	Units in Structure
Language Spoken at Home	Industry and Occupation	Value of Home
Marital History <sup>2</sup>	Place of Work	Vehicles Available
Marital Status	Poverty Status	Year Householder Moved Into Unit
Migration/Residence 1 Year Ago	Work Status Last Year	Year Structure Built
Period of Military Service		<b>Demographics Characteristics</b>
Place of Birth	<b>Housing Characteristics</b>	Age and Sex
School Enrollment	Computer and Internet Use <sup>5</sup>	Group Quarters Population
Undergraduate Field of Degree <sup>3</sup>	House Heating Fuel	Hispanic or Latino Origin
Veteran Status <sup>2</sup>	Kitchen Facilities	Race
Year of Entry	Occupancy/Vacancy Status	Relationship to Householder
	Occupants Per Room	Total Population

<sup>1</sup> Questions on Disability Status were significantly revised in the 2008 survey to cause a break in series.

<sup>2</sup> Marital History, Veterans’ Service-Connected Disability Status and Ratings, and Health Insurance Coverage were added in the 2008 survey.

<sup>3</sup> Undergraduate Field of Degree was added in the 2009 survey.

<sup>4</sup> Food Stamp Benefit amount was removed in 2008. In Puerto Rico, the SNAP Program is called the Nutritional Assistance Program.

<sup>5</sup> Computer and Internet Use was added to the 2013 survey.

<sup>6</sup> One of the components of Plumbing Facilities, flush toilet, and Business or Medical Office on Property questions were removed in 2016.

Source: U.S. Census Bureau.

basic counts of Puerto Rico's population by age, sex, race, and Hispanic origin, visit the Census Bureau's Population and Housing Unit Estimates Web page.<sup>3</sup>

The content collected through the PRCS can be grouped into four main types of characteristics: social, economic, housing, and demographic (see Table 1.1). Various tables in the ACS/PRCS have different “universes,” or base reference totals against which all other characteristics are compared. Some tables cover population characteristics, while others cover housing characteristics. Among the population tables, some cover the entire population (such as tables of the population by age), while some cover only a subset of the population (such as tables on employment status, which include data only for the population aged 16 and older).

PRCS and ACS content is designed to meet the needs of federal government agencies, and every question on the survey is asked for a reason. For example, questions about how people get to work and the length of their commutes are used for planning emergency response routes and improvements to roads, highways, rail lines, and bus routes. The responsibility of the Office of Management and Budget (OMB) under the Paperwork Reduction Act requires that new questions demonstrate the practical utility of the data and minimize “respondent burden.” Respondent burden can be defined in different ways, but is often related to the length of the interview or questionnaire, or the extent to which questions are viewed as being intrusive or too personal. Because participation in the PRCS and ACS is mandatory, the OMB will only approve necessary questions for inclusion on the surveys.

Some people are reluctant to respond to the PRCS because of concerns about the confidentiality of the data. However, strict confidentiality laws protect all PRCS and ACS information that could be used to identify individuals or households under Title 13 of the U.S. Code.<sup>4</sup> This is true even for interagency communication; other government agencies do not have the legal right to access individuals' confidential information from the PRCS or the ACS.

## Who Uses the PRCS?

The PRCS provides vital information on a yearly basis about Puerto Rico and its people, in order to help local officials, community leaders, businesses, and the public plan and make decisions based on the changes taking place in their communities. Through the PRCS, we know more about demographic trends, jobs

<sup>3</sup> U.S. Census Bureau, Population and Housing Unit Estimates, <[www.census.gov/popest/](http://www.census.gov/popest/)>.

<sup>4</sup> U.S. Census Bureau, Title 13, U.S. Code—Protection of Confidential Information, <[www.census.gov/history/www/reference/privacy\\_confidentiality/title\\_13\\_us\\_code.html](http://www.census.gov/history/www/reference/privacy_confidentiality/title_13_us_code.html)>.

and occupations, educational attainment, veterans, homeownership, and many other topics. Because data collection is ongoing, the PRCS also provides essential, up-to-date information about population and housing characteristics both before and after natural disasters (like hurricanes) or economic shifts, like the recession in Puerto Rico that began in 2006.<sup>5</sup>

Here are some examples of how PRCS data are being used for reporting and decision-making:

- The daily newspaper *El Nuevo Día* used PRCS data to show that Puerto Rico had experienced net out-migration of 67,000 people to the U.S. mainland in 2016.<sup>6</sup>
- The Youth Development Institute of Puerto Rico (Instituto para el Desarrollo de la Juventud) uses PRCS data for several of the indicators it uses to monitor child and family well-being in the Commonwealth and its municipios, including child poverty, single-parent family status, and access to health insurance.<sup>7</sup>
- The Center for Puerto Rican Studies at Hunter College, City University of New York, used PRCS data to project the number of people who may migrate from Puerto Rico to the United States in the wake of Hurricane Maria, as well as which states are likely to feel the greatest impact.<sup>8</sup>
- The U.S. Department of Housing and Urban Development used PRCS data to analyze aspects of the housing market in Puerto Rico, including the share of homeowners living in single-family homes and median rental costs.<sup>9</sup>

<sup>5</sup> Mary Williams Walsh, “How Puerto Rico Is Grappling With a Debt Crisis,” *New York Times* (May 16, 2017), <[www.nytimes.com/interactive/2017/business/dealbook/puerto-rico-debt-bankruptcy.html](http://www.nytimes.com/interactive/2017/business/dealbook/puerto-rico-debt-bankruptcy.html)>.

<sup>6</sup> “Unas 67,000 personas en la isla emigraron a Estados Unidos en 2016,” *El Nuevo Día* (September 14, 2017), <[www.elnuevodia.com/noticias/locales/nota/unas67000personasenlaislaemigraron-naestadosunidosen2016-2357680/](http://www.elnuevodia.com/noticias/locales/nota/unas67000personasenlaislaemigraron-naestadosunidosen2016-2357680/)>.

<sup>7</sup> Instituto para el Desarrollo de la Juventud, <<http://juventudpr.org/en/data/statistics/>>.

<sup>8</sup> Center for Puerto Rican Studies (Centro), Hunter College, CUNY, “Estimates of Post-Hurricane Maria Exodus from Puerto Rico,” Centro RB2017-01 (October 2017), <[https://centropr.hunter.cuny.edu/sites/default/files/RB2017-01-POST-MARIA%20EXODUS\\_V3.pdf](https://centropr.hunter.cuny.edu/sites/default/files/RB2017-01-POST-MARIA%20EXODUS_V3.pdf)>.

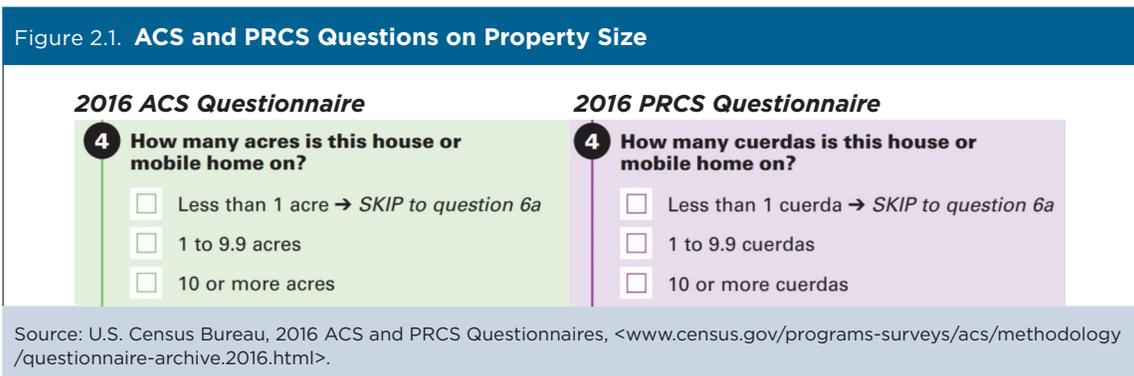
<sup>9</sup> U.S. Department of Housing and Urban Development, Office of Policy Development and Research, (September 1, 2017), “Comprehensive Housing Market Analysis” for Puerto Rico, <[www.huduser.gov/portal/publications/pdf/PuertoRico-comp.pdf](http://www.huduser.gov/portal/publications/pdf/PuertoRico-comp.pdf)>.

## 2. HOW IS THE PRCS DIFFERENT FROM THE ACS?

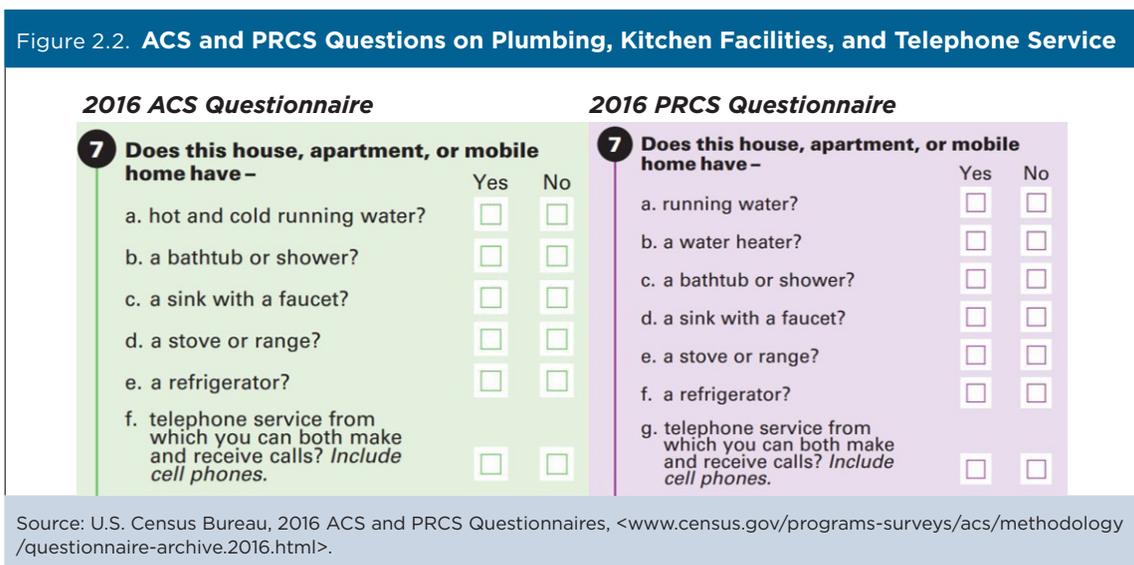
The data collected in the Puerto Rico Community Survey (PRCS) are similar to those collected in the American Community Survey (ACS) for the 50 states and the District of Columbia, but there are also some important differences between the two surveys.

With the ACS, the initial mailings sent to U.S. addresses are printed in English and residents can receive Spanish-language materials upon request. By comparison, Puerto Rico addresses initially receive PRCS mailings that are printed in Spanish, although residents can request English-language materials. English and Spanish versions of sample PRCS questionnaires are available on the U.S. Census Bureau's Web site.<sup>10</sup>

The PRCS form includes several questions that are modified from those on the ACS to account for cultural and geographic differences between Puerto Rico and the U.S. mainland.<sup>11</sup> For example, Question 4 in the Housing section asks the amount of land that a house, apartment, or mobile home occupies. Whereas the acre is the unit of measurement in the ACS, the cuerda (or "Spanish acre," equal to .971 acres) is the measurement unit in the PRCS (see Figure 2.1).<sup>12</sup>



While the ACS asks if respondents have "hot and cold running water," the PRCS asks if they have "running water" and "a water heater," as it is less common to have hot water heaters in Puerto Rico (see Figure 2.2).



<sup>10</sup> U.S. Census Bureau, American Community Survey (ACS), Questionnaire Archive, <[www.census.gov/programs-surveys/acs/methodology/questionnaire-archive.html](http://www.census.gov/programs-surveys/acs/methodology/questionnaire-archive.html)>.

<sup>11</sup> U.S. Census Bureau, American Community Survey Design and Methodology Report (January 2014), p. 56, <[https://www2.census.gov/programs-surveys/acs/methodology/design\\_and\\_methodology/acs\\_design\\_methodology\\_report\\_2014.pdf](https://www2.census.gov/programs-surveys/acs/methodology/design_and_methodology/acs_design_methodology_report_2014.pdf)>.

<sup>12</sup> U.S. Census Bureau, 2016 ACS and PRCS Questionnaires, <[www.census.gov/programs-surveys/acs/methodology/questionnaire-archive.2016.html](http://www.census.gov/programs-surveys/acs/methodology/questionnaire-archive.2016.html)>.

In the ACS, Question 14 asks whether anyone in the household received benefits through the Food Stamp Program or Supplemental Nutrition Assistance Program (SNAP) (see Figure 2.3). Puerto Rico operates a “Nutritional Assistance Program” in place of SNAP, and eligibility requirements and benefit amounts are determined by Puerto Rico, rather than the federal government.

Figure 2.3. ACS and PRCS Questions on Nutrition Assistance Program Benefits

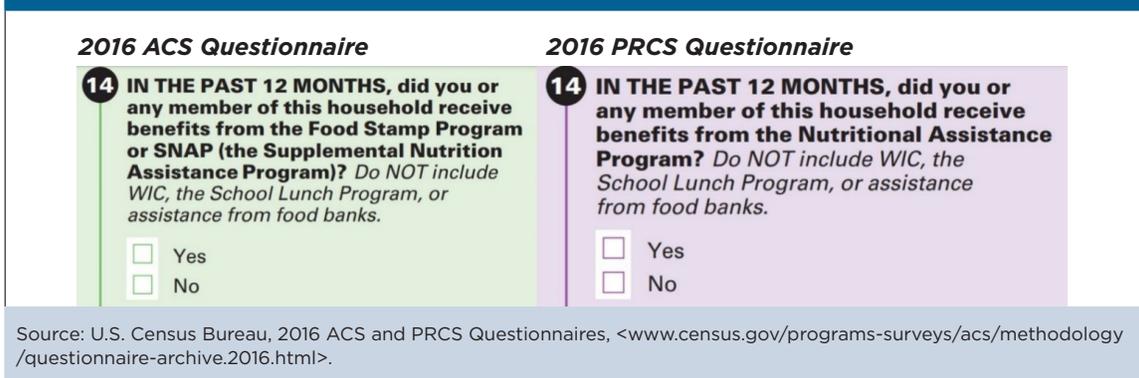
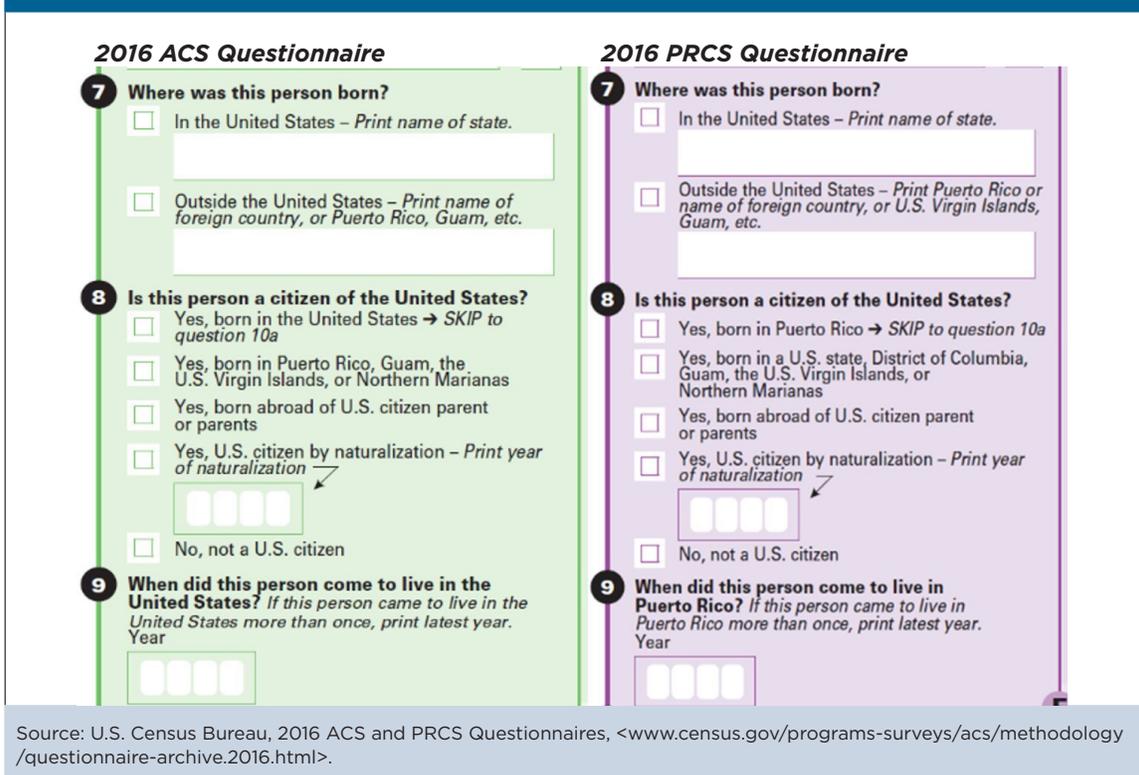
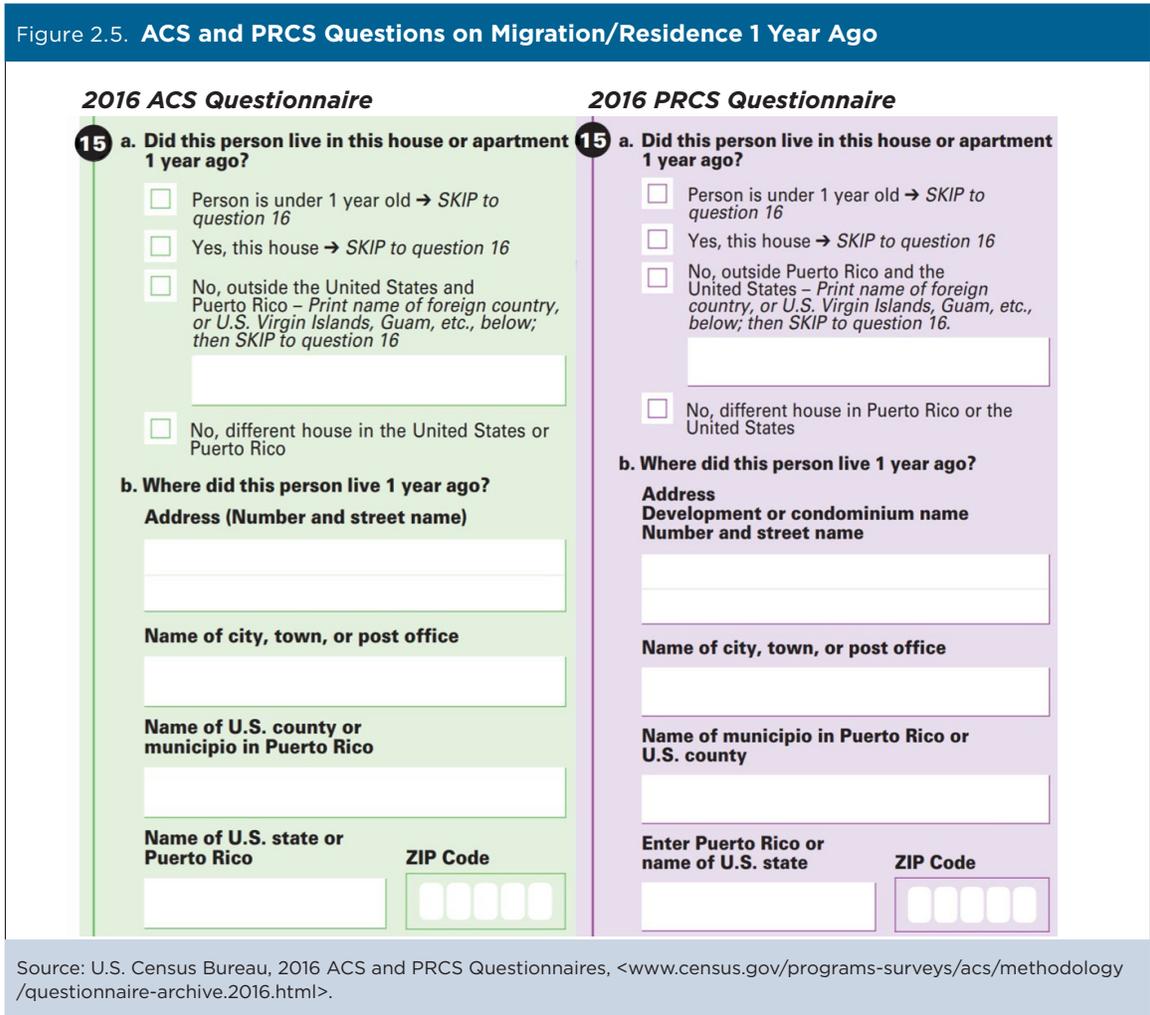


Figure 2.4 shows additional PRCS modifications to the questions on birthplace (nativity), citizenship, and year of entry. For these questions, the differences are in the geographic areas emphasized in the question wording or response options. For example, the “year of entry” question in the ACS asks when a respondent came to live in the United States. In the PRCS, that same question asks when someone came to live in Puerto Rico.

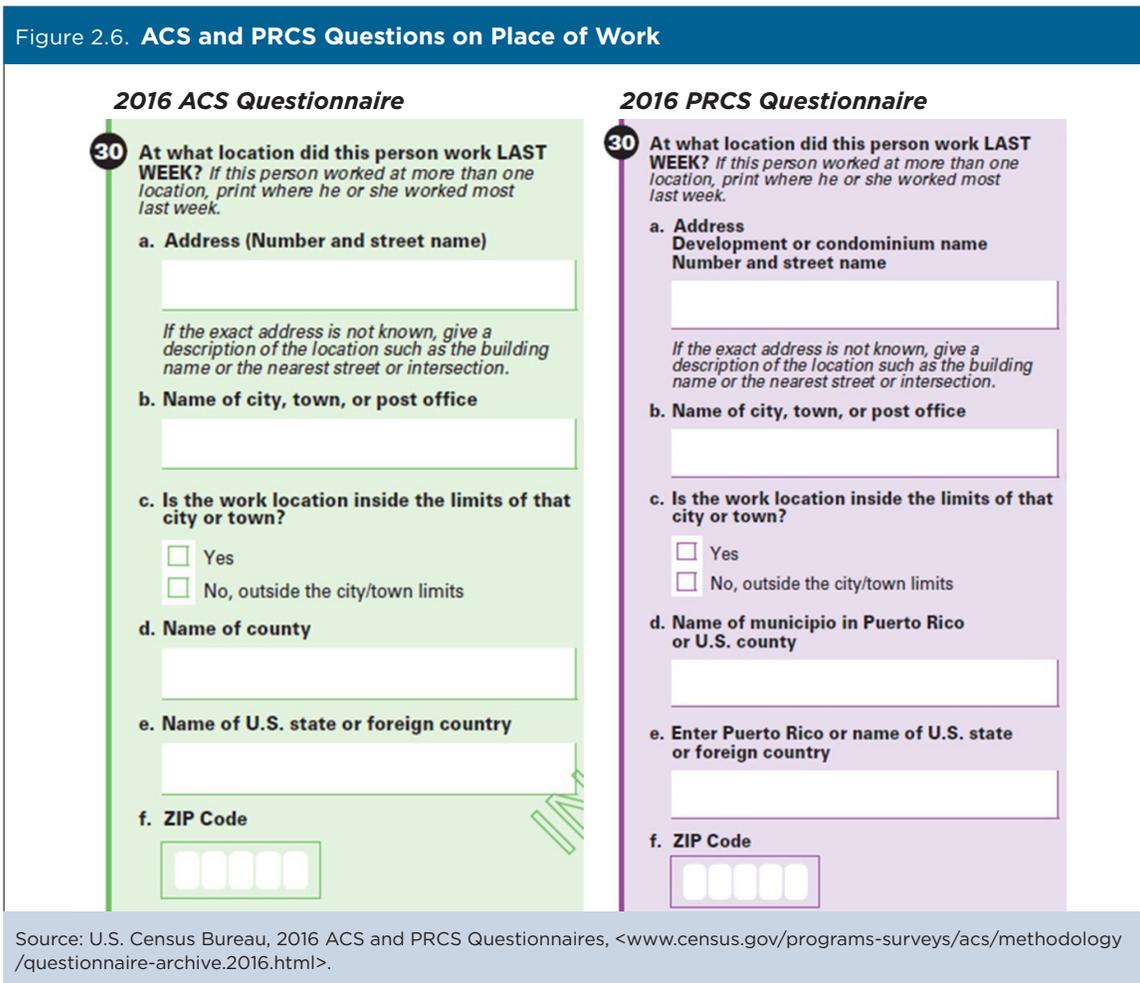
Figure 2.4. ACS and PRCS Questions on Place of Birth, Citizenship, and Year of Entry



Similarly, questions on migration and place of residence 1 year ago differ slightly between the two surveys (see Figure 2.5).

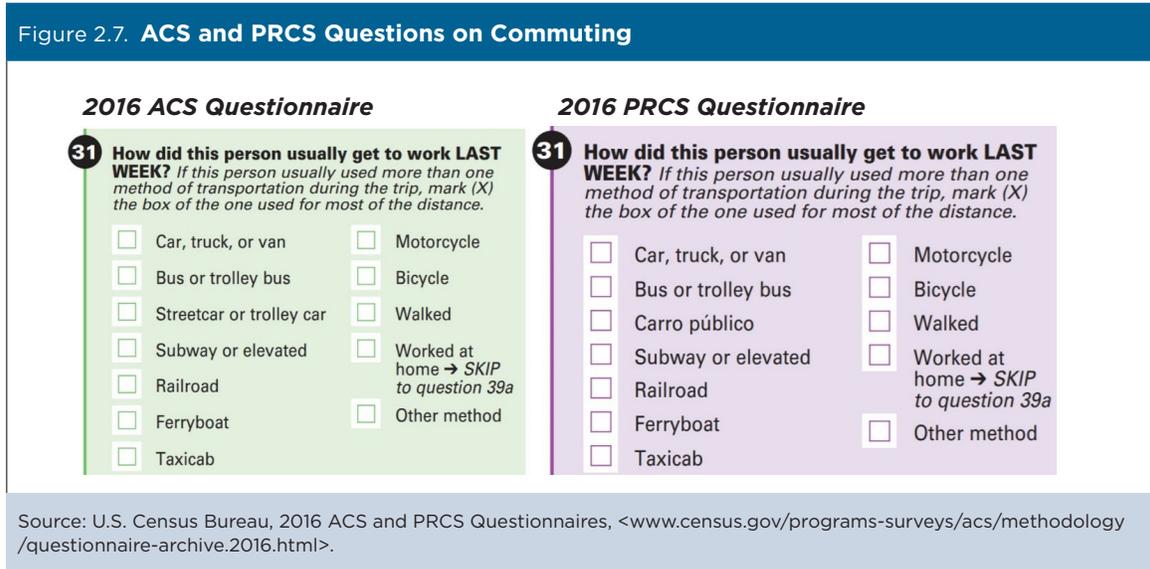


The “place of work” question in the ACS asks the respondent to name the county and state of their work location, while the same question in the PRCS asks the person to name the Puerto Rico municipio as the first option, while listing the U.S. county and state as an alternative (see Figure 2.6).<sup>13</sup>

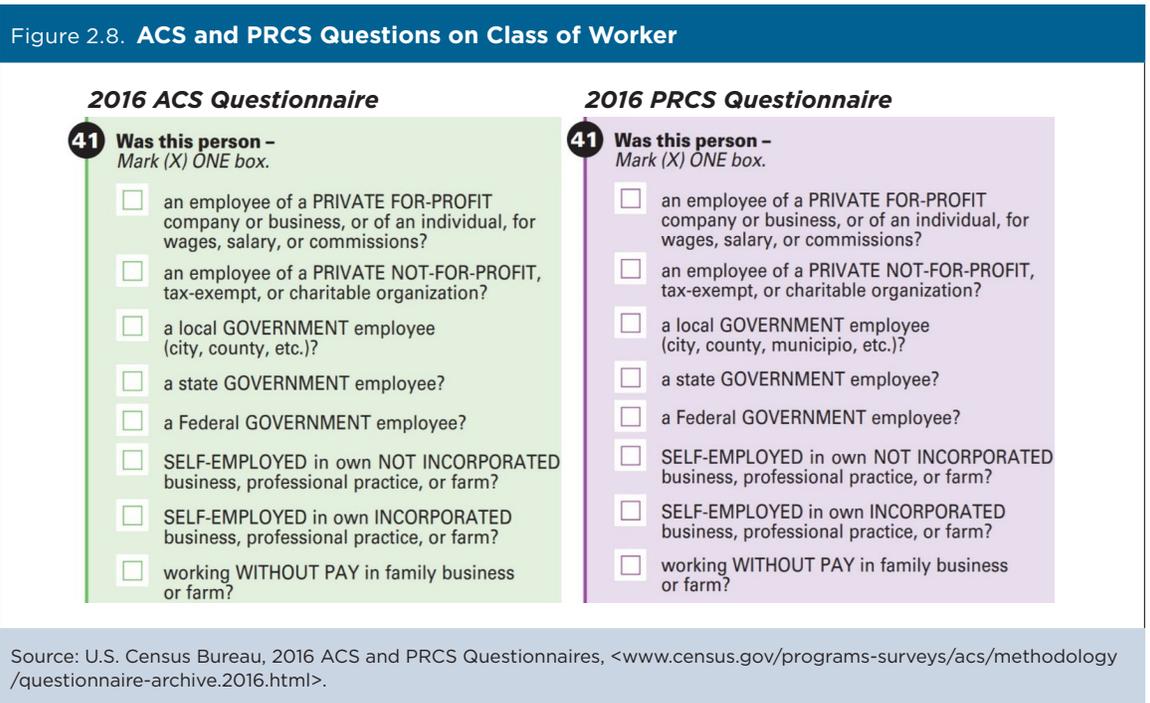


<sup>13</sup> U.S. Census Bureau, American Community Survey (ACS), Questionnaire Archive, <[www.census.gov/programs-surveys/acs/methodology/questionnaire-archive.html](http://www.census.gov/programs-surveys/acs/methodology/questionnaire-archive.html)>.

There are also differences in the ACS and PRCS questions on the means of transportation to work. The ACS includes an option for “Streetcar or trolley car” while “Carro público,” or “public car” is included in the list of options in the PRCS (see Figure 2.7).



Finally, Figure 2.8 shows a minor difference in the ACS and PRCS questions on class of worker. The ACS questionnaire includes “county” as an example of a local government employee, while the PRCS questionnaire refers to both “county” and “municipio” employees.



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## ***Differences in Data Collection Methods and Population Controls***

Unlike the ACS, the PRCS does not have an Internet response option. As a result, the Census Bureau uses a different mail strategy to encourage households to complete the PRCS. About 4 days before the initial mail package, addresses selected for the PRCS receive a prenotice letter, which addresses selected for the ACS do not receive. The initial mail package for the PRCS contains the full questionnaire, rather than an instruction card for completing the survey online, as is the case for the ACS mailing. In both cases, the replacement mail package for nonrespondents is sent approximately 3 weeks after the initial mailing. In addition, the Census Bureau sends only two reminder postcards for the PRCS, compared with three reminders for the ACS (two pressure seal letters and one postcard).

As with most household surveys, the PRCS data are controlled so that the number of people in certain categories agree with the Census Bureau's official estimates. The PRCS, like the ACS, uses a weighting method to ensure that estimates are consistent with official Census Bureau population control totals. However, there are minor differences in the controls used in the ACS and the PRCS. ACS estimates are controlled to the Census Bureau's July 1 population estimate totals by age, sex, race, and Hispanic origin, while PRCS estimates are controlled to population estimates by age and sex only. Additionally, while both ACS and PRCS estimates are controlled to the population at the county (or municipio) level, they are not controlled to the sub-county level in Puerto Rico—unlike in the 50 states and the District of Columbia.<sup>14</sup>

Housing unit totals in the ACS are controlled to the Census Bureau's mid-year totals, but there are currently no housing unit controls available for Puerto Rico.<sup>15</sup> This is because the Census Bureau's Population Estimates Program only produces July 1 housing unit estimates for the 50 states and the District of Columbia.

More information about PRCS and ACS methods is available in the Census Bureau's Design and Methodology Report.<sup>16</sup>

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<sup>14</sup> Starting with the 2009 surveys, ACS estimates of the total population of incorporated places (self-governing cities, towns, or villages) and minor civil divisions (such as county precincts) are also adjusted so that they are consistent with official population estimates.

<sup>15</sup> U.S. Census Bureau, American Community Survey Design and Methodology Report (January 2014), pp. 153–154, <[www.census.gov/programs-surveys/acs/methodology/design-and-methodology.html](http://www.census.gov/programs-surveys/acs/methodology/design-and-methodology.html)>.

<sup>16</sup> U.S. Census Bureau, American Community Survey Design and Methodology Report (January 2014), <[www.census.gov/programs-surveys/acs/methodology/design-and-methodology.html](http://www.census.gov/programs-surveys/acs/methodology/design-and-methodology.html)>.

### 3. GEOGRAPHIC AREAS COVERED IN THE PRCS

Data from the Puerto Rico Community Survey (PRCS) are tabulated for a variety of geographic areas ranging from the Commonwealth to municipios, barrios, and subbarrios. For reporting purposes, Puerto Rico (like the United States as a whole) is subdivided into two main types of geographic areas, legal and statistical. Municipios are the primary legal divisions of Puerto Rico. For data presentation purposes, the U.S. Census Bureau treats a municipio as the equivalent of a county in the United States.

The Census Bureau recognizes barrios and barrios-pueblo as the primary legal divisions of municipios. These entities are similar to the minor civil divisions used for reporting data in 29 states of the United States. Subbarrios are subdivisions of barrios and barrios-pueblo.

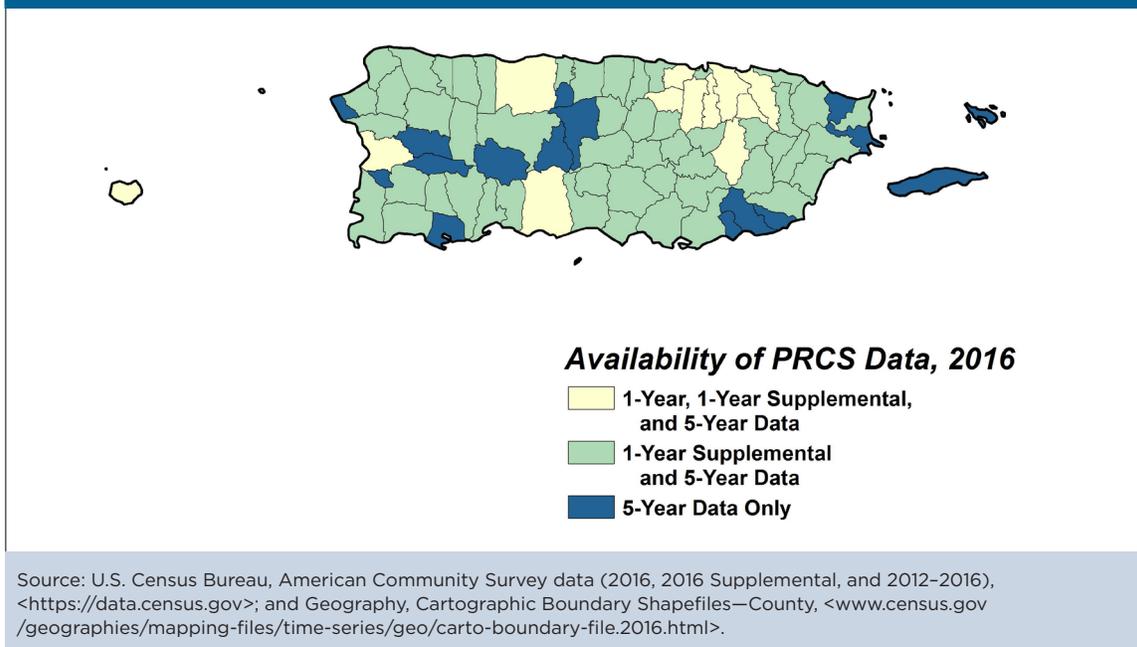
Statistical areas in Puerto Rico are defined by the Census Bureau in partnership with officials in Puerto Rico and include areas like metropolitan and micropolitan statistical areas, urban areas, census tracts, and zonas urbanas. The primary purpose of statistical areas is to tabulate and present decennial census and ACS/PRCS data. An example of a statistical area is the San Juan-Carolina-Caguas Metropolitan Statistical Area.

There are no incorporated places in Puerto Rico; instead, the Census Bureau provides data for two types of “census designated places”: zonas urbanas, representing the governmental center of each municipio, and comunidades, representing other settlements.

Figures 3.1 through 3.4 display sample maps of several key geographic areas available through the PRCS: municipios, Public Use Microdata Areas (PUMAs), comunidades, and census tracts.

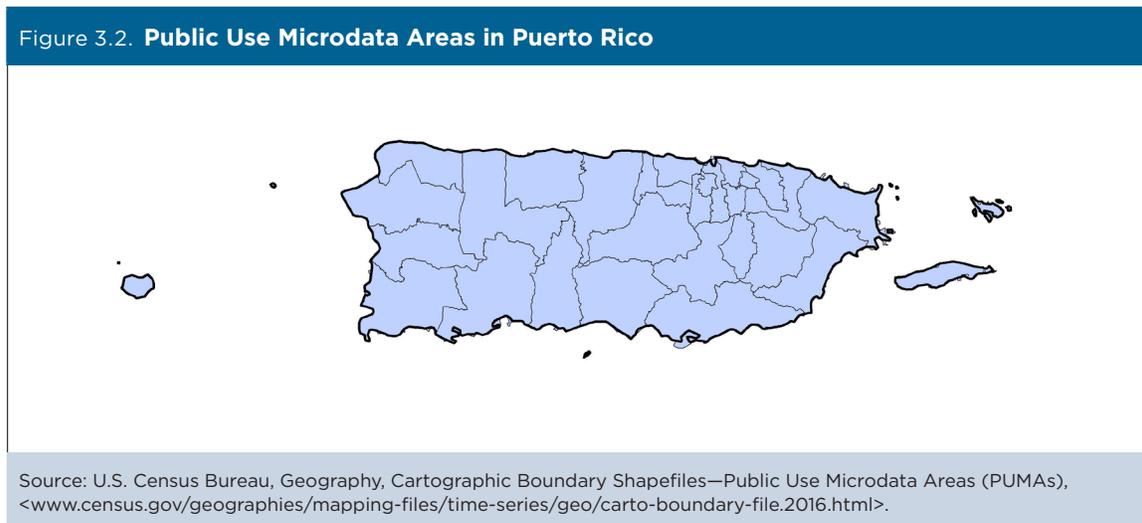
There are 78 municipios in Puerto Rico, all of which are functioning governmental entities. PRCS 1-year estimates are currently available for 11 of Puerto Rico’s 78 municipios—those with populations of 65,000 or more in 2016 (see Figure 3.1). Puerto Rico has 62 municipios with populations of at least 20,000 people that receive 1-year Supplemental Estimates. The 16 municipios in Puerto Rico with fewer than 20,000 people only receive 5-year estimates.

Figure 3.1. **Municipios in Puerto Rico by Availability of PRCS Estimates in 2016**

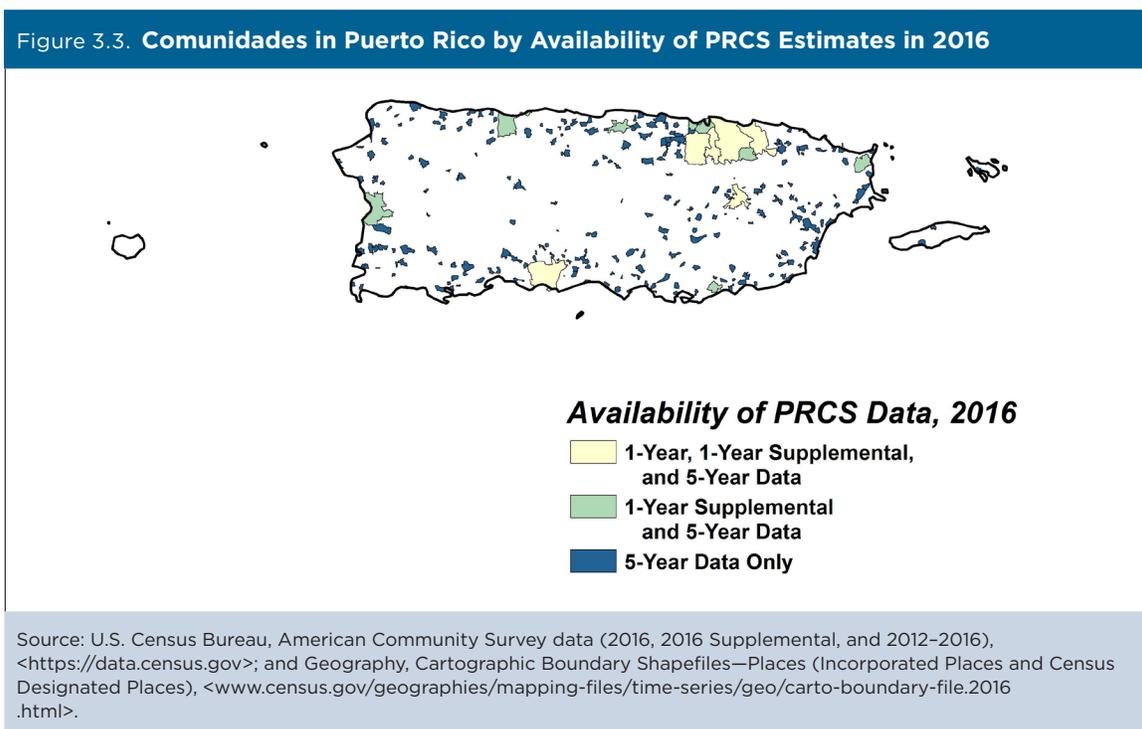


As with each state, the Census Bureau works with the Puerto Rico State Data Center to divide Puerto Rico into a series of PUMAs with minimum populations of 100,000. PUMAs are constructed based on municipio and census tract boundaries. Typically, municipios with large populations are subdivided into multiple PUMAs, while PUMAs in more rural areas are made up of groups of adjacent municipios. PUMAs defined in Puerto Rico for the 2010 Census and beyond nest within the boundaries of the 11 municipio-based planning regions used to tabulate and disseminate Economic Census data for Puerto Rico.

Puerto Rico’s PUMAs are shown below in Figure 3.2.

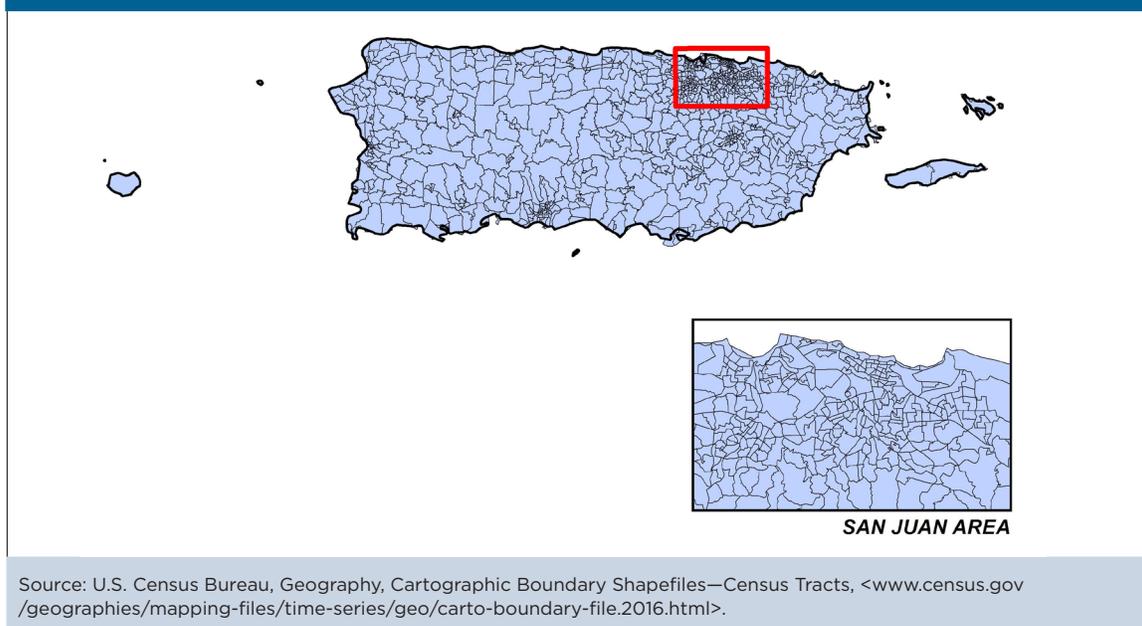


Puerto Rico also contains 253 census designated places, referred to as “comunidades” and “zonas urbanas.” As Figure 3.3 shows, 94 percent of these places have fewer than 20,000 people and thus will receive only 5-year estimates; in contrast, 1-year estimates are available for only six of these places.



Census tracts—small subdivisions of counties that typically have between 1,200 and 8,000 residents, with an optimum population of 4,000,—are commonly used to present information for areas approximately the size of neighborhoods. Puerto Rico currently has 945 census tracts (see Figure 3.4).

Figure 3.4. **Census Tracts in Puerto Rico**



There are also more than 300 PRCS data tables available for block groups—subdivisions of census tracts—that include between 600 and 3,000 people each. In the PRCS, block groups are the lowest (smallest) level of geography published. Block group data are only available in the PRCS 5-year data products.

For more information about geographic areas covered by PRCS and ACS data, see the Census Bureau's handbook on *Understanding and Using American Community Survey Data: What All Data Users Need to Know*.<sup>17</sup>

<sup>17</sup> U.S. Census Bureau, *American Community Survey, Understanding and Using American Community Survey Data: What All Data Users Need to Know*, <[www.census.gov/programs-surveys/acs/guidance/handbooks/general.html](http://www.census.gov/programs-surveys/acs/guidance/handbooks/general.html)>.

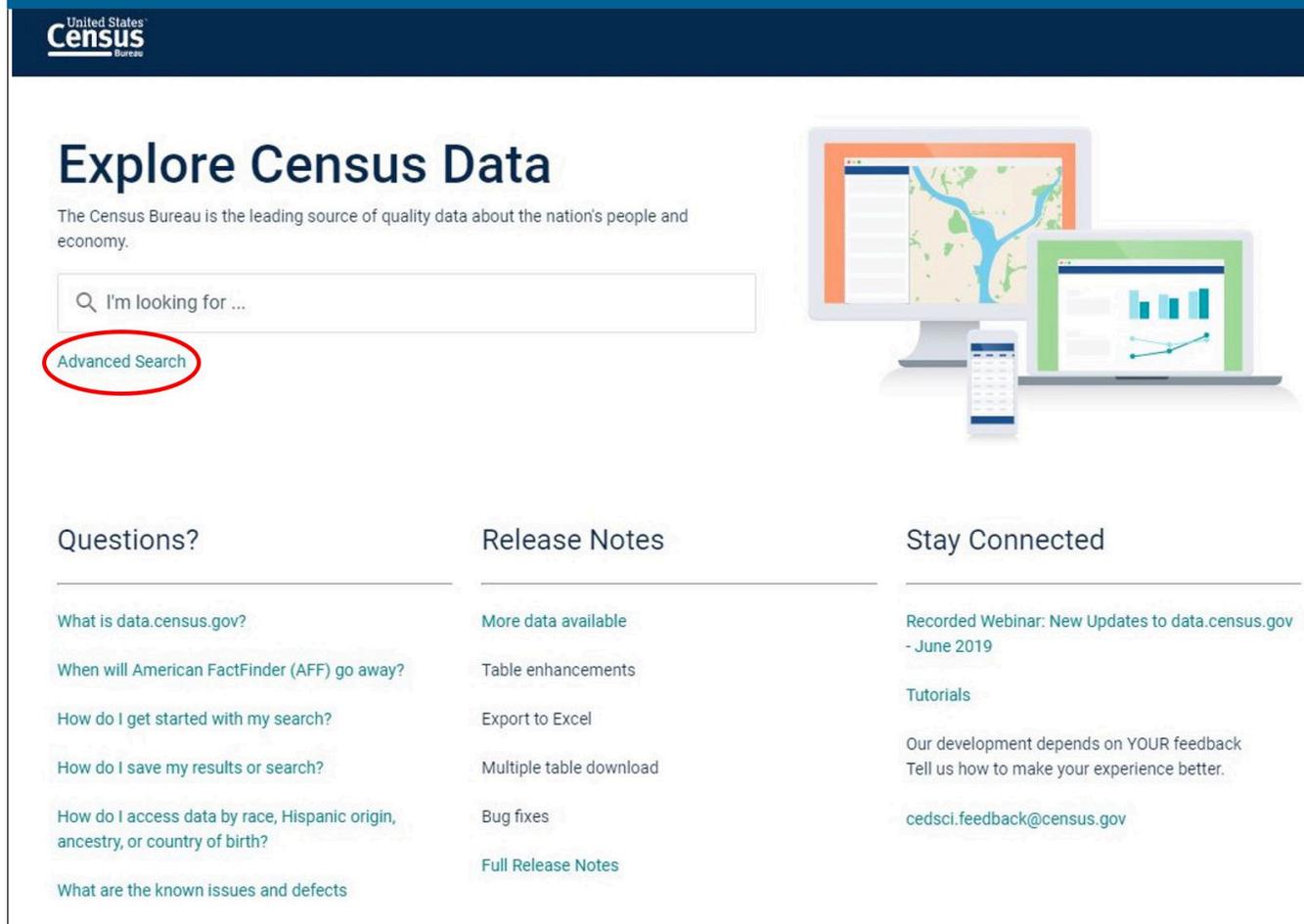
## 4. ACCESSING PRCS DATA

Data.census.gov is the U.S. Census Bureau's primary tool for accessing population, housing, and economic data from the Puerto Rico Community Survey (PRCS), the American Community Survey (ACS), the decennial census, and many other Census Bureau data sets.<sup>18</sup> Data.census.gov provides comprehensive access to pretabulated PRCS data for a wide range of geographic areas, including Puerto Rico, municipios, census designated places, census tracts, and block groups.

Suppose, for example, we are interested in finding poverty estimates for Puerto Rico.

- Go to data.census.gov at <https://data.census.gov> and click on “Advanced Search” under the search bar (see Figure 4.1). This will bring you to the Advanced Search page.

Figure 4.1. Selecting Advanced Search in Data.census.gov



Source: U.S. Census Bureau, data.census.gov, <https://data.census.gov>.

*TIP: Data users who want to access PRCS estimates through data.census.gov will not see “PRCS” or “Puerto Rico Community Survey” among the listed surveys. Rather, they can access PRCS estimates by using the geography filter to select data for Puerto Rico. However, there are certain tables produced only for Puerto Rico, with names ending in “PR” such as “DP02PR.” For a complete list of ACS and PRCS tables, visit the Census Bureau’s Table Shells and Table List Web page at <www.census.gov/programs-surveys/acs/technical-documentation/table-shells.html>.*

<sup>18</sup> Source: U.S. Census Bureau, data.census.gov, <https://data.census.gov>.

- Begin with the Geography filter. Select “Geography” in the navigation pane on the left side of the screen to display a list of available geographies.
- Select “State” and then select “Puerto Rico” from the “State” filter (see Figure 4.2).

Figure 4.2. Geography Filter Selection in Data.census.gov

The screenshot shows the 'Advanced Search' page on Data.census.gov. The 'BROWSE FILTERS' sidebar on the left has 'Geography' selected. The 'GEOGRAPHY' section has 'State' selected, and the 'STATE' section has 'Puerto Rico' selected. The 'Selected Filters' bar at the bottom shows 'Puerto Rico' as the active filter.

**United States Census Bureau** Search

// Search / Advanced Search

# Advanced Search

e.g. age, sex, population...

Narrow search with filters

FIND A FILTER

e.g. 336111 - Automobile Manufacturing

**BROWSE FILTERS**

- Topics
- Geography**
- Years
- Surveys
- Codes

**GEOGRAPHY**

Show Summary Levels

- Nation
- Region
- Division
- State**
- County
- Tract
- Block Group
- Block
- Zip Code Tabulation Area (Five-Digit)
- Elementary School District
- Secondary School District

**STATE**

Show geographic components

- Ohio
- Oklahoma
- Oregon
- Pennsylvania
- Puerto Rico
- Rhode Island
- South Carolina
- South Dakota
- Tennessee
- Texas
- United States Virgin Islands

**Selected Filters:** Puerto Rico

CLEAR FILTERS SEARCH MORE

Source: U.S. Census Bureau, data.census.gov, <<https://data.census.gov>>.

- Next, choose the “Surveys” filter and select “ACS 1-Year Estimates Subject Tables” (see Figure 4.3)

Figure 4.3. **Selecting a Survey in Data.census.gov**

The screenshot shows the 'Advanced Search' page on data.census.gov. At the top, there is a search bar with the text 'Search' and a magnifying glass icon. Below the search bar, the text '// Search / Advanced Search' is visible. The main heading is 'Advanced Search' in a large, bold font. Underneath, there is a placeholder text 'e.g. age, sex, population...' followed by a horizontal line. Below this, the text 'Narrow search with filters' is displayed. Underneath that, there is a section titled 'FIND A FILTER' with a search bar containing the text 'e.g. 336111 - Automobile Manufacturing' and a magnifying glass icon. The main content area is divided into two columns. The left column is titled 'BROWSE FILTERS' and contains a list of filter categories: 'Topics', 'Geography', 'Years', 'Surveys', and 'Codes'. The 'Surveys' category is highlighted with a red oval. The right column is titled 'SURVEYS' and contains a list of survey options, each with a checkbox. The options are: 'ACS 1-Year Estimates Comparison Profiles', 'ACS 1-Year Estimates Data Profiles', 'ACS 1-Year Estimates Detailed Tables', 'ACS 1-Year Estimates Selected Population Profiles', 'ACS 1-Year Estimates Subject Tables', 'ACS 5-Year Estimates Comparison Profiles', 'ACS 5-Year Estimates Data Profiles', and 'ACS 5-Year Estimates'. The 'ACS 1-Year Estimates Subject Tables' option is checked and highlighted with a red oval. At the bottom of the page, there is a 'Selected Filters' section with two filter tags: 'Puerto Rico' and 'ACS 1-Year Estimates Subject Tables', each with a close button (X). To the right of the filter tags are buttons for 'CLEAR FILTERS', 'SEARCH', and 'MORE'.

Source: U.S. Census Bureau, data.census.gov, <<https://data.census.gov>>.

- For our example, choose the “Topics” filter and select “Income and Poverty,” “Poverty,” and “Poverty” again.
- The three filters should appear in the “Selected Filters” at the bottom of the page.
- Next, click on “Search” in the lower right corner of the page (see Figure 4.4).

Figure 4.4. Searching for Topics in Data.census.gov

The screenshot shows the 'Advanced Search' page on Data.census.gov. At the top, there is a search bar and the United States Census Bureau logo. Below the search bar, the page title 'Advanced Search' is displayed. A search input field contains the text 'e.g. age, sex, population...'. Underneath, there is a section titled 'Narrow search with filters' with a search input field containing 'e.g. 336111 - Automobile Manufacturing'. The main content area is divided into four columns of filters:

- BROWSE FILTERS:** Includes 'Topics' (circled in red), 'Geography', 'Years', 'Surveys', and 'Codes'.
- TOPICS:** Lists various categories such as 'Business and Economy', 'Education', 'Employment', 'Families and Living Arrangements', 'Government', 'Health', 'Housing', 'Income and Poverty' (circled in red), 'Populations and People', and 'Race and Ethnicity'.
- INCOME AND POVERTY:** Contains checkboxes for 'Income and Poverty', 'Income and Earnings', 'Poverty' (circled in red), and 'Wealth and Assets'.
- POVERTY:** Contains a checked checkbox for 'Poverty' (circled in red) and unchecked checkboxes for 'Official Poverty Measure', 'Supplemental Poverty Measure', and 'Well-Being'.

At the bottom of the page, the 'Selected Filters' section shows 'Puerto Rico', 'ACS 1-Year Estimates Subject Tables', and 'Poverty'. To the right, there are buttons for 'CLEAR FILTERS', 'SEARCH' (circled in red), and 'MORE'.

Source: U.S. Census Bureau, data.census.gov, <<https://data.census.gov>>.

- Click on Table S1701 “Poverty Status in the Past 12 Months” (see Figure 4.5).

Figure 4.5. **Choosing a Subject Table in Data.census.gov**

The screenshot shows the Data.census.gov interface. At the top, there is a search bar and navigation tabs for ALL, TABLES, MAPS, and PAGES. Below the navigation, it indicates 'About 38,404 results | Filter'. A featured result box displays '43.1% +/- 0.7% Poverty, All people in Puerto Rico' with a source link to the American Community Survey. Below this, the 'Tables' section is visible, with the table 'POVERTY STATUS IN THE PAST 12 MONTHS' circled in red. The table provides data for Puerto Rico, broken down into 'Total' and 'Below poverty level' categories, with columns for 'Estimate' and 'Margin of Error'. The table includes rows for the total population and various age groups (Under 18 years, Under 5 years, 5 to 17 years). Below the table, another table titled 'POVERTY STATUS IN THE PAST 12 MONTHS OF FAMILIES' is partially visible. At the bottom, the source is cited as 'U.S. Census Bureau, data.census.gov, <https://data.census.gov>'.

**POVERTY STATUS IN THE PAST 12 MONTHS**  
 Survey/Program: American Community Survey  
 Years: 2018,2017,2016,2015,2014,2013,2012,2011,2010 Table: S1701

	Puerto Rico			
	Total		Below poverty level	
	Estimate	Margin of Error	Estimate	Margin of Error
Population for whom po...	3,165,711	+/-1,397	1,363,666	+/-23,647
AGE				
Under 18 years	588,499	+/-1,391	335,044	+/-9,728
Under 5 years	124,657	+/-808	80,321	+/-3,422
5 to 17 years	463,842	+/-1,489	254,723	+/-8,136

**POVERTY STATUS IN THE PAST 12 MONTHS OF FAMILIES**  
 Survey/Program: American Community Survey  
 Years: 2018,2017,2016,2015,2014,2013,2012,2011,2010 Table: S1702

Source: U.S. Census Bureau, data.census.gov, <https://data.census.gov>.

- An online table showing poverty status for the population in Puerto Rico is displayed on the next screen.
- From this page, users can click on “Customize Table” if they want to modify the geography, survey, year, or topic (see Figure 4.6).

Figure 4.6. Customizing a Table in Data.census.gov

The screenshot shows the Data.census.gov interface. At the top, there is a search bar and navigation tabs for ALL, TABLES, MAPS, and PAGES. The main content area displays a table titled "POVERTY STATUS IN THE PAST 12 MONTHS" for Puerto Rico. The table is structured as follows:

	Puerto Rico			
	Total		Below poverty level	
	Estimate	Margin of Error	Estimate	Margin of Error
Population for whom po...	3,165,711	+/-1,397	1,363,666	+/-23,647
AGE				
Under 18 years	588,499	+/-1,391	335,044	+/-9,728
Under 5 years	124,657	+/-808	80,321	+/-3,422
5 to 17 years	463,842	+/-1,489	254,723	+/-8,136
Related children o...	586,931	+/-1,567	333,537	+/-9,689
18 to 64 years	1,923,885	+/-956	779,041	+/-14,862
18 to 34 years	686,159	+/-2,413	312,901	+/-8,863
35 to 64 years	1,237,726	+/-2,281	466,140	+/-9,887
60 years and over	863,601	+/-5,589	332,660	+/-8,572
65 years and over	653,327	+/-952	249,581	+/-7,425
SEX				
Male	1,501,118	+/-3,580	616,743	+/-12,804
Female	1,664,593	+/-3,652	746,923	+/-14,780
RACE AND HISPANIC ...				
White alone	2,058,934	+/-22,339	841,615	+/-22,891
Black or African Am...	397,448	+/-17,171	177,787	+/-10,099
American Indian an...	N	N	N	N
Asian alone	N	N	N	N

The "CUSTOMIZE TABLE" button is highlighted with a red circle in the top right corner of the table area.

Source: U.S. Census Bureau, data.census.gov, <<https://data.census.gov>>.

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## Other Options for Accessing PRCS Data

Data users with programming skills can use the ACS Summary File for Puerto Rico to download and analyze ACS data.<sup>19</sup> The Summary File is useful for skilled programmers who want to access multiple ACS tables for large numbers of geographic areas. Similar to data.census.gov, data users who want to access PRCS estimates through the ACS Summary File will not see “PRCS” or “Puerto Rico Community Survey.” They can access PRCS estimates by selecting Puerto Rico as their geography.

There are certain tables produced only for Puerto Rico with names ending in “PR” such as “B05001PR.” For a complete list of ACS and PRCS tables, visit the Census Bureau’s Table Shells and Table List Web page at <[www.census.gov/programs-surveys/acs/technical-documentation/table-shells.html](http://www.census.gov/programs-surveys/acs/technical-documentation/table-shells.html)>.

*TIP: The ACS Summary File is geared toward more advanced data users, so the Census Bureau recommends that users check to see if their tables of interest are easily available for download through data.census.gov before using this data product.*

The ACS Summary File can be downloaded as zipped files from the Census Bureau’s file transfer protocol (FTP) server.<sup>20</sup>

Developers can also access PRCS data through the Census Bureau’s application programming interface (API).<sup>21</sup> The Census Data API provides an efficient way to get ACS, PRCS, and other data directly from the Census Bureau, without storing the data on a computer or a local server. If you know how to read the documentation and create a request, you can easily download variables and geographic areas of interest. Data are continuously available and regularly updated, so you have immediate access to new data as they are released.

Data users interested in creating custom ACS estimates for Puerto Rico can access microdata records from the Census Bureau’s Public Use Microdata Sample (PUMS) files. Accessible through the Census Bureau’s Web site, the ACS PUMS files allow users to create their own estimates with variables of their choosing.<sup>22</sup> Estimates created using the PUMS files may differ from published estimates available through data.census.gov because the PUMS files are a subset of the cases contained in the full ACS data.

*TIP: Data users need to use statistical software, such as SPSS, SAS, R, or Stata, to process PUMS data, and the responsibility for producing estimates from PUMS and judging their statistical significance is up to the data user.*

Data users interested in learning more about accessing data from the PRCS are encouraged to refer to the section on “Accessing ACS Data” in the Census Bureau’s handbook on *Understanding and Using American Community Survey Data: What All Data Users Need to Know*.<sup>23</sup>

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<sup>19</sup> U.S. Census Bureau, American Community Survey (ACS), Summary File Data, <[www.census.gov/programs-surveys/acs/data/summary-file.html](http://www.census.gov/programs-surveys/acs/data/summary-file.html)>.

<sup>20</sup> U.S. Census Bureau, American Community Survey (ACS), Data via FTP, <[www.census.gov/programs-surveys/acs/data/data-via-ftp.html](http://www.census.gov/programs-surveys/acs/data/data-via-ftp.html)>.

<sup>21</sup> U.S. Census Bureau, Developers, Available APIs, <[www.census.gov/data/developers/data-sets.html](http://www.census.gov/data/developers/data-sets.html)>.

<sup>22</sup> U.S. Census Bureau, American Community Survey (ACS), PUMS Data, <[www.census.gov/programs-surveys/acs/data/pums.html](http://www.census.gov/programs-surveys/acs/data/pums.html)>.

<sup>23</sup> U.S. Census Bureau, *Understanding and Using American Community Survey Data: What All Data Users Need to Know*, <[www.census.gov/programs-surveys/acs/guidance/handbooks/general.html](http://www.census.gov/programs-surveys/acs/guidance/handbooks/general.html)>.

# 5. CASE STUDIES USING PRCS DATA

## Case Study #1: Analyzing Child Poverty Rates Across Municipios

**Skill Level:** Introductory/Intermediate

**Subject:** Child poverty

**Type of Analysis:** Analysis of Puerto Rico Community Survey (PRCS) data across municipios in Puerto Rico

**Tools Used:** Data.census.gov, spreadsheet

**Author:** José Caraballo Cueto, Census Information Center, University of Puerto Rico

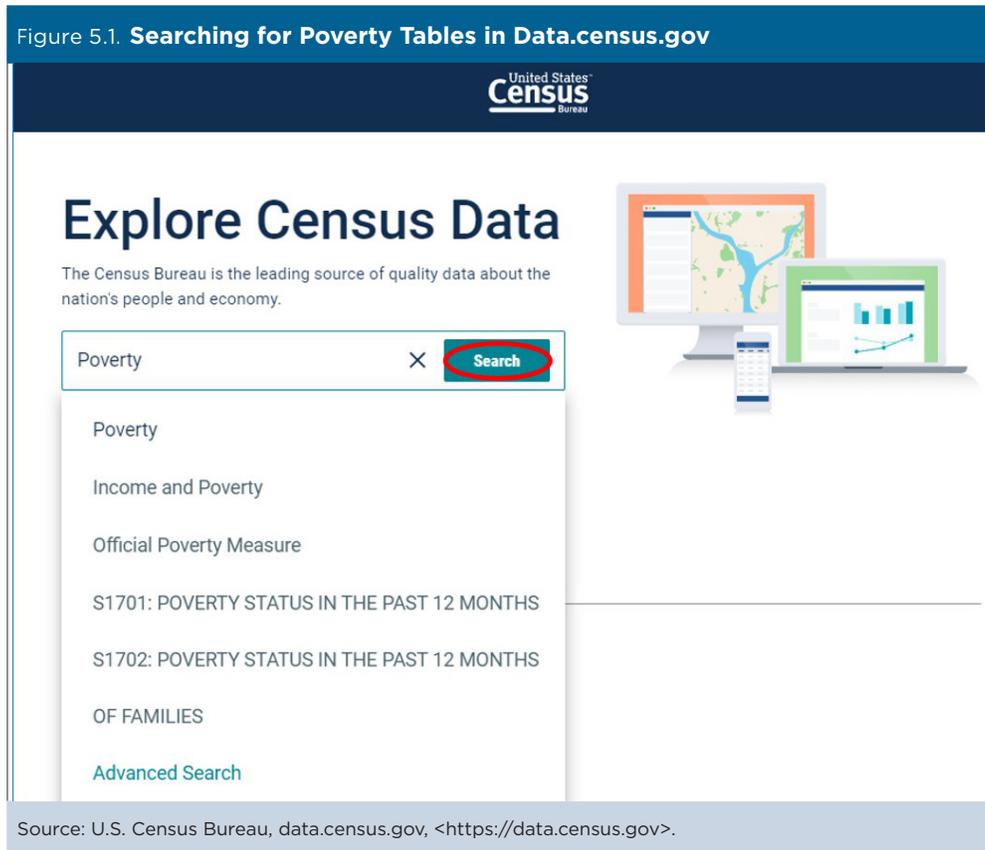
Dr. José Caraballo Cueto is the director of the Census Information Center (CIC) at the University of Puerto Rico (UPR) in Cayey. The CIC Program was established in 1988 through a joint agreement between the National Urban League and the U.S. Census Bureau to support the dissemination of census data to underserved communities.

Since then, the CIC Network has become an official Census Bureau Program with a total of 59 organizations in 22 states, including the District of Columbia and Puerto Rico. The CIC at UPR in Cayey provides the university, and the 11 municipios it serves, technical training in the use of census data. For this case study, Dr. Cueto analyzes child poverty estimates in Puerto Rico across municipios, using Puerto Rico Community Survey (PRCS) data.

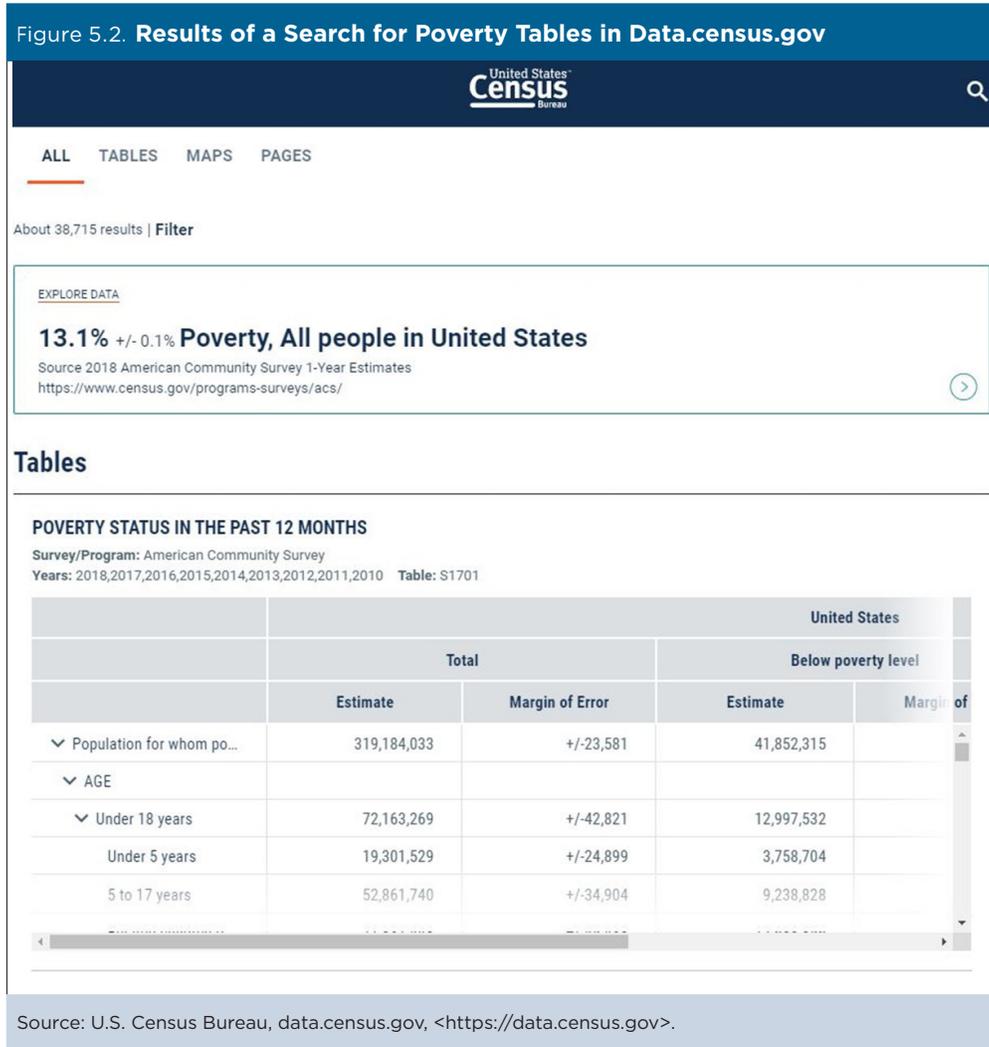
His first step is to select the appropriate PRCS data set. While single-year data are available for many municipios, he needs to use a 5-year ACS data set (for example, 2011–2015) if he wants data for every municipio in the Commonwealth. He also knows that there is uncertainty—margin of error—associated with all the PRCS estimates, particularly for smaller geographic areas and small population groups. The 5-year estimates are more reliable than 1-year estimates because they are based on larger sample sizes.

Dr. Cueto starts his analysis by going to the data.census.gov Web site at <<https://data.census.gov>>.

- He types “Poverty” into the search bar on the data.census.gov home page and then clicks on the “Search” button (see Figure 5.1).



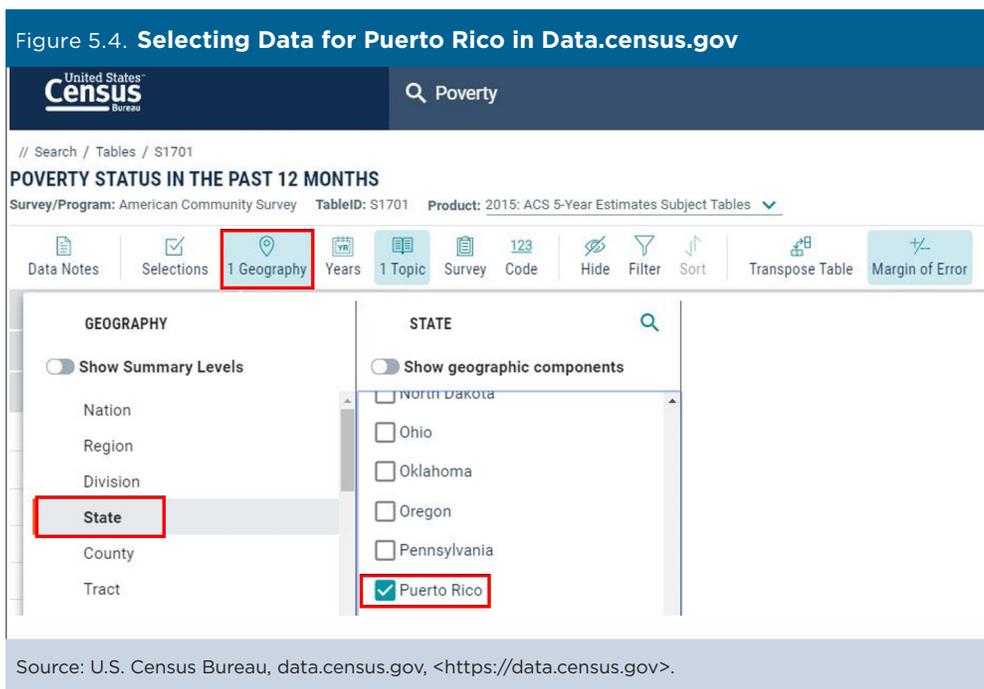
- On the next page, he clicks on the first table on “Poverty Status in the Past 12 Months,” which includes poverty estimates for the population under age 18 (see Figure 5.2).



- Next, he selects the desired survey year by clicking on the current “Product” selection at the top of the page. (For the purposes of this case study, he used 2015 ACS 5-year estimates because they were the most recent data available at the time.)
- The header should read “2015 ACS 5-Year Estimates Subject Tables.”
- Next, he clicks on the “Customize Table” button to select geographic areas of interest (see Figure 5.3).



- On the next page, he scrolls to the top of the table and selects the Geography filter.
- He clicks on “State” and then selects “Puerto Rico” (see Figure 5.4). Puerto Rico is a territory of the United States, but in data.census.gov, Puerto Rico is listed under the “State” category, and its municipios are listed under the “County” category.



- Next, he clicks on “County” and then “Puerto Rico” to display a list of municipios.
- He checks the box labeled “All counties in Puerto Rico.” He confirms that the “Selected Geographies” at the bottom of the page list the geographies that he needs for his analysis.
- He then clicks on the “Close” button in the lower right corner to view the table with his updated geography selections (see Figure 5.5).

**Figure 5.5. Selecting Data for Puerto Rico Municipios in Data.census.gov**

Source: U.S. Census Bureau, data.census.gov, <<https://data.census.gov>>.

- The online table displays data on children living in families below the poverty level. However, he decides to export the full table into a spreadsheet.
- He clicks on the “Download” button at the top of the page (see Figure 5.6).

**Figure 5.6. Downloading a Table in Data.census.gov**

Adjuntas Municipio, Puerto Rico				
	Total		Below poverty level	
	Estimate	Margin of Error	Estimate	Margin of Error
Population for whom po...	18,873	+/-78	11,645	+/-717
▼ AGE				
▼ Under 18 years	4,421	+/-71	3,191	+/-245
Under 5 years	1,038	+/-67	762	+/-112
5 to 17 years	3,383	+/-22	2,429	+/-209
Related children of ...	4,419	+/-71	3,189	+/-244

Source: U.S. Census Bureau, data.census.gov, <<https://data.census.gov>>.

- He then uses the checkboxes to select the 2015 ACS 5-year data.
- He chooses the File Type (CSV).
- Finally, he clicks “Download” at the bottom of the screen.
- When the file is ready, he clicks “Download Now” to save the file to his computer (see Figures 5.7 and 5.8).

**Figure 5.7. Selecting a Survey Year and File Type in Data.census.gov**

The screenshot shows the Data.census.gov interface for the table 'POVERTY STATUS IN THE PAST 12 MONTHS'. The 'Download Tables' section is active, showing a table of vintages. The '2015' column is highlighted, and the '5-Year' checkbox is checked. The 'File Type' section shows 'CSV' selected. A 'DOWNLOAD' button is visible at the bottom right.

Select Table Vintages	All	2018	2017	2016	2015	2014	2013	2012	2011	2010
S1701										
1-Year	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
5-Year	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>				

**File Type**

CSV  
 PDF

**What You're Getting**

- 1 .csv files (metadata)
- 1 .csv files (data)
- 1 .txt files (table title)

Uncompressed Estimated Size: 331.1 kB

**DOWNLOAD**

Source: U.S. Census Bureau, data.census.gov, <https://data.census.gov>.

**Figure 5.8. Downloading Selected Files From Data.census.gov**

The screenshot shows a modal window titled 'We're preparing your files.' with a progress bar at 100%. A 'Download Now' button is visible at the bottom right.

**We're preparing your files.**

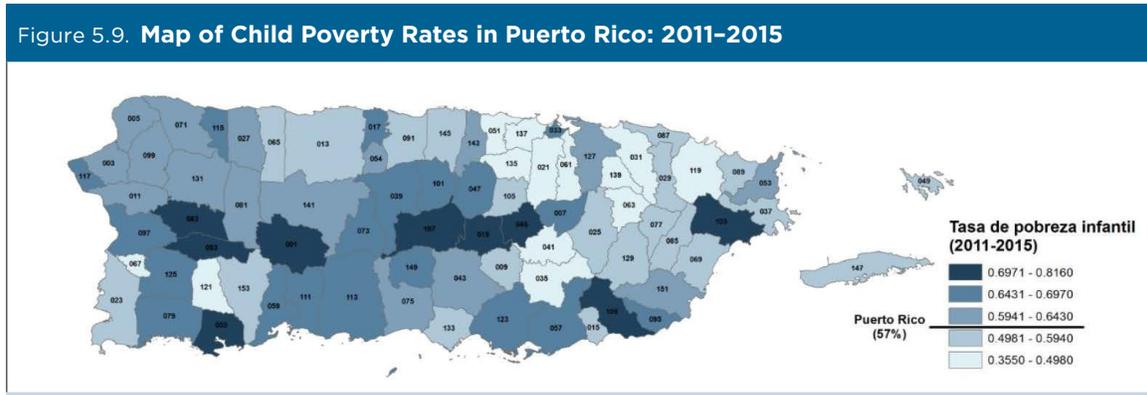
Cancelling this window will end the download.

100%

**Download Now**

Source: U.S. Census Bureau, data.census.gov, <https://data.census.gov>.

- Dr. Cueto opens the zipped CSV file (with prefix ACSST5Y2015.S1701\_data\_with\_overlays) and sees that the child poverty rate in Puerto Rico in 2011–2015 was 57.4 percent.
- Here, the results for municipios are presented in a map to show areas with the highest and lowest child poverty rates in the Commonwealth (see Figure 5.9). This map is featured in the CIC’s Poverty by Age and Sex in Puerto Rico publication.<sup>24</sup>



Source: Author’s analysis of data from the U.S. Census Bureau, American Community Survey.

<sup>24</sup> University of Puerto Rico, Census Information Center, Poverty by Age Group and Sex in Puerto Rico, <[www.upr.edu/iii-cayey/notas-del-centro-de-informacion-censal-cic-24-pobreza-por-grupo-de-edad-y-sexo-en-puerto-rico/](http://www.upr.edu/iii-cayey/notas-del-centro-de-informacion-censal-cic-24-pobreza-por-grupo-de-edad-y-sexo-en-puerto-rico/)>.

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## Case Study #2: Youth Development Institute’s Child and Youth Well-Being Index

**Skill Level:** Introductory/Intermediate

**Subject:** Child and youth well-being

**Type of Analysis:** Creation of well-being index by combining Puerto Rico Community Survey (PRCS) estimates with data from other sources

**Tools Used:** Data.census.gov and spreadsheet

**Author:** Caridad Arroyo, Youth Development Institute (Instituto del Desarrollo de la Juventud)

### About Our Institute

The Youth Development Institute of Puerto Rico (Instituto del Desarrollo de la Juventud, IDJ) is a nonprofit organization working to advance public policies—at both the federal and commonwealth level—to improve the lives of children and youth in Puerto Rico.<sup>25</sup> Our work includes the collection and dissemination of data, development of research-driven public policy recommendations, and advocacy work that is driven by both data and people. We are the only organization focused on policy and advocacy around children’s issues in Puerto Rico.

### The Child and Youth Well-Being Index

Policymakers in Puerto Rico are hindered by a lack of up-to-date, reliable, and accessible data that provide information about the local context. Reliable data for local areas are needed to promote conversation, citizen participation, and public policy recommendations. Here is where the IDJ, in a strategic planning session, saw the opportunity to raise awareness about the living conditions of children and youth in Puerto Rico through the Child and Youth Well-Being Index.

The Child and Youth Well-Being Index is a tool developed by the IDJ with the assistance of Puerto Rico’s Institute of Statistics to examine the living conditions of children and youth in Puerto Rico. Data are from the Puerto Rico Community Survey (PRCS) and several other federal data sources. After a process of validation with local experts, we settled on an index with 27 indicators in five core areas of children’s development. The areas are economy, education, family, health, and security. The criteria to include indicators in the Index were:

1. Accessible and current data available every 1 or 2 years.
2. From a valid source of information—mainly from federal reports and the U.S. Census Bureau.
3. Consistent in their methodology over time to ensure valid comparisons across different years.

The method used to construct the index is similar to the method used by the World Bank in their Knowledge Economy Index.<sup>26</sup> This method allows us to normalize all data points in a uniform scale ranging from zero to 10. Standardization is important because the indicators are not available in the same unit of measurement. At the end of the process, we calculate the mean of these normalized values and establish a grade, from A to F, to describe the living conditions of children in the Commonwealth.

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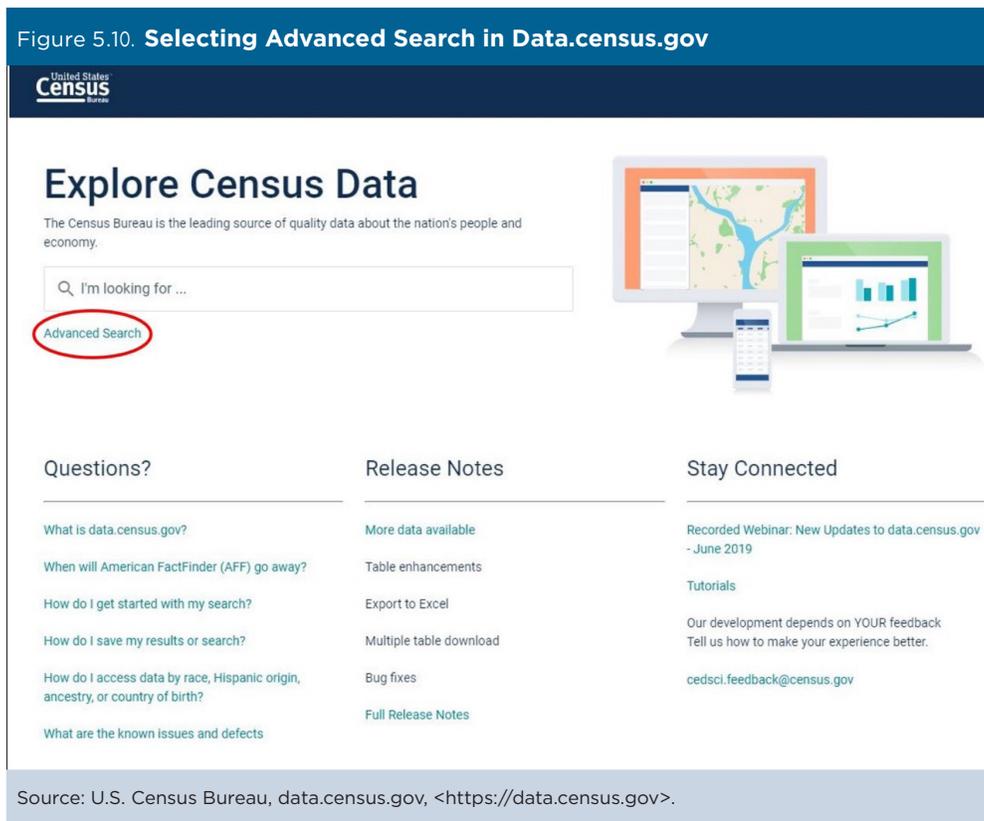
<sup>25</sup> Youth Development Institute of Puerto Rico, <[www.juventudpr.org/](http://www.juventudpr.org/)>.

<sup>26</sup> World Bank, The knowledge economy, the KAM methodology and World Bank operations (English), <<http://documents.worldbank.org/curated/en/695211468153873436/The-knowledge-economy-the-KAM-methodology-and-World-Bank-operations>>.

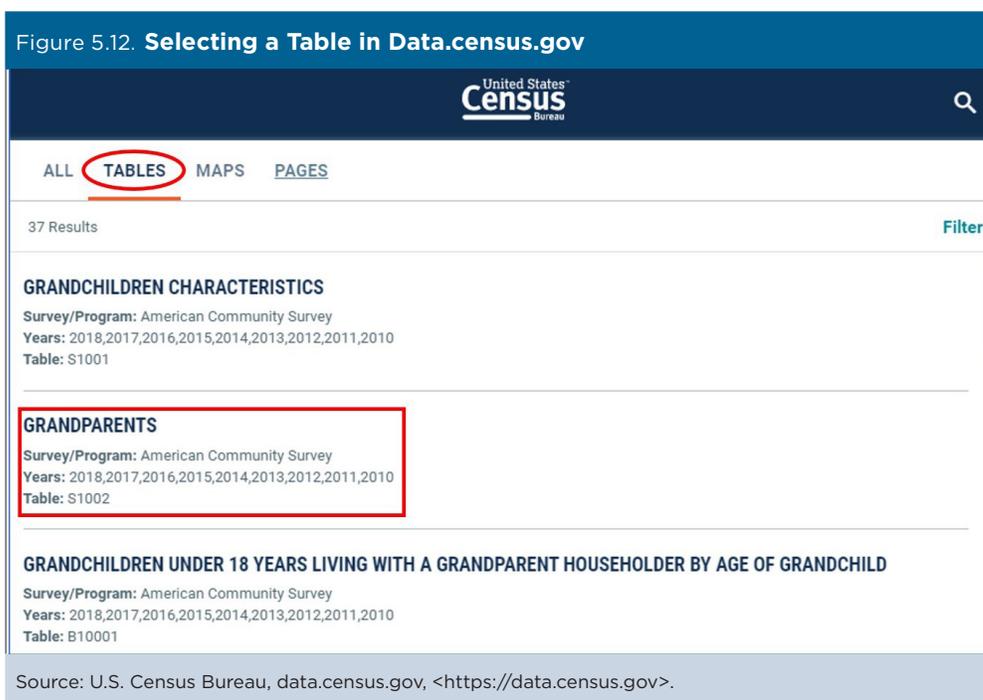
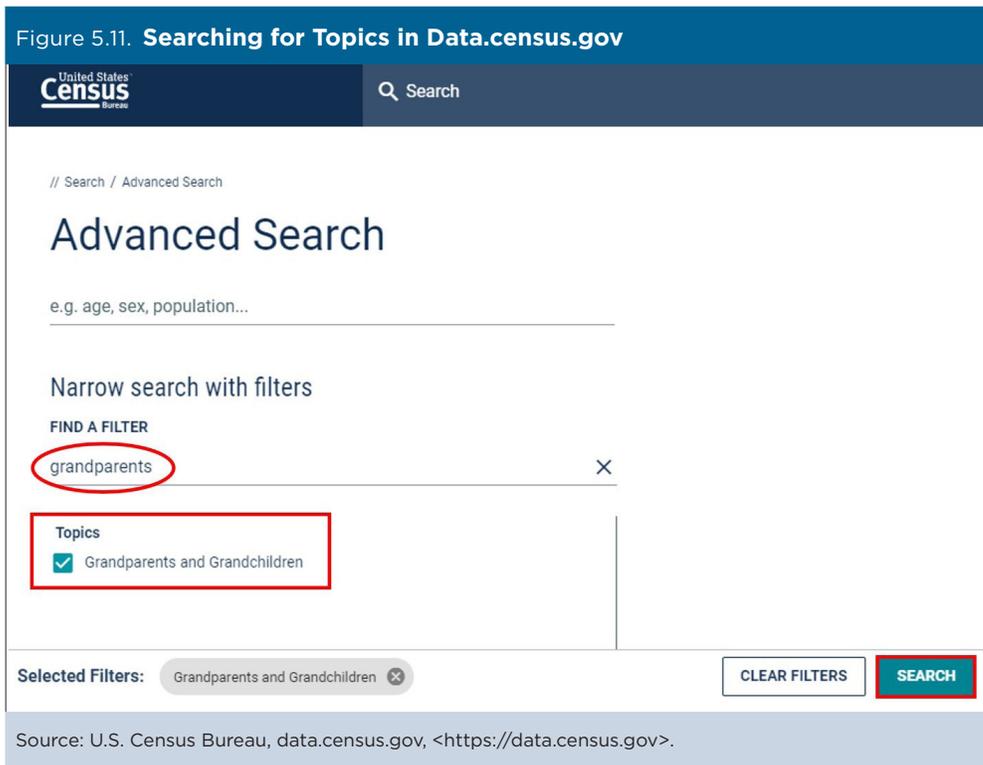
## Accessing PRCS Data for the Index

Of the 27 indicators in the Child and Youth Well-Being Index, 12 are drawn from the 2016 PRCS 1-year estimates. Our first step to access these PRCS data is to identify the relevant tables that we need in [data.census.gov](https://data.census.gov).

- We navigate to the Census Bureau’s [data.census.gov](https://data.census.gov) Web site <<https://data.census.gov>>.
- We select the “Advanced Search” option, which allows users to conduct keyword searches or search by using predefined topics, geographies, years, surveys, or codes (see Figure 5.10).



- Next, we click on the Topic filter to display a list of available topics. For example, to find data on grandparents responsible for their grandchildren under 18 years, we type “grandparents” into the search box and then click on the “Grandparents and Grandchildren” box.
- After making our selection, we click on the “Search” box in the lower right corner (see Figure 5.11).
- Next, we click on “Tables” at the top of the page to display a list of potential tables on grandparents and grandchildren.
- From this list, we can identify those that are best suited for our analysis. For the measure of grandparents responsible for grandchildren, we select Table S1002 “Grandparents” (see Figure 5.12).



By repeating this process for different topics, we identify the PRCS tables that we need for our analysis. Table 5.1 provides a list of each measure and the source of the data in data.census.gov.

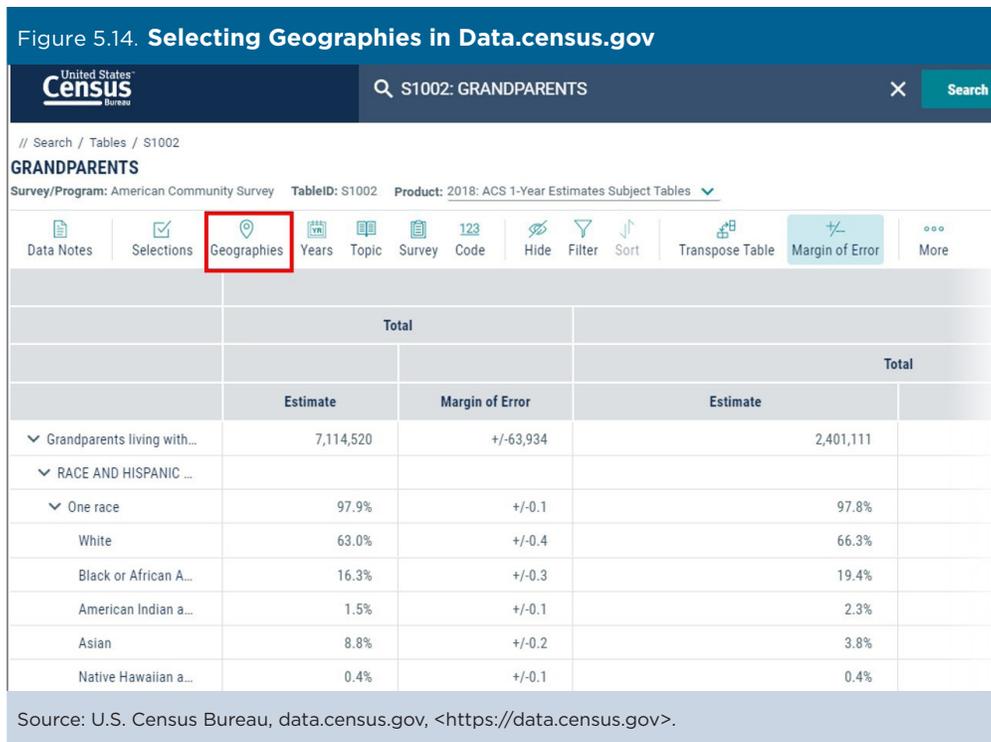
Table 5.1. Indicators and Source Tables From the PRCS		
Indicator	Table ID	Table name
Children under 18 years below the poverty level	DP03	Selected Economic Characteristics
Median family income with children under 18 years	S1903	Median Income in the Past 12 Months (In 2016 Inflation-Adjusted Dollars)
Unemployed teenagers between 16 and 19 years not enrolled in school	B14005	Sex by School Enrollment by Educational Attainment by Employment Status for the Population 16 To 19 Years
Families with children whose parents are unemployed or not in the labor force	B23007	Presence of Own Children Under 18 Years by Family Type by Employment Status: Opposite-Sex Married-Couple Families and Families Maintained by Women and Men with No Spouse Present
Children under 18 years not enrolled in school	B14003	Sex by School Enrollment by Type of School by Age for the Population 3 Years and Over
Children between 3 to 4 years not enrolled in school	S1401	School Enrollment
Teenagers between 16 and 19 years not enrolled school and without high school diploma	B14005	Sex by School Enrollment by Educational Attainment by Employment Status for the Population 16 to 19 Years
Households with children living in single-parent families	B09002	Own Children Under 18 Years by Family Type and Age
Households with children under 18 years receiving food stamps	S2201	Food Stamps/Supplemental Nutrition Assistance Program (SNAP)
Women 15 to 50 years who had a birth in the last 12 months and have less than a high school diploma	B13014	Women 15 to 50 Years Who Had a Birth in the Past 12 Months by Marital Status and Educational Attainment
Grandparents responsible for their grandchildren under 18 years	S1002	Grandparents
Children under 18 years without health insurance	S2701	Selected Characteristics of Health Insurance Coverage in the United States

Source: U.S. Census Bureau, data.census.gov, <<https://data.census.gov>>.

- Now that we know the relevant table identifiers, we can use the search box to quickly find the data that we need. For example, to get data on grandparents responsible for grandchildren, we can type “S1002” into the search box and click “Search” (see Figure 5.13).



- American Community Survey (ACS) estimates for Table S1002 are displayed on the data.census.gov Web site. However, the default geography in data.census.gov is the United States, so we need to filter the results to get data for Puerto Rico.
- We click on the “Geographies” filter at the top of the page (see Figure 5.14). If the filters are not being displayed, try expanding the size of the browser window, or click on the “Customize Table” button to view the available filters.



- We click on “State” and then select “Puerto Rico.” (Puerto Rico is a territory of the United States, but in data.census.gov, Puerto Rico is listed under the “State” category.)
- Then we click “Close” in the lower right corner to view the results (see Figure 5.15)

**Figure 5.15. Selecting Data for Puerto Rico in Data.census.gov**

The screenshot shows the Data.census.gov interface for the table S1002: GRANDPARENTS. The 'GEOGRAPHY' section on the left has 'State' selected and highlighted with a red box. The 'STATE' dropdown menu is open, showing a list of states with 'Puerto Rico' selected and highlighted with a red box. The 'CLOSE' button in the bottom right corner is also highlighted with a red box. The 'Selected Geographies' section at the bottom shows 'Puerto Rico' with a close icon.

Source: U.S. Census Bureau, data.census.gov, <<https://data.census.gov>>.

- Next, we select the desired survey year by clicking on the current “Product” selection at the top of the page (see Figure 5.16). For the purposes of this case study, we used 2016 ACS 1-year estimates because they were the most recent data available at the time.

**Figure 5.16. Customizing a Table in Data.census.gov**

The screenshot shows the Data.census.gov interface for the table S1002: GRANDPARENTS. The 'Product' dropdown menu is open, and '2016: ACS 1-Year Estimates Subject Tables' is selected and highlighted with a red box. Below the dropdown, a data table is displayed with columns for 'Estimate' and 'Margin of Error'.

	Estimate	Margin of Error	Estimate
Grandparents living with...	96,568	+/-5,605	39,093
▼ RACE AND HISPANIC O...			
▼ One race	N	N	N
White	67.8%	+/-3.1	62.5%
Black or African Am...	11.3%	+/-1.6	16.2%

Source: U.S. Census Bureau, data.census.gov, <<https://data.census.gov>>.

- Next, we right click on the table and select “Export Table” and then “Export to CSV” to download the data to our computer (see Figure 5.17).

**Figure 5.17. Exporting a Table in Data.census.gov**

The screenshot shows the Data.census.gov interface for the table 'S1002: GRANDPARENTS'. The table displays data for 'Grandparents living with...' and 'RACE AND HISPANIC ORIGIN'. A context menu is open over the 'White' row, with 'Export Table' and 'Export to CSV' highlighted in red boxes. The 'Export Table' menu also includes 'Copy cells', 'Copy with headers', and 'Export to Excel'.

	Total		Total	
	Estimate	Margin of Error	Estimate	Margin of Error
Grandparents living with...	96,568	+/-5,605	39,093	
▼ RACE AND HISPANIC ORIGIN				
▼ One race				
White		N	62.5%	
Black or African American	11.3%		16.2%	
American Indian and Alaska Native	N		N	
Asian	N		N	
Native Hawaiian and Other Pacific Islander	N		N	
Some other race	16.3%	+/-2.2	16.2%	
Two or more races	4.4%	+/-1.2	4.9%	
Hispanic or Latino origin	98.8%	+/-0.7	99.5%	
White alone, not Hispanic or Latino	N		N	

Source: U.S. Census Bureau, data.census.gov, <<https://data.census.gov>>.

Now that we have the data in a spreadsheet format, we can manipulate it to produce the estimates we need. From Table S1002, we calculate the share of grandparents responsible for grandchildren (40.5 percent) by dividing the number of grandparents responsible for grandchildren (39,093) by the total number of grandparents living with grandchildren (96,568) (see Table 5.2).<sup>27</sup>

Table 5.2. **Portion of Table S1002 for Puerto Rico**

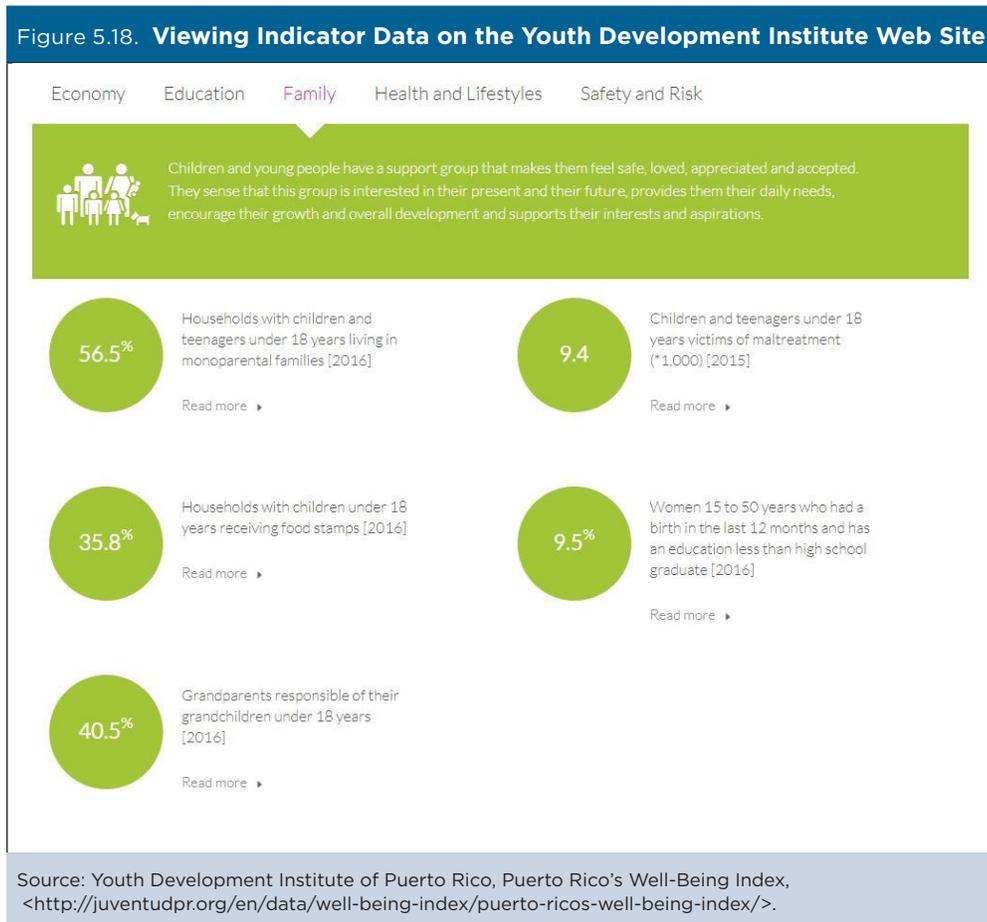
Subject	Puerto Rico							
	Total		Percent distribution of grandparents responsible for grandchildren					
			Total		30 to 59 years		60 years and over	
	Estimate	Margin of error	Estimate	Margin of error	Estimate	Margin of error	Estimate	Margin of error
Grandparents living with own grandchildren under 18 years	96,568	±5,605	39,093	±3,548	19,490	±2,406	19,603	±2,583
Race and Hispanic or Latino Origin								
One race	N	N	N	N	N	N	N	N
White	67.8%	±3.1	62.5%	±4.1	60.9%	±5.3	64.1%	±6.2
Black or African American	11.3%	±1.6	16.2%	±2.8	18.5%	±4.3	14.0%	±3.9
American Indian and Alaska Native	N	N	N	N	N	N	N	N
Asian	N	N	N	N	N	N	N	N
Native Hawaiian and Other Pacific Islander	N	N	N	N	N	N	N	N
Some other race	16.3%	±2.2	16.2%	±3.1	16.2%	±4.5	16.3%	±4.4
Two or more races	4.4%	±1.2	4.9%	±2.0	4.4%	±2.5	5.4%	±4.1
Hispanic or Latino origin (of any race)	98.8%	±0.7	99.5%	±0.5	99.4%	±0.8	99.6%	±0.7
White alone, not Hispanic or Latino	N	N	N	N	N	N	N	N

N The estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.

Source: U.S. Census Bureau, data.census.gov, Table S1002: Grandparents.

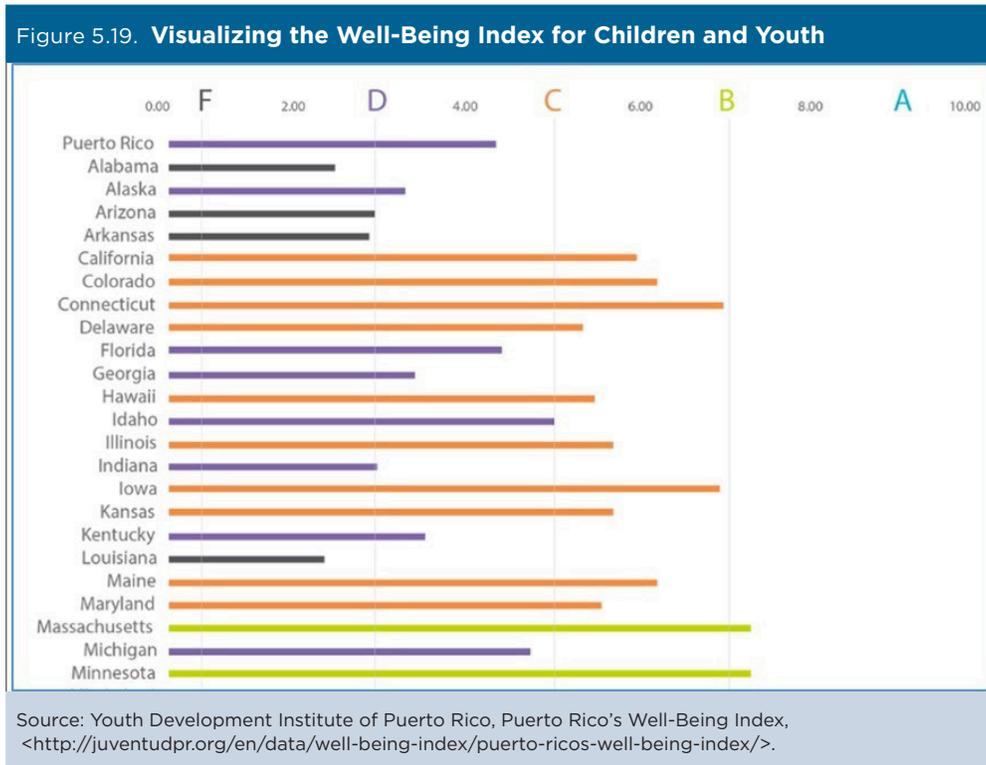
<sup>27</sup> U.S. Census Bureau, data.census.gov, Table S1002: Grandparents.

The results are presented on our Puerto Rico's Well-Being Index Web page.<sup>28</sup> Data are available for each of the 27 indicators across five social dimensions: Education, Family, Safety and Risk, Economy, and Health and Lifestyles (see Figure 5.18). Users can also click the “Read More” option to get definitions and source information or to compare the data for Puerto Rico with data for the 50 states and the District of Columbia.



<sup>28</sup> Youth Development Institute of Puerto Rico, Puerto Rico's Well-Being Index, <<http://juventudpr.org/en/data/well-being-index/puerto-ricos-well-being-index/>>.

The 27 individual indicator values are combined into a single summary measure to create the Child and Youth Well-Being Index. These index values are presented for Puerto Rico and for each state and the District of Columbia on the Youth Development Institute’s Web site (see Figure 5.19).<sup>29</sup> Massachusetts and Minnesota have among the highest (best) index values, scoring a “B,” while Puerto Rico ranks toward the bottom, scoring a “D.”



<sup>29</sup> Youth Development Institute of Puerto Rico, Well-Being Index for Children and Youth, <<http://juventudpr.org/en/data/well-being-index/tabla-comparativa-con-eeuu/>>.

### Case Study #3: U.S. Migrants to Puerto Rico

**Skill Level:** Introductory/Intermediate

**Subject:** Characteristics of Immigrants to Puerto Rico

**Type of Analysis:** Comparison of immigrants to total population in Puerto Rico by age and income over time

**Tools Used:** Data.census.gov and spreadsheet

**Author:** Alberto Velázquez, Puerto Rico Institute of Statistics (PRIS)

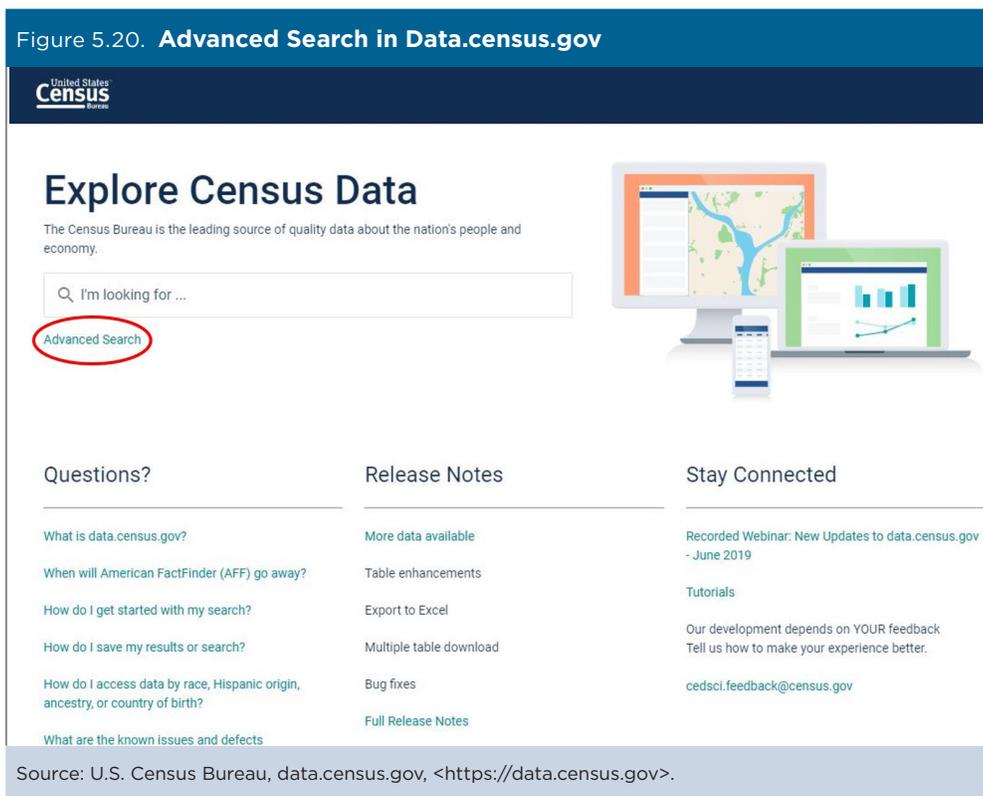
At the Puerto Rico Institute of Statistics (PRIS), we keep track of migration flows in order to inform policymakers and the public in general about the diverse characteristics of this dynamic population.<sup>30</sup> The Puerto Rico Community Survey (PRCS) collects data on multiple variables, such as age, sex, race, family and relationships, income, education, health insurance, and disabilities (among other characteristics) of the Puerto Rican population. The PRCS is the equivalent of the American Community Survey (ACS) for Puerto Rico.

The PRCS 1-year estimates allow us to access data about the island’s population that migrated from the United States from 2010 to 2016. Using these data, we compared the changing characteristics of the immigrant and total populations in Puerto Rico, focusing on two variables: median age and median income.

We accessed PRCS estimates for this analysis from data.census.gov, which consolidates data from the multiple surveys and censuses published by the U.S. Census Bureau.<sup>31</sup> Data.census.gov provides an interactive platform for data users seeking population, housing, and economic information at the national, state, and county geographic levels, among others.

### Accessing PRCS Data on U.S. Migrants to Puerto Rico

- Go to the data.census.gov Web site at <https://data.census.gov>.
- Click on “Advanced Search” under the search bar. This will bring you to the Advanced Search page (see Figure 5.20).



<sup>30</sup> Puerto Rico Institute of Statistics, <https://estadisticas.pr/>.

<sup>31</sup> U.S. Census Bureau, data.census.gov, <https://data.census.gov>.

- Begin with the Geography filter. Select “Geography” in the navigation pane on the left side of the screen to display a list of available geographies.
- Select “State” and then select “Puerto Rico” from the “State” filter (see Figure 5.21).

**Figure 5.21. Geography Filter Selection in Data.census.gov**

The screenshot shows the Data.census.gov Advanced Search page. The top navigation bar includes the United States Census Bureau logo and a search bar. Below the header, the page title is "Advanced Search" with a subtitle "Narrow search with filters". A search input field contains "e.g. 336111 - Automobile Manufacturing". The "BROWSE FILTERS" section on the left has "Geography" selected. The "GEOGRAPHY" section has "State" selected. The "STATE" section has "Puerto Rico" selected. The "Selected Filters" section at the bottom shows "Puerto Rico" as the selected filter. Buttons for "CLEAR FILTERS" and "SEARCH" are visible.

United States  
**Census**  
BUREAU

Search

// Search / Advanced Search

## Advanced Search

e.g. age, sex, population...

Narrow search with filters

**FIND A FILTER**

e.g. 336111 - Automobile Manufacturing

**BROWSE FILTERS**

- Topics
- Geography**
- Years
- Surveys
- Codes

**GEOGRAPHY**

Show Summary Levels

- Nation
- Region
- Division
- State**
- County
- Tract
- Block Group
- Block
- Zip Code Tabulation Area (Five-Digit)
- Elementary School District

**STATE**

Show geographic components

- Ohio
- Oklahoma
- Oregon
- Pennsylvania
- Puerto Rico
- Rhode Island
- South Carolina
- South Dakota
- Tennessee
- Texas

**Selected Filters:** Puerto Rico

**CLEAR FILTERS** **SEARCH**

Source: U.S. Census Bureau, data.census.gov, <<https://data.census.gov>>.

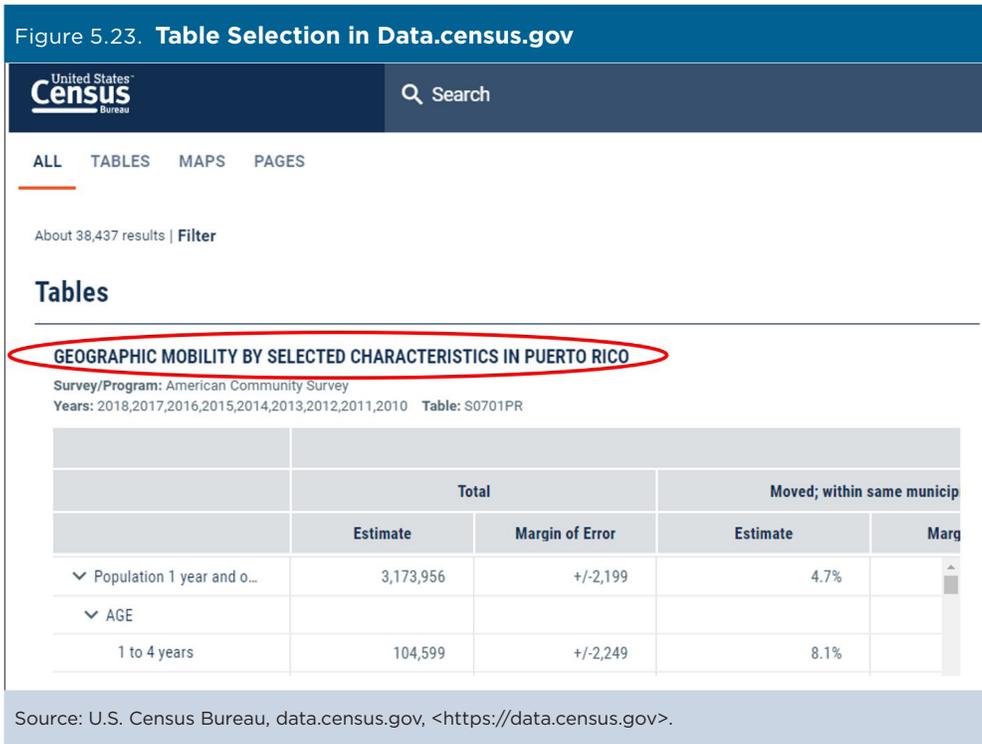
- Next, choose the “Topics” filter, select “Populations and People,” and select “Residential Mobility.”
- Both filters should appear in the “Selected Filters” at the bottom of the page.
- Next, click on “Search” in the lower right corner of the page (see Figure 5.22).

**Figure 5.22. Residential Mobility Filter Selection in Data.census.gov**

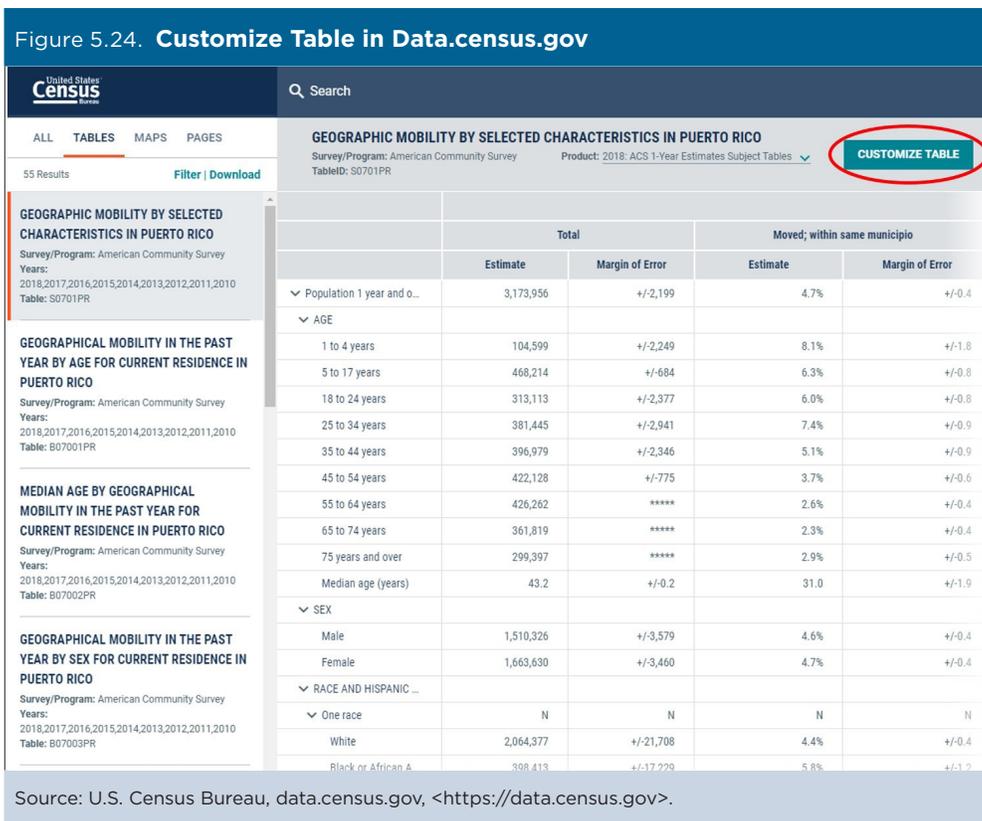
The screenshot shows the 'Advanced Search' page on Data.census.gov. At the top, there is a search bar with the text 'Search'. Below it, the breadcrumb path is '// Search / Advanced Search'. The main heading is 'Advanced Search' with a subtext 'e.g. age, sex, population...'. Underneath, there is a section 'Narrow search with filters' with a search input 'e.g. 336111 - Automobile Manufacturing' and a magnifying glass icon. The filter selection area is divided into three columns: 'BROWSE FILTERS', 'TOPICS', and 'POPULATIONS AND PEOPLE'. In the 'BROWSE FILTERS' column, 'Topics' is highlighted with a red box. In the 'TOPICS' column, 'Populations and People' is highlighted with a red box. In the 'POPULATIONS AND PEOPLE' column, 'Residential Mobility' is checked with a red box. At the bottom, the 'Selected Filters' section shows 'Puerto Rico' and 'Residential Mobility' with close icons. There are 'CLEAR FILTERS' and 'SEARCH' buttons at the bottom right.

Source: U.S. Census Bureau, data.census.gov, <<https://data.census.gov>>.

- To find PRCS data on U.S. migrants to Puerto Rico, click on Table S0701PR “Geographic Mobility by Selected Characteristics in Puerto Rico” (see Figure 5.23).



- Next, select “Customize Table” (see Figure 5.24).



- Select the desired survey year by clicking on the current “Product” selection. Make sure you select the most recent data set available. When this analysis was initially conducted, the 2016 ACS 1-year estimates were the most current. The header should read “2016 American Community Survey 1-Year Estimates” and the geography—“Puerto Rico” (see Figure 5.25).

**Figure 5.25. Selecting the Survey Year in Data.census.gov**

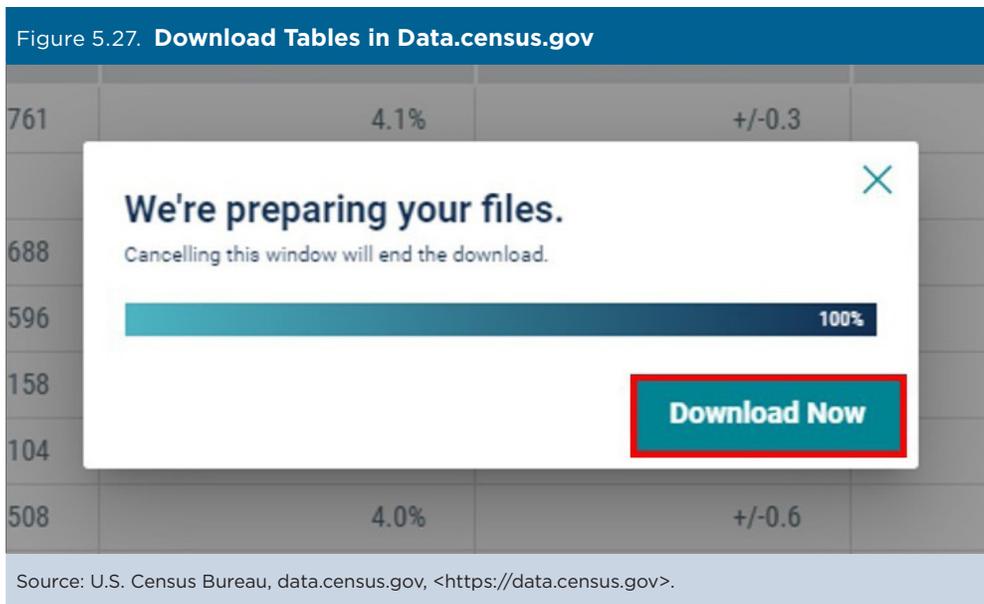
Source: U.S. Census Bureau, data.census.gov, <https://data.census.gov>.

- Select “Download” at the top of the window. Then, use the Download Tables window to check the boxes for the 2010 to 2016 PRCS 1-year data. Select “CSV” as the file type and click on “Download” (see Figure 5.26).

**Figure 5.26. Survey Year and File Type Selection in Data.census.gov**

Source: U.S. Census Bureau, data.census.gov, <https://data.census.gov>.

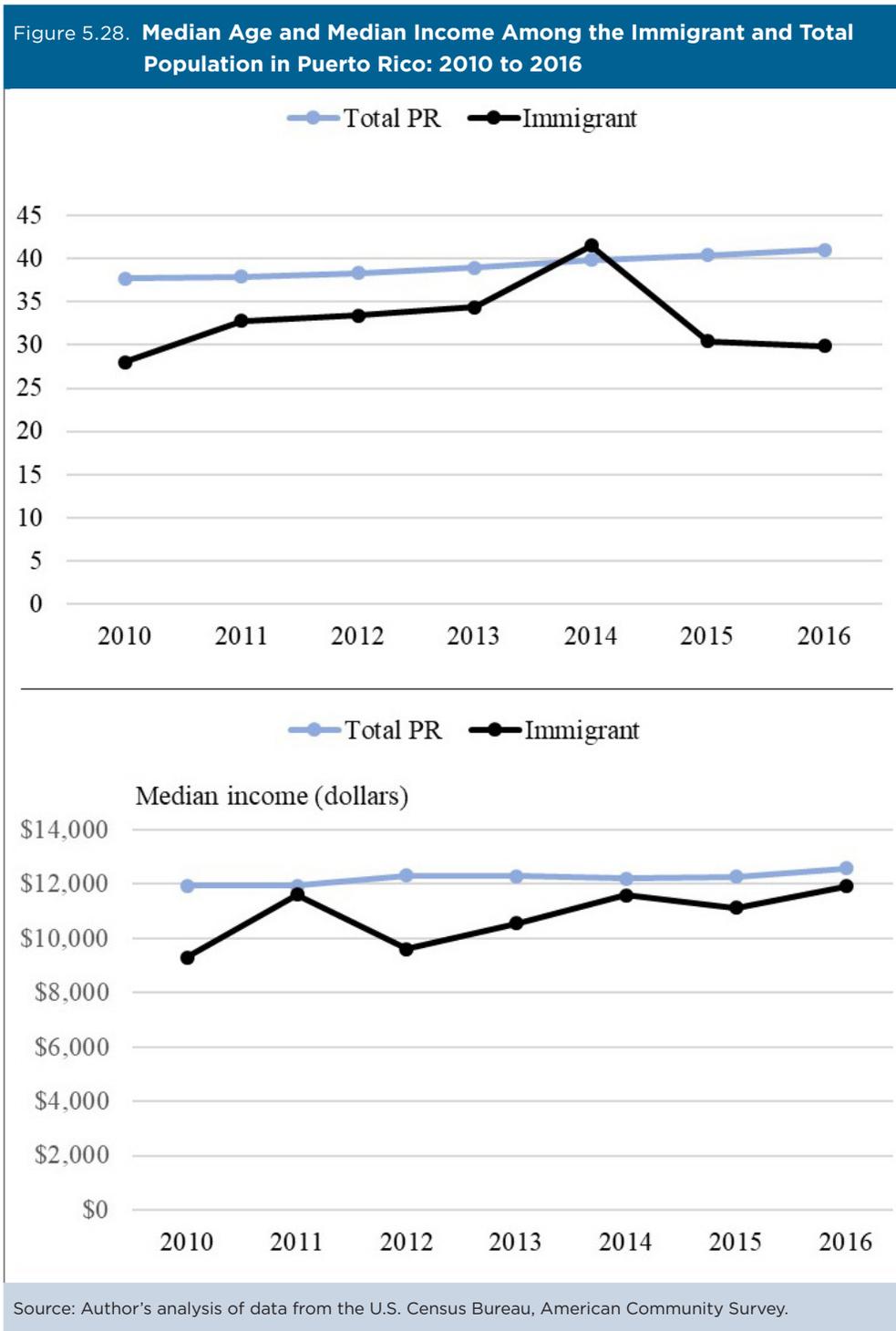
- After the files are prepared, click the “Download Now” button (see Figure 5.27).



This will produce the zip file. Open the zip file to extract your tables. The data are located in a series of CSV files—one file for each year—with the following prefixes:

- ACSST1Y2010.S0701PR\_data\_with\_overlays
- ACSST1Y2011.S0701PR\_data\_with\_overlays
- ACSST1Y2012.S0701PR\_data\_with\_overlays
- ACSST1Y2013.S0701PR\_data\_with\_overlays
- ACSST1Y2014.S0701PR\_data\_with\_overlays
- ACSST1Y2015.S0701PR\_data\_with\_overlays
- ACSST1Y2016.S0701PR\_data\_with\_overlays

To analyze the selected characteristics over time, we created charts to display trends in median age and median income during the period (see Figure 5.28).



We do not include the margins of error (MOEs) in the graphical representations of the data, because we want to present a basic comparison of the point estimates between the immigrant population and the total population of Puerto Rico. However, respective MOEs for the point estimates are included in Table 5.3.

**Table 5.3. Median Age and Median Income for the Immigrant and Total Puerto Rico Population: 2010 to 2016**

Year	Median Age				Median Income			
	Total PR	MOE	Immigrant	MOE	Total PR	MOE	Immigrant	MOE
2010	37.7	±0.2	28.0	±3.3	\$11,931	±124	\$9,300	±1,243
2011	37.9	±0.2	32.8	±5.2	\$11,937	±159	\$11,611	±1,454
2012	38.3	±0.2	33.4	±2.5	\$12,317	±152	\$9,598	±1,537
2013	38.9	±0.2	34.4	±4.1	\$12,283	±141	\$10,560	±1,309
2014	39.8	±0.2	41.5	±4.8	\$12,212	±151	\$11,577	±2,829
2015	40.4	±0.2	30.4	±3.5	\$12,259	±135	\$11,114	±1,218
2016	41.0	±0.2	29.9	±4.4	\$12,581	±220	\$11,913	±2,550

Source: Author's analysis of data from the U.S. Census Bureau, American Community Survey.

The results allow a comparison of age and income between recent immigrants to Puerto Rico and the total population on the island, and how these characteristics have changed over time. This analysis helps the PRIS advise policymakers and the public about changes in the characteristics of the Commonwealth's dynamic immigrant population. These analyses are included in PRIS's annual report, "Migrant Population Profile," available in the publications section of our Web site<sup>32</sup>

<sup>32</sup> Puerto Rico Institute of Statistics, Publications, Perfil del Migrante, <<https://estadisticas.pr/en/publicaciones/perfil-del-migrante>>.

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## 6. ADDITIONAL RESOURCES

***U.S. Census Bureau, About the Puerto Rico Community Survey***

<[www.census.gov/programs-surveys/acs/about/puerto-rico-community-survey.html](http://www.census.gov/programs-surveys/acs/about/puerto-rico-community-survey.html)>.

***U.S. Census Bureau, What Is the American Community Survey?***

<[www.census.gov/programs-surveys/acs/about.html](http://www.census.gov/programs-surveys/acs/about.html)>.

***U.S. Census Bureau, Understanding and Using American Community Survey Data: What All Data Users Need to Know***

<[www.census.gov/programs-surveys/acs/guidance/handbooks/general.html](http://www.census.gov/programs-surveys/acs/guidance/handbooks/general.html)>.

***U.S. Census Bureau, ACS Data Releases***

<[www.census.gov/programs-surveys/acs/news/data-releases.html](http://www.census.gov/programs-surveys/acs/news/data-releases.html)>.

***U.S. Census Bureau, Geography and ACS***

<[www.census.gov/programs-surveys/acs/geography-acs.html](http://www.census.gov/programs-surveys/acs/geography-acs.html)>.

***U.S. Census Bureau, ACS Data Tables and Tools***

<[www.census.gov/acs/www/data/data-tables-and-tools/](http://www.census.gov/acs/www/data/data-tables-and-tools/)>.

***U.S. Census Bureau, data.census.gov Resources***

<[www.census.gov/data/what-is-data-census-gov.html](http://www.census.gov/data/what-is-data-census-gov.html)>.