Extension
UNIVERSITY OF WISCONSIN-MADISON

Data Collection Tutorial - US Census Bureau

Introduction

In order to prepare any plan for a community, those making the plan need to understand the community they are serving and what the needs of that community are. The US Census Bureau (Data.Census.Gov) provides useful data sets that are publicly available, free of charge. Data sets come from two collection sources used by the US Census Bureau: the Decennial Census and the American Community Survey. Both data sources can be extremely powerful and helpful for research purposes, each with specific strengths and shortcomings.

The Decennial Census records data on a given population's age, race, income category, household size, etc, and collects this data every 10 years from all persons living in the United States as mandated by the US Constitution. While the Census is accurate, data is collected only once every 10 years. As a decade progresses, new trends may arise that cause these counts to be less representative of a given population. As such, the data can be extremely useful in the beginning of a decade, but less reliable to measure current trends in the 7-9th year of a decade.

In addition to the Decennial Census, the US Census Bureau also conducts an annual survey called the American Community Survey (ACS). This survey is sent to a sample of the population on an annual basis to collect additional data to the Decennial Census. While much more up to date than Decennial Census, the information gathered has high margins of error (especially with geographies with lower population numbers). For example, the 2024 ACS survey estimates the Town of Herman has a population of 2,086 with a margin of error of +/- 271 people, whereas the 2020 Census puts the population at 2,162 people with zero margin of error. Both the Decennial Census and the ACS provide valuable data sets that anyone can use to better understand their population's demographics, identify trends, and best prepare policy and plans for their community.

The data provided at Data.Census.Gov can be searched based on two main filters:

- Geographies: What area are we interested in?
- Topics: What information would we like to know about people?

In order to get the most appropriate data for the plan we are preparing, we need to decide: *what* do we want to know about the people who live *where*? The following instruction manual will help you navigate the Census web site and access these data sets for use in policy making.

CREATED BY:
Kirtis Orendorff (he/him)
Community Development Educator - Sheboygan County
University of Wisconsin-Madison Division of Extension
kirtis.orendorff@wisc.edu

Instructions

1.) To begin, Navigate to http://data.census.gov in your internet browser of choice.

The search bar will allow you to search for municipalities, topics, and any other data collected by the Census Bureau (fig. 1). While you can just search for information by once specific category (i.e. place or dataset), searches can be specific to what you are trying to learn about where (fig. 2). This search method can be useful when searching for one specific statistic or data set, but is less useful at understanding a full population data profile.

Fig. 1

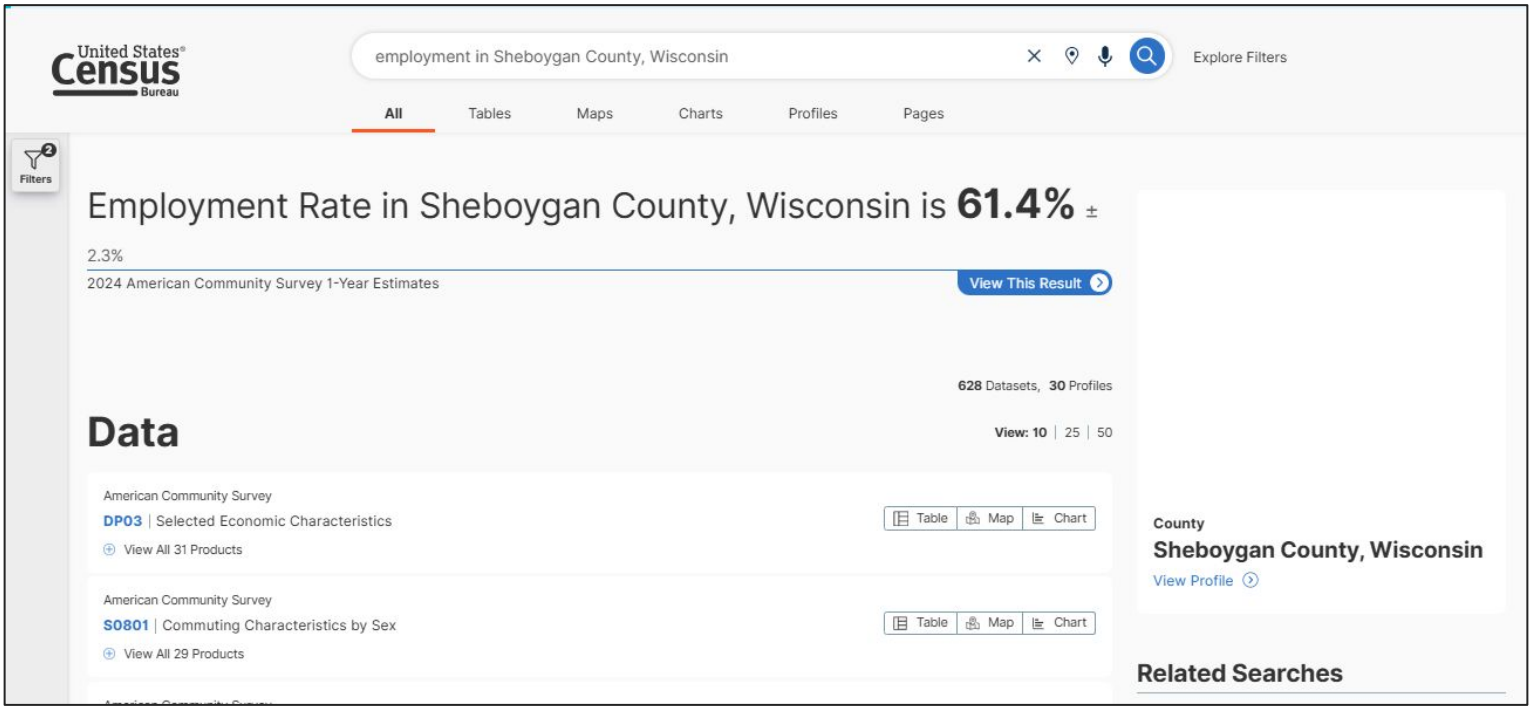


Fig. 2

Instructions

2.) If a full profile for a given place is desired, search for a geographic location using the search bar. The Geography Profile Page can be found on the search results page for a given location. The profile page allows for quick visualization of data available, premade charts and tables, and sources for data being presented (located on the right of the search results). Click “View Profile” at the top right of the page to see these visualizations (fig. 3).

Topics are typically split into 9 main categories: Populations and People, Employment, Business and Economy, Income and Poverty, Housing, Families and Living Arrangements, Education, Health, and Race and Ethnicity (fig. 4)

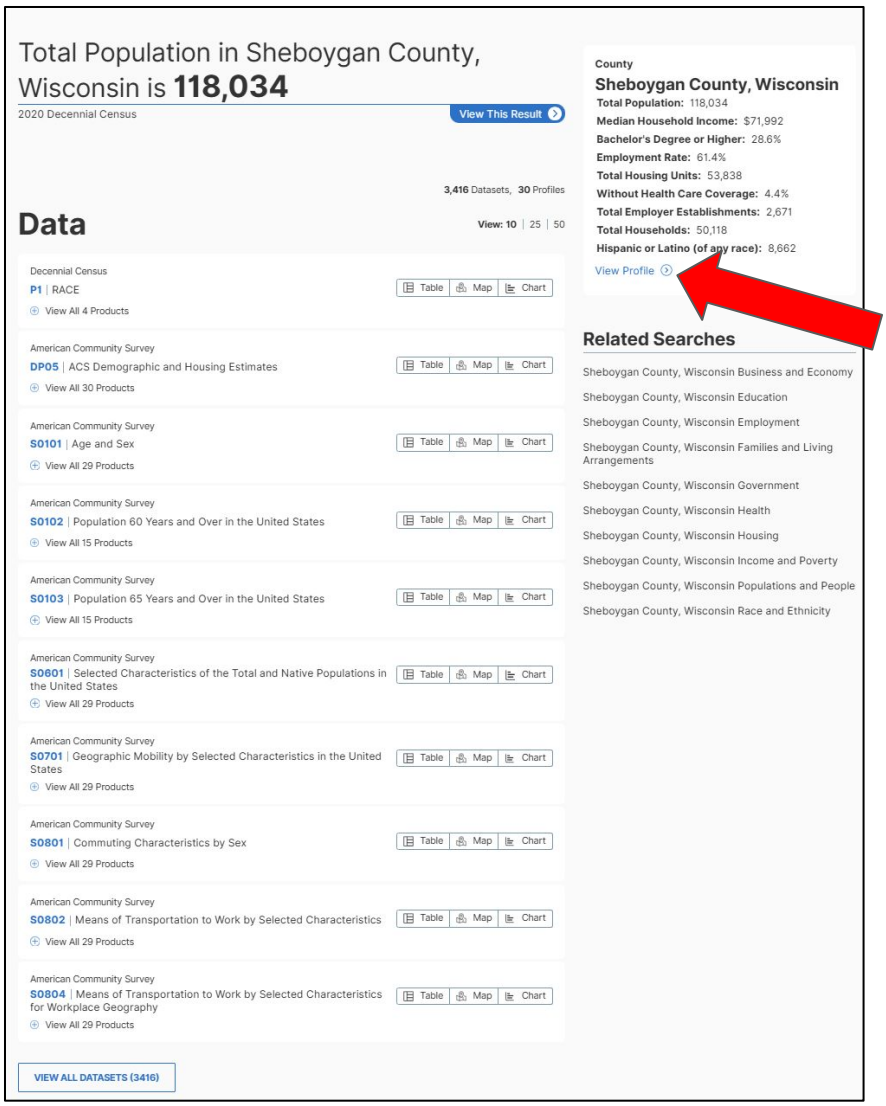


Fig. 3

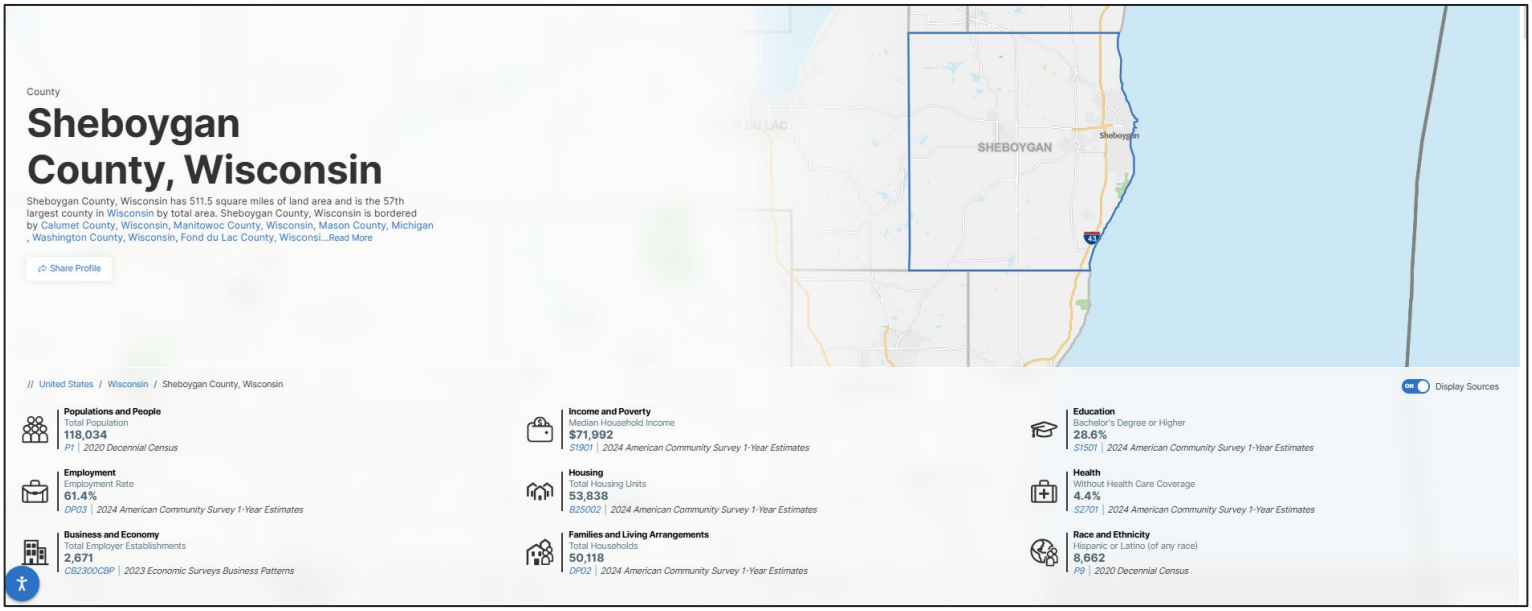


Fig. 4

3.) Tables and data sets will be connected to a specific census or survey. In order to access this data set directly, click the table name at the bottom right to open the table directly (fig 5). To go back to the Profile page, click the 'All" button under the search bar at the top of the web page, then click "View Profile" as shown in fig. 3.

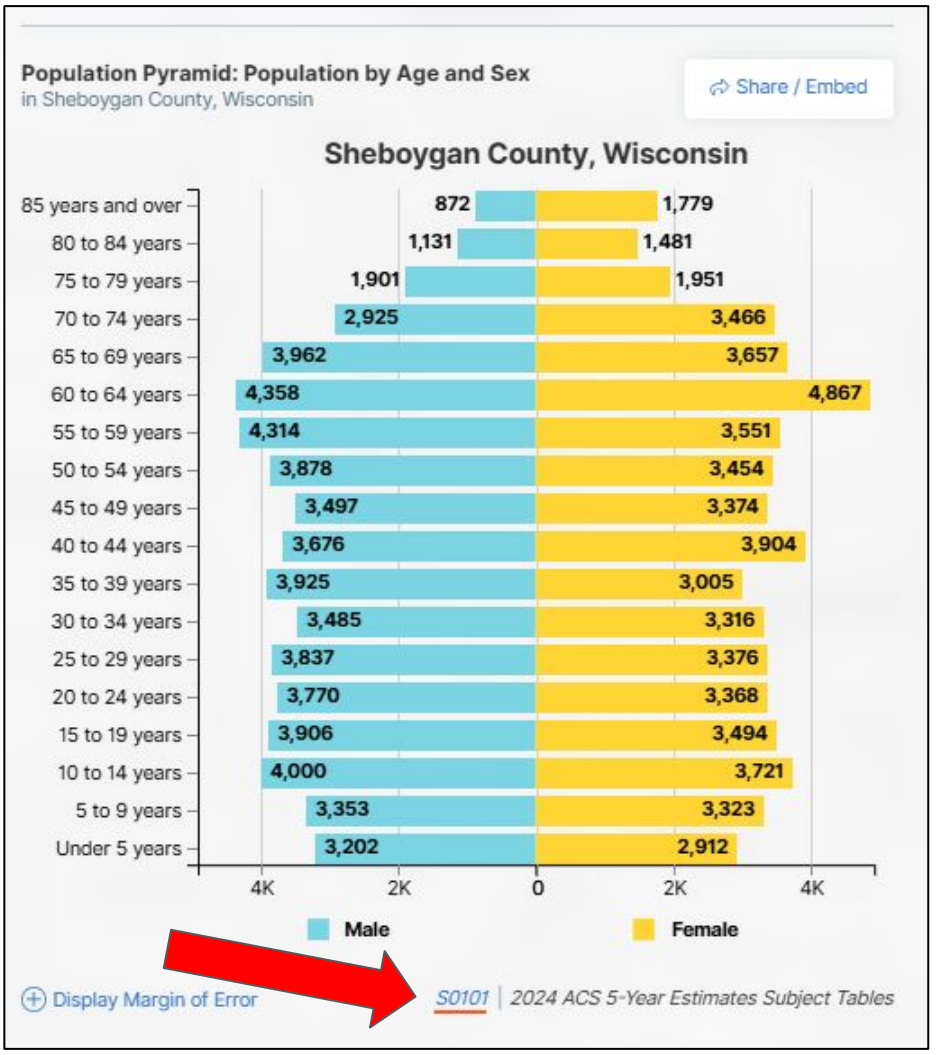


Fig. 5

4.) To download the table as an Excel file, click the "Download" button on the top of the table view page and select "Excel" as your file type (fig. 6).

Editor's note: Excel file formats are the most user friendly for table and chart generation if you plan on doing so in-house. The ZIP file format may be helpful if you wish to do your own mapping, but is generally not recommended.

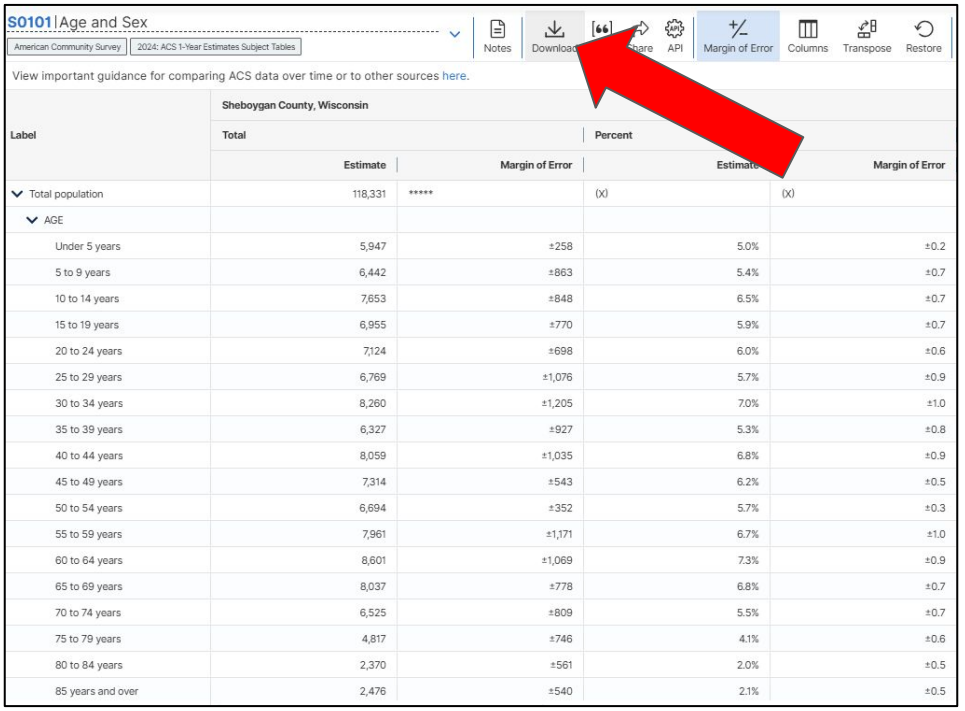


Fig. 6

5.) When opening Census data in Excel, the first page displayed shows information relative the the table and dataset provided. In order to see the data set itself, first navigate to the “Data” sheet, located at the bottom of the window (fig. 6).

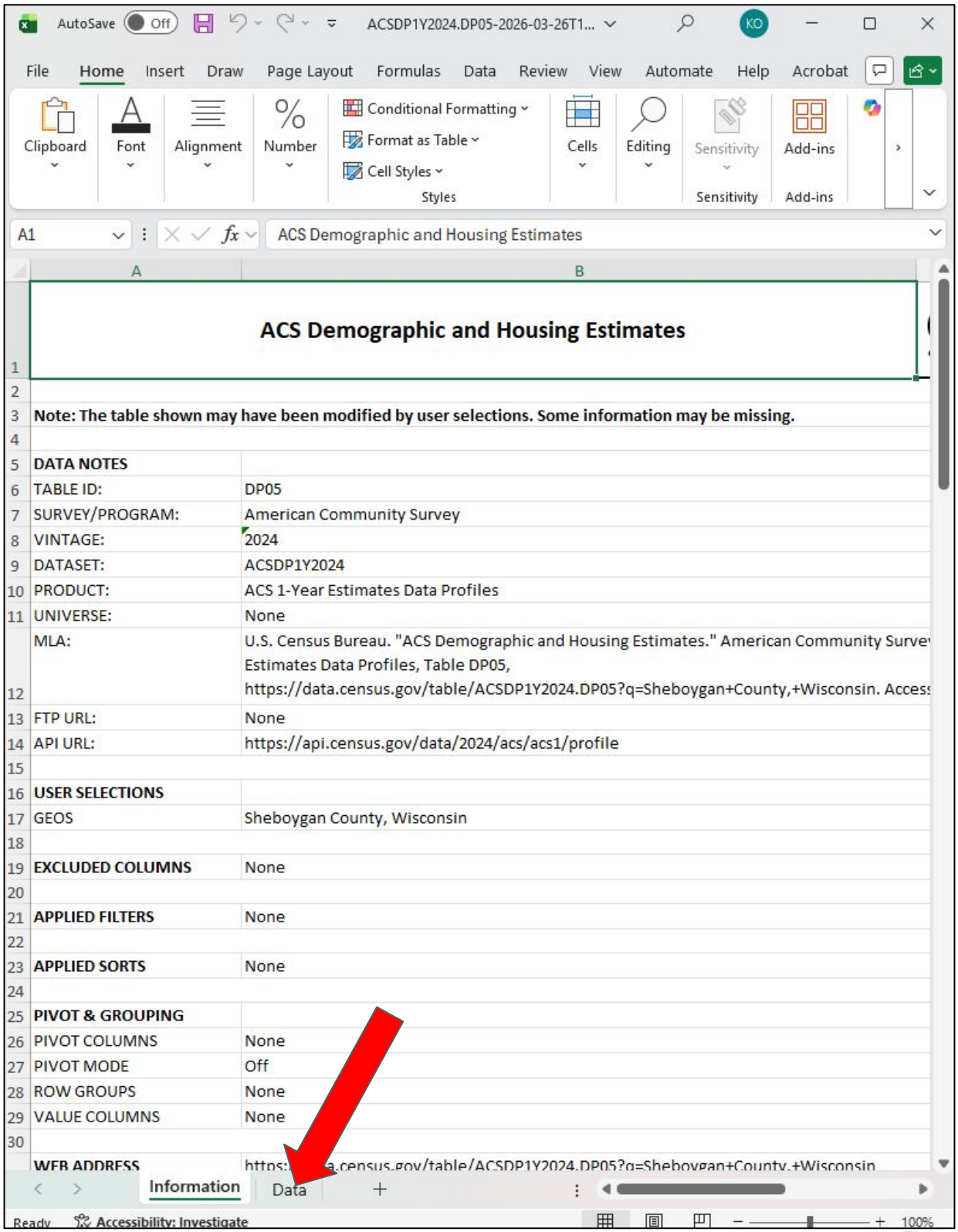
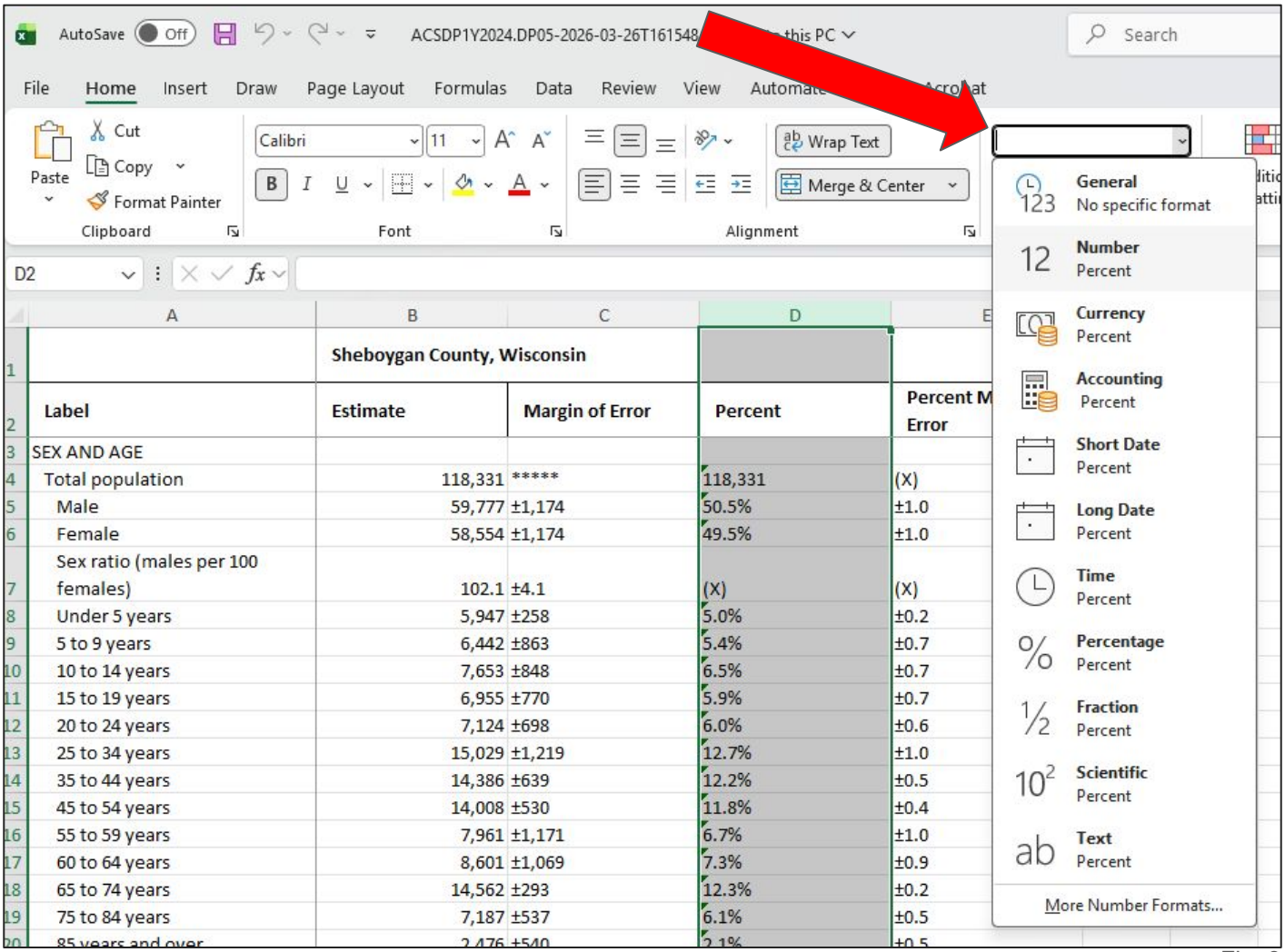


Fig. 7

6.) If the table you are downloading contains data from ACS, it will be formatted in a table with columns for Label, Estimate, and Margin of Error. Estimate is the count that the ACS has identified for a given category, with the margin of error as a reflection of the statistical confidence level of said estimate.

When downloading data directly from data.census.gov, many of the columns of numerical data save in such a way where Excel/Google Sheets will not read them as “numbers”, but instead reads them as “text”. When this happens, elements such as tables and charts do not function properly.

In order to fix this, we must change the data type for the column of data we are looking at (fig. 8). First, click the column (or specific cells) we need to convert. Then, change the data type from “General” to “Number” (or percent, depending on the type of data being analyzed). Once you’ve converted the data types for the columns we are analyzing, regular Excel/Google Sheets functionality should work (tables, charts, etc).



	A	B	C	D	E
1		Sheboygan County, Wisconsin			
2	Label	Estimate	Margin of Error	Percent	Percent M Error
3	SEX AND AGE				
4	Total population	118,331	*****	118,331	(X)
5	Male	59,777	±1,174	50.5%	±1.0
6	Female	58,554	±1,174	49.5%	±1.0
7	Sex ratio (males per 100 females)	102.1	±4.1	(X)	(X)
8	Under 5 years	5,947	±258	5.0%	±0.2
9	5 to 9 years	6,442	±863	5.4%	±0.7
10	10 to 14 years	7,653	±848	6.5%	±0.7
11	15 to 19 years	6,955	±770	5.9%	±0.7
12	20 to 24 years	7,124	±698	6.0%	±0.6
13	25 to 34 years	15,029	±1,219	12.7%	±1.0
14	35 to 44 years	14,386	±639	12.2%	±0.5
15	45 to 54 years	14,008	±530	11.8%	±0.4
16	55 to 59 years	7,961	±1,171	6.7%	±1.0
17	60 to 64 years	8,601	±1,069	7.3%	±0.9
18	65 to 74 years	14,562	±293	12.3%	±0.2
19	75 to 84 years	7,187	±537	6.1%	±0.5
20	85 years and over	2,476	±540	2.1%	±0.5

Fig. 8