CTPP Five-Year Data Access Software
Tutorial
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Introduction to the CTPP Tutorial

How Do People Get to Work?

The Census Transportation Planning Products (CTPP) software is designed to help transportation analysts and planners understand where and how people are traveling between home and work. The information about workers is organized by where they live, where they work, and by the flow between them.

This tutorial shows how to use the software by working through a specific scenario that looks at commuters into New York City. Because of the nature of the scenario, most of the major features of the product are demonstrated.

Scenario

This tutorial demonstrates how to rank all counties by how commuters get into New York City (specifically, what percent travel by train and what percent by car).

The resulting data can be viewed in many different ways -- as a table, as a chart, on a map, or in a spreadsheet.

Settings are saved along the way so that a similar analysis on different geography selections can be completed in the future, and the same geographic selections can be used for more detailed analysis.

What’s New

The CTPP Data Access Software has been redesigned to include many new features to enhance the ability to define, generate and revise meaningful tables. At a high-level, the major enhancements include:

Geography Selections

Geography selections are now central to the user experience. The Residence and Workplace dimensions are displayed at the top of the screen at all times. Geography selection and table selection are completely independent of each other. Note: “Sessions” (selecting a set of geographies and generating a group of tables/reports for those geographies) are no longer available.

Mapping

The mapping features have been significantly enhanced. Selection mapping is an effective way to define geographic selections and flows. Thematic mapping has many features to help with the analysis of table variables.

Percentages

Percentages are integrated at several levels and are easier to define and select.

Data Sets

The CTPP Data Access Software currently contains two data sets: the 3-year 2006-2008 American Community Survey and the 5-year 2006-2010 American Community Survey. In the future, other data sets may be added, such as special tabulations of the 1990 and 2000 long-form Census data, and future 5-year data sets.
Getting Started

Note: The available tables can be accessed without signing in. However, to save selection sets or customized tables, register (or sign in) either when starting to use CTPP Data Access Software or at the first saving opportunity. The Save selection as button only appears after signing in (in this tutorial, after creating the Workplace selection set).

To show the flow of commuters, create a Workplace selection set (where people work) and a Residence selection set (where people live).

Create a Workplace Selection Set

This scenario includes data regarding commuters (from the counties in which they live) into New York City, New York.

To create a Workplace selection set:

1. Click the WORKPLACE link.

2. From the Select level area (on the left of the Selection list tab), select the geographic level for the flow (POW State is selected by default). For this scenario, select POW State-Place.

3. Note: Any combination of geographies can be selected to be shown in tables. The default list includes all states. Since this scenario includes flows from counties to New York City, the default selection must be cleared.
Click the **Clear full selection** button.

**WORKPLACE**

<table>
<thead>
<tr>
<th>Selection list</th>
<th>Selection map</th>
<th>Totals</th>
<th>Percentages</th>
<th>Cust</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Select level:**

- Nation (US Total) *(0 of 10 selected)*
- POW State *(52 of 499 selected)*
- POW State-County *(0 of 3,221 selected)*
- POW State-County-MCD (for 12 strong MCD states) *(0 of 11,767 selected)*
- **POW State-Place**
  - POW Metropolitan Statistical Area *(0 of 374 selected)*
  - POW Metropolitan Statistical Area – EACH Principal City *(0 of 692 selected)*
  - POW State-POWPUMA *(0 of 1,263 selected)*
  - Worked Outside United States *(0 of 3 selected)*
  - State-County-Tract *(0 of 73,092 selected)*
  - TAD *(0 of 10,848 selected)*
  - TAZ *(0 of 188,996 selected)*

4. **Access the Advanced Search**, by pulling down the option to the right of the Search Members icon.

**Note:** There are several other ways to select specific geographies, including using the standard Search field, manually selecting from the entire list and using the selection map.

5. In the **With the exact phrase** field, enter New York City and click **Search**.

**Note:** To save this selection set, sign into the application.

### Sign into the Application

To sign into the application:

1. Click the **Sign in** link at the top of the page.

   ![Sign in link](CTPP_Census_Transportation_Planning_Products SIGN IN.png)

2. Enter the applicable user name and password (or click the **Register** button to create a new user name and then sign in).

   ![Sign in form](CTPP_Census_Transportation_Planning_Products SIGN IN 2.png)

3. Click **OK**.

   The **Save selection set**... button is now displayed.

   **Note:** A selection set is a specific collection of selected geographies or any other variables. It also includes any additional operations on the same page, including custom groups, totals, percentages and custom calculations, some of which are explained later in this tutorial.

### Save a Workplace Selection Set

To save a Workplace selection set:

1. Beside **WORKPLACE**, click the **Save selection set**... button.
2. In the **Set name** field, enter New York City (PLACE) and click OK.

### Save selection set

- **Create new set**
  
  **Set name:** New York City (PLACE)

- **Modify existing set**
  
  **Choose set:**

  **Hierarchy:** WORKPLACE

  **Data source:** WRK_CUBE02

  ![Save selection set](image)

  ![Save selection set](image)

3. This new selection set is now displayed in the WORKPLACE drop-down list.

![Selected Geography](image)

### Create a Residence Selection Set

The goal of the scenario is to view commuting patterns of people working in New York City broken down by the county in which they live. The first step is to find reported flows for those counties in which people live who work in New York City. These are referred to as counties with “valid flows” into New York City. This can be accomplished by using the List view or the Map view (demonstrated below).

To create a Residence selection set:

1. Click the **RESIDENCE** link.

![Selected Geography](image)

2. Select the geographic level for the flow. From the **Select level** area (on the left of the **Selection list** tab), select State-County.
3. Select the **Selection map** tab.

4. Click the **Clear selection** button to remove the default selections of all states.
5. Click the **Valid Flow** button. Counties that have a “flow” into New York are drawn.

6. Select the **Rectangular Highlight** button on the toolbar.

7. Drag the cursor across the area of interest (the north-eastern seaboard in this example). Counties with valid flow data are now highlighted in yellow.

8. Click the **Add all highlighted State-County(s) to selection** button to add the highlighted counties to the selection list. They are now highlighted in red on the map and displayed in the
9. Beside RESIDENCE, click the Save selection set button.

10. Enter “Commuters to New York City” into the Set name field and click OK.

11. The selection set is now displayed in the RESIDENCE drop-down list.

Find and View a Table

Now that the desired geography lists have been selected, the next step is to open a table that contains data of interest for this geography. In the scenario, the variable of interest is the means of transportation, as the question revolves around how commuters get into New York.
On the **CTPP Tables** list, the tables are broken down into three categories: tables of data about where people live (Part 1), tables of data about where people work (Part 2), and tables of data about travel between residence and workplace (Part 3). For this scenario, we are interested in a table that includes both where people live and where they work.

To search for a table:

1. **Click the Show CTPP Tables button.**

2. **On the CTPP Tables tab search bar, enter “train” and press the Enter key.**

3. **To retrieve a table that includes all people who commuted by train as their mode or means of transportation, select “A302103 Means of Transportation (18) (Workers 16 years and over)”:**

4. **In the Flow drop-down list, ensure “State-County -> POW State-Place” is selected.**
5. View the table.
Customize the Table

Switch Dimension Position

To more easily view the information in the table format, rearrange some of the columns (such as Workplace, which in this scenario displays the same information (“New York City, New York” throughout).

To switch a dimension position:

1. Select the textured area to the left of the applicable dimension (such as WORKPLACE).

<table>
<thead>
<tr>
<th>Means of Transportation 18</th>
<th>Total, means of</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
</tr>
<tr>
<td>RESIDENCE</td>
<td>WORKPLACE</td>
</tr>
<tr>
<td>Fairfield County, Connect...</td>
<td>New York cty, New York</td>
</tr>
<tr>
<td>Hartford County, Connecti...</td>
<td>New York cty, New York</td>
</tr>
<tr>
<td>Litchfield County, Connec...</td>
<td>New York cty, New York</td>
</tr>
<tr>
<td>Middlesex County, Connect...</td>
<td>New York cty, New York</td>
</tr>
</tbody>
</table>

2. Drag the cursor up to the “Drag dimensions here so they do not show as a row or column in table” area (which becomes yellow, indicating the selection can be “dropped” there) and drop the dimension.
3. When the cursor is released, the Workplace dimension is shown at the top of the table.

Create a Custom Group

In the scenario, the final table will show commuters that travel by car, by trains and totals. For car travel, the question is how many people travel by car, regardless of how many people are in the car. Therefore, all columns relating to traveling by car need to be aggregated. To do this, create a group with car-related information.

To create a custom group:

1. In the table, click the **Means of Transportation** link.

2. Click the **Custom groups** tab and click the **Create new group** button.

3. In the **Group name** field, enter “CARS ONLY”. Select all car-related checkboxes and click the **Create Custom Group** button. (Select a range by clicking on the green arrow and following the...
instructions to click start of range, then click end of range. All categories will be selected, including first and last."

4. The new custom group is now displayed in the Custom groups list.
5. Click the **Show updated table** button.

6. The CARS ONLY data is shown at the far right.

Remove Items from the Selection

In this scenario, the commuters travelling by "TRAIN" can be displayed by deselecting all other items.

To remove items from a selection:

1. In the table, click the **Means of Transportation** link.

2. By default, all of the categories are displayed and selected. There are many different sets of buttons for selecting and deselecting members. It is possible to deselect all with a single click, or all members below the total can be deselected with the second set of buttons from the left. We
will deselect using the range option.

### Means of Transportation 18

Select by: [Save selection set...]

<table>
<thead>
<tr>
<th>Variable categories *</th>
<th>Totals</th>
<th>Percentages</th>
<th>Custom groups *</th>
<th>Custom calculations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Categories 1-18 of 18</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Select/Clear**

Default selection: Total, means of transportation

3. On the **Variable categories** tab, select the “deselect” icon under **Select/Clear > Range**.
4. Select the first checkbox below total and last checkbox above “Railroad” to clear those categories.
5. Repeat steps 3 and 4 for those categories below “Railroad”.
6. Click the **Save selection set** button.
7. Since the final selection set contains the custom group for cars and the Railroad selection, enter "Cars and Trains" and click OK.

8. Click the Show Updated Table button.

9. The Totals, Railroad, and Cars Only (custom group) data is shown.

<table>
<thead>
<tr>
<th>RESIDENCE</th>
<th>Total means of transportation</th>
<th>Railroad</th>
<th>CARS ONLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fairfield County, Connecticut</td>
<td>31,010</td>
<td>20,735</td>
<td>7,285</td>
</tr>
<tr>
<td>Hartford County, Connecticut</td>
<td>900</td>
<td>229</td>
<td>420</td>
</tr>
<tr>
<td>Litchfield County, Connecticut</td>
<td>1,450</td>
<td>365</td>
<td>619</td>
</tr>
<tr>
<td>Middlesex County, Connecticut</td>
<td>390</td>
<td>75</td>
<td>170</td>
</tr>
<tr>
<td>New Haven County, Connecticut</td>
<td>3,990</td>
<td>1,590</td>
<td>3,500</td>
</tr>
<tr>
<td>New London County, Connecticut</td>
<td>415</td>
<td>100</td>
<td>145</td>
</tr>
<tr>
<td>Tolland County, Connecticut</td>
<td>130</td>
<td>15</td>
<td>115</td>
</tr>
<tr>
<td>Windham County, Connecticut</td>
<td>75</td>
<td>47</td>
<td>70</td>
</tr>
<tr>
<td>Kent County, Delaware</td>
<td>170</td>
<td>119</td>
<td>150</td>
</tr>
<tr>
<td>New Castle County, Delaware</td>
<td>450</td>
<td>90</td>
<td>240</td>
</tr>
<tr>
<td>Sussex County, Delaware</td>
<td>70</td>
<td>4</td>
<td>50</td>
</tr>
<tr>
<td>District of Columbia, District</td>
<td>460</td>
<td>135</td>
<td>70</td>
</tr>
<tr>
<td>Androscoggin County, Maine</td>
<td>10</td>
<td>0</td>
<td>104</td>
</tr>
<tr>
<td>Cumberland County, Maine</td>
<td>175</td>
<td>35</td>
<td>40</td>
</tr>
<tr>
<td>Franklin County, Maine</td>
<td>4</td>
<td>0</td>
<td>104</td>
</tr>
</tbody>
</table>

Please note: The table represents the means of transportation for different counties, with columns for Estimate, Margin of Error, Railroad, and Cars Only.
Show Values as Percentages

In this scenario, we want to know what percentage of commuters have use cars (versus trains). To do this, the “number” of commuters must be modified to a “percentage” of all commuters. The software converts the estimates to percentages and recalculates appropriate margins of error for these percentages.

To show each means of transportation category (train, car) as a percentage of all means of transportation:

1. To ensure that the table data remains clear when the additional measure (percentage) is included, the Measures dimension can be moved. Drag the Measures dimension down below Means of Transportation and “drop” when the down arrow is displayed inside the positioning box.

2. Click the Means of Transportation link.

3. Click the Percentages tab and click the Create new percentage button.
4. In the **Percentage name** field, enter "Pct of All".
5. Select the **Specific category** selection button and select a member listed below (Total, Means of Transportation in this example).

6. Click the **Create percentage** button. The new percentage is shown in the list.
7. Click the **Show Updated Table** button. The values are now displayed as percentages.

8. To display the actual values as well as the percentages, select **Tables options** icon and then the **Percentage options** selection.
9. Select the **Include estimates and percentages in table** button and then click OK.

Note that if you have enabled multiple percentage calculations, or if you have a bar at the top of the table, you will need to scroll to see your different values.

10. The resulting table shows the estimated number of commuters as a raw number and as a percentage of "Total, means of transportation".

11. The columns showing 100% (Total as a percentage of itself) and the corresponding empty cell for margin of error can be hidden by using the Suppress Values feature.

To remove any entries for which the entire column is empty or all 100%, select the **Table options** icon and then select **Suppress values**.
12. On the **Suppress values** page, select **Columns**, select **Empty or in the specified range**, enter 100/100, and click **OK**.

13. The table now displays without the "uninteresting" columns.

14. To ensure that all selections (including percentages) are saved in the present selection set, click the **Means of Transportation** link and click the **Save selection set** button. Select the **Modify**
existing set option, select CARS AND TRAINS, and click OK.

**Save selection set**

- Create new set
  - Set name: 
- Modify existing set
  - Choose set: CARS AND TRAINS
  - Hierarchy: Means of Transportation 18
  - Data source: FLOW_CUBE02

15. Click the **Show updated table** button. Now the data in the table can also be sorted.

**Order Rows by Sorting**

To display data in meaningful ways, sort the existing rows. In this scenario, rows are sorted with the counties with the most car commuters at the top (in descending order).

To sort rows:

1. Select the Down (Sort Descending) arrow in the **Cars Only/Estimate** column.

   ![Table showing car commuters by county](image)

   - Queens County, New York: 1,034,600
   - Kings County, New York: 1,014,600
   - Nassau County, New York: 863,255
   - Richmond County, New York: 883,965
   - Westchester County, New York: 1,229,099
   - New York County, New York: 760,475
   - Suffolk County, New York: 79,075
   - Bergen County, New Jersey: 80,419
   - Rockland County, New York: 28,770
   - Monmouth County, New Jersey: 22,219

2. The county with the largest number of car commuters is now listed at the top of the table.
Save the Table View

1. To save the table view, select **Save table view as** from the **Save** menu.

2. In the **Title** field, enter “COMMUTERS INTO NEW YORK CITY” and click **OK**.

3. The new title is displayed at the top of the table.

4. This table can be found in the future on the **Saved Tables and Charts** tab. (Select the **Show CTPP Tables** link.)
5. This table can be used with different geography selections in the future.

**Note:** The Residence and Workplace selection sets are not saved with the table. Each time the table is opened, the currently selected Residences and Workplaces will be applied. While the table is open, use the Residence and Workplace drop-down lists to apply different geography selections in the table.

The “CARS AND TRAINS” selection set on the Means of Transportation (18) dimension can be reused in any table that includes this dimension.
View Data in Different Ways

View a Table as a Map

To view a table as a map:

1. Click the **Show CTPP Tables** button.
2. Select the **Saved Tables and Charts** tab and select the applicable table from the list.
3. Select the **View As: Map** button.
4. The map is displayed and is ready for thematic analysis to be applied.

5. Change **Flow from Target Residence** to **Flow to Target Workplace**. Due to the selection settings, “New York” is automatically identified as the workplace. The “target” is now shown in
6. There are many different ways to display the data in the Map view.

Select a specific **Measure** (such as “Workers 16 and Over Pct of All”), select the Flow view, a variable (such as Cars - Only), and then click **OK**.

7. The flow arrows appear, as well as a legend. Use the Zoom In icon to drill down into the flows. Use the cursor to display more details about each flow.
View a Table as a Chart

To view a table as a chart:

1. Click the Show CTPP Tables button.
2. Select the Saved Tables and Charts tab and select the applicable table from the list.
3. Select the View As: Chart link.
4. The default chart is displayed.

To display as a pie chart, select the Chart options icon and then select Chart display settings.
5. Select “Pie” from the list on the **Chart display settings** page and click **OK**.

![Chart display settings](image)

6. Remove the margins of error values by selecting the **Output** link, deselecting Margin of Error on the **Variable categories** tab and clicking **Show Updated Table**.
7. Drag the Residence dimension to replace the Means of Transportation dimension (which will get moved to the rows).

Export a Table

To export the table data:

1. Click the Show CTPP Tables button.
2. Select the Saved Tables and Charts tab and select the applicable table from the list.
3. To add the FIPS codes (so they can be exported as well) for the residences, modify the label by clicking RESIDENCE and then selecting the Select labels icon.

Note: FIPS is a widely-used coding system for US geographies, maintained by the US Census Bureau.

4. On the Select Labels page, select the FIPS and Name option and click OK.
5. Click the **Show Data** button. The FIPS code is now displayed.

   ![Table Image]

   36081 | Queen County, Ne...
   36047 | Kings County, New...
   36005 | Bronx County, New...
   36059 | Nassau County, Ne...
   36085 | Richmond County, ...
   36119 | Westchester Count...
   36061 | New York County, ...

6. To export the data, select the **Download Table Data** icon.

   ![Download Icon]

7. Select the applicable export format (such as .csv) and click OK.
8. The data is downloaded into a separate file. Save it to a logical location.

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>36081</td>
<td>Queens County, NY</td>
<td>908,590</td>
<td>4,482</td>
<td>22,265</td>
</tr>
<tr>
<td>9</td>
<td>36047</td>
<td>Kings County, NY</td>
<td>1,014,600</td>
<td>4,891</td>
<td>10,150</td>
</tr>
<tr>
<td>10</td>
<td>36055</td>
<td>Bronx County, NY</td>
<td>460,075</td>
<td>4,258</td>
<td>7,905</td>
</tr>
<tr>
<td>11</td>
<td>36059</td>
<td>Nassau County, NY</td>
<td>198,255</td>
<td>3,052</td>
<td>66,170</td>
</tr>
<tr>
<td>12</td>
<td>36085</td>
<td>Richmond County, NY</td>
<td>185,965</td>
<td>2,109</td>
<td>1,860</td>
</tr>
<tr>
<td>13</td>
<td>36119</td>
<td>Westchester County, NY</td>
<td>122,090</td>
<td>2,151</td>
<td>50,885</td>
</tr>
</tbody>
</table>