



How to Upload a Country Data File in the UNI-CGE Model

Learn how to load a country data file into the UNI

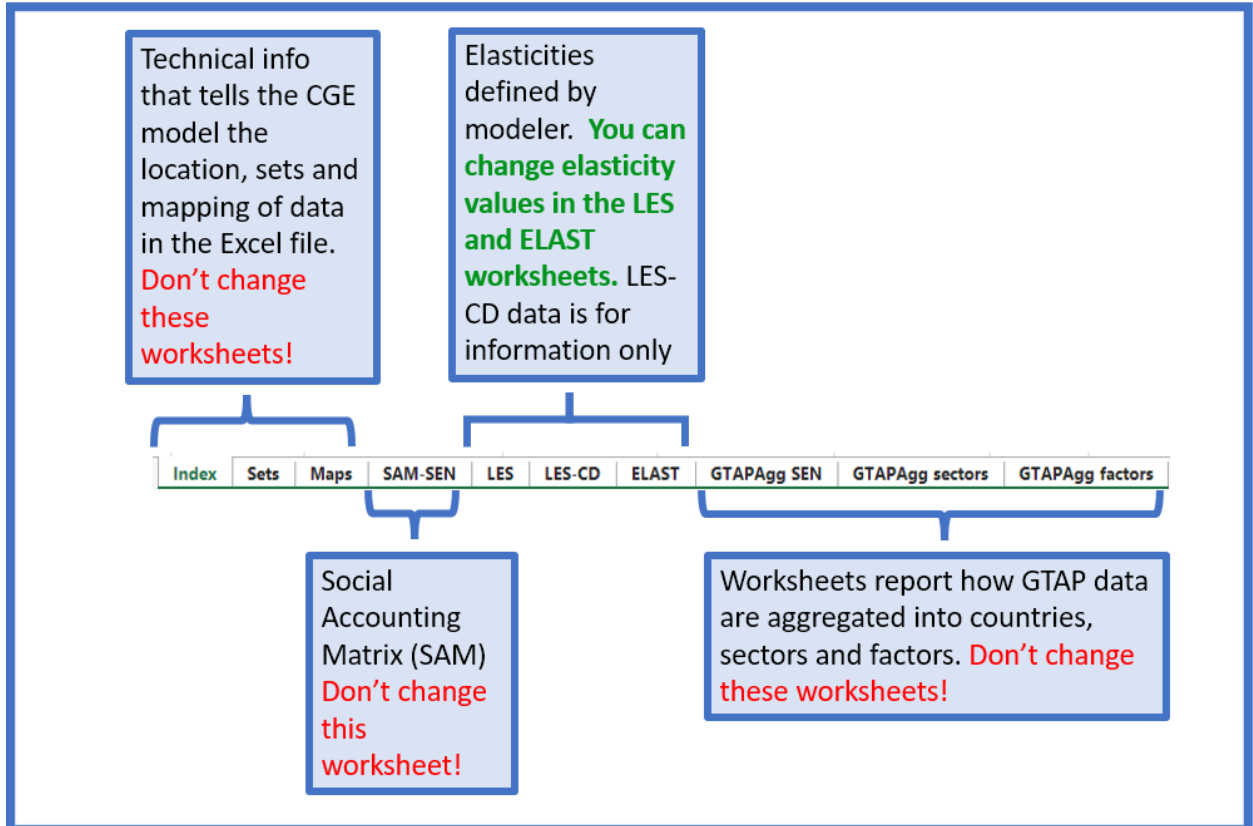
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1. WHAT IS A COUNTRY DATA FILE?

A country data file is an Excel file that contains all of the data required to run the UNI-CGE model and analyze a country. Figure 1 shows the worksheets in a country data file.

Figure 1. Worksheets in a country data file



- The first three worksheets are technical (Index, Sets, Maps). The index worksheet directs the CGE model to cells containing the data needed to run the model. The sets worksheet defines all sets in the CGE model. Mapping links one set to another – in our case, it links two sets that describe factors. **Do not change anything in these worksheets!**
- The SAM-XXX worksheet contains the Social Accounting Matrix (SAM). The three letters – XXX – are the three-letter country code. In our example, SAM-SEN is the SAM for Senegal, whose country code is SEN. SAMS for the UNI-CGE model are aggregations of the global database

developed by the Global Trade Analysis Project GTAP). **Do not change anything in the SAM worksheet!**

- There are three elasticity worksheets. The first contains the elasticities used in the Linear Expenditure System (LES), which is used by the UNI-CGE model to describe consumer demand. The LES-CD worksheet contains elasticities that transform LES demand into Cobb-Douglas. This worksheet is for your reference only; you can use these values in the LES worksheet if you prefer to have a Cobb-Douglas utility function in your model. Worksheet ELAS contains all the other elasticities used in the model. These elasticity values are general, commonly used values in CGE models. **You can change the elasticities on the LES and ELAS worksheets** if you have better information on elasticities or if you want to change elasticities to see how results may change.
- The last three worksheets report how the GTAP global database has been aggregated into the 6-sector, 3-factor SAM. This descriptive information creates a record that you may find useful.

2. UPLOAD A COUNTRY DATA FILE INTO THE UNI-CGE MODEL

A. LOCATE THE LIST OF COUNTRY DATA FILES IN THE UNI-CGE MODEL

The .zip file that contains the UNI-CGE model also includes most Excel country data files used in the course. Open the UNI-CGE model and search (CNTRL+F) for the term:

Define the excel country data file

This will take you to a list of country data files that are in your directory.

Table 2 shows the model code that defines the list of Excel country data files included in the UNI-CGE model zip file as of August 2024 (more data files are occasionally added).

Table 2. List of Excel country data files, 8/2024

USA333 SAM used for demonstration in the course
<i>TUR Turkey</i>
<i>ESP Spain</i>
<i>KEN Kenya</i>
<i>CHN China</i>
<i>NGA Nigeria</i>
<i>BRA Brazil</i>
<i>IDN Indonesia</i>
<i>IND India</i>
<i>VEN Venezuela</i>
<i>ZAF South Africa</i>
<i>ZMB Zambia</i>
<i>ONM Oman</i>
<i>PAK Pakistan</i>

B. SELECT THE COUNTRY DATA FILE TO BE USED IN THE MODEL

The UNI-CGE model selects the country data file using the **\$setglobal** command where "CNTY" is the country code assigned to your SAM. The following example shows how to select the US data file, US333, that we use for demonstration in the course.

```
$SETGLOBAL CNTY USA333
```

If you prefer to use a different country data file, edit the country code to select a different country file. For example, if you want to select the Nigeria data file, then the command would be:

```
$SETGLOBAL CNTY NGA
```

where NGA is the 3-digit country code for Nigeria.

C. WHAT IF YOUR COUNTRY DATA FILE IS NOT IN THE LIST OF FILES?

We continue to add country data files to the Database Library for this course. If there is a file for a country in the Library that is not listed in the UNI-CGE model, download the country file into the same directory that holds the UNI-CGE model. Then, in the UNI-CGE model, add a new line of code to add the new file to the list of countries:

```
$SETGLOBAL CNTY 3-digit code for new country
```

D. HOW THE MODEL CALLS TO THE SELECTED DATA FILE

After the country's 3-digit code has been defined as the CNTY, the \$CALL command loads the selected database into the UNI-CGE model. Notice that the command refers to "CNTY." It is a general expression that will call in whichever country you assigned as "CNTY." There is no need to add the country name to the \$CALL command.

```
$CALL 'GDXXRW i=SAM-%CNTY%.xlsx o=model-data.gdx INDEX=Index!A4'
```

You are now ready to run the UNI-CGE model with the selected country datafile.