Using Big Datasets in Stata

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On the sociology LAN, Stata is configured to use 12 megabytes (MB) of memory, which means that the user can load up datasets that are no more than 12 MB in size.\(^1\) There are two ways to get around this if you are working with a large dataset: increase Stata’s memory usage or use DBMS/Copy to make a smaller dataset. Which method you use depends on the size of the dataset; the larger the dataset, the slower Stata is going to run. For Stata SE, we recommend that you set up your computer’s mem to a number larger than the dataset you use, so you won’t have problem opening the dataset or running analyses. If your dataset is very large, you may want to consider making your dataset smaller is using DBMS/Copy instead.

Increasing Stata’s Memory Usage
The easiest way to use a large dataset is to increase Stata’s memory usage. This is simply done by using the `set mem` command.

```
set mem #
```

In this command, # is the number of kilobytes (KB) of memory that you want Stata to use. Choose a number that is somewhat larger than the size of the dataset you want to use (the reason is that you may need to add variables during your analyses, which will increase the size of the dataset). For example, if you want to use a 30 MB dataset, tell Stata to use 35 MB:

```
set mem 35000
```

You may abbreviate the number of MB you want Stata to use by dividing the number by 1,000 and adding a lower-case “m” next to the # of MBs.

```
set mem 35m
```

Using DBMS/Copy
DBMS/Copy is a nice program that lets you copy datasets and translate datasets from one statistical package to another. If you want to create a smaller dataset that Stata can use, you can use DBMS/Copy to copy the dataset but to delete a certain number of variables or cases.

Here is how DBMS/Copy works:

1. Load up DBMS/Copy. You can access the program through the Start menu, under Programs/LAN Statistics. Choose DBMS/Copy → DBMS/Copy 8. As far as we

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\(^1\) You can tell how large a file is by clicking on it in a Windows window; Windows will tell you the size in kilobytes (KB) or megabytes—a megabyte is approximately 1,000 KB (e.g. 12,000 KB = 12 MB).
know, it doesn’t matter if you choose either “DBMS/COPY V8 (with DBMSAnalyst)” or just “DBMS/COPY V8”.  

You should get the following menu choices:

![Menu Choices](image)

Click on the “Interactive” button. A window should pop up where you choose the “input” database.

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2 Following graphs show “DBMS/Copy V7.” We have “DBMS/Copy V8” now.
Since you’re dealing with Stata datasets, make sure the program is looking for Stata SE datasets. If you want to transform SPSS or SAS data sets, look for “SPSS 12.0 for windows” or “SAS 9.1 for windows.” (We use the Eurobarometer 47.1 dataset as an example.)

This window pops up. Ignore this window and press the “Done” button.
Then this window pops up:

Step 2: We will show you how to delete cases or delete variables next.
(1) To select cases, press “Record Filter & Equations;” (2) to delete variables, press “Variable Information.”

(1) Selecting Cases:

In this example, we are telling DBMS/Copy to select cases where the respondent is from Belgium, W. Germany, E. Germany, and Austria. This implies that we are deleting all the other cases that are not selected. You can either double click “select” in the box of
“Goodies” or type “select variable=value” in the last box. The program’s syntax is pretty simple; you can also “drop” cases as well. For more help, look at DBMS/Copy’s help file on equations (Y:\DBMSCOPY 8\program files\DataFlux\dfPower Tools\8.0.hlp).

After you are done typing in your equation, click on “OK”

In this window, we are specifying which variables to keep and which to delete. The first column “Name” gives the variable name; under the “Rename” column you can type in a new variable name for the output dataset; in the “Keep” column the user indicates what variables are to be retained for the output dataset; and the “Label” column gives the variable labels.

Importantly, whether you choose to “Drop Check” or “Keep Check” depends on whether you want to work with a small (“Keep Check”) or large (“Drop Check”) fraction of the variables in the dataset. Notice that “Keeping” and “Dropping” have the same effect—they trim the output database.

In this case, we are telling DBMS/Copy to keep the variables q4901-q4917, which are a series of statements about immigrants in Western European societies. You can tell this because those variables are checked.

(2) Deleting Variables:

Alternatively, you can drop variables from the output dataset. In that case, you would specify “Drop Checked” in the button third from the left at the top (which currently says “Keep Checked”). The “Keep” column would then become a “Drop” column, and any variables you selected would be eliminated from the output dataset.
After you are done specifying which variables should be kept or dropped, click on the “OK” button.

Step 3: After selecting the variables, you are back at the Power Panel, shown above. Click the “OK” button.

Here you specify what your output dataset is going to be. Make sure that you specify Stata SE dataset (You can also select SPSS 12.0 for windows or SAS 9.1 for windows if you prefer to use these two statistical packages). After you finish this procedure, click the “Save” button.
You will be taken to this window:

This window gives you the DBMS/Copy’s syntax for all of your specifications. You can save your program by pushing the “Save Program” button—this is a good idea to keep track of your data manipulations. For now, click the “Do-It!” button.

DBMS/Copy is now processing your commands.

When it’s done, you’re ready to open the Stata/SPSS/SAS file that contains the variables you want. Congratulations!!