

A1.4 (CD-ROM TOPIC) INTRODUCTION TO SPSS

SPSS Overview

SPSS is one of the most widely used statistical programs in the world. SPSS is known for, among other things, its scope, user support, and interactive and high-resolution graphics.

In SPSS, you work in the worksheet-like **Data Editor** window to create and open individual data sets. You view the results of analysis in an **Output Viewer**, a separate two-pane window that lists all output objects in a tree in the left pane and shows the detail of the currently selected output object in the right pane. You can place the Data Editor window and the Output Viewer window anywhere on the screen and open more than one Output Viewer at a time (only one Data Editor window can be opened). You switch among the opened windows by selecting the appropriate window in the Windows menu of any SPSS window. You can open and save a data set or open and save an output viewer.

SPSS's extensive help and tutorial features, global presence, separate handling of data and results, and extensive help and tutorials makes this program a great tool for learning statistics. The SPSS Student version shares most of these

attributes, limited only by the number of variables it can handle and the elimination of some advanced statistical methods.

Using the SPSS Data Editor

You use the SPSS Data Editor to enter data and information about your variables. As you open SPSS the Data Editor window containing the **Data View** and **Variable View** worksheets appears. (Some SPSS Student versions open a "What would you like to do?" dialog box over the Data Editor window. If you see this dialog box, you can click the Cancel button to advance to the Data Editor.)

You enter data values for variables by columns in the Data View sheet (see Figure A1.8). As you enter data, SPSS names the variables you enter into columns serially in the form of var0001, var0002, and so on, and fills in other information about the variable in a single row of the Variable View sheet (see Figure A1.9). You can review this information by clicking the Variable View sheet tab at the bottom of the sheets. (To switch back, click the Data View sheet tab.) The Variable View sheet contains labeled columns and numbered rows. Each column represents a fact about a variable and all of the facts about one variable are listed in a single row.

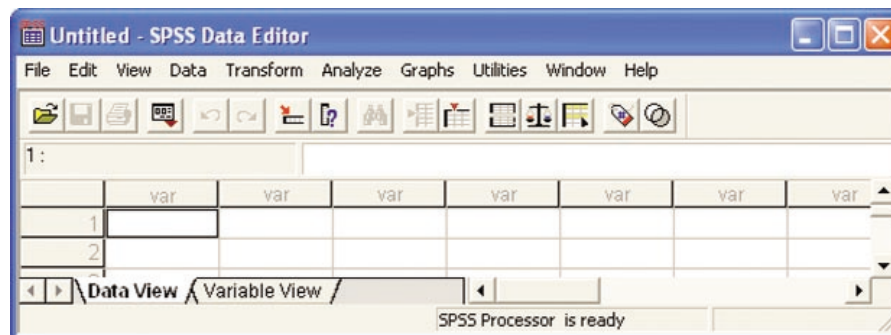


FIGURE A1.8 SPSS Data View Sheet of the Data Editor Window

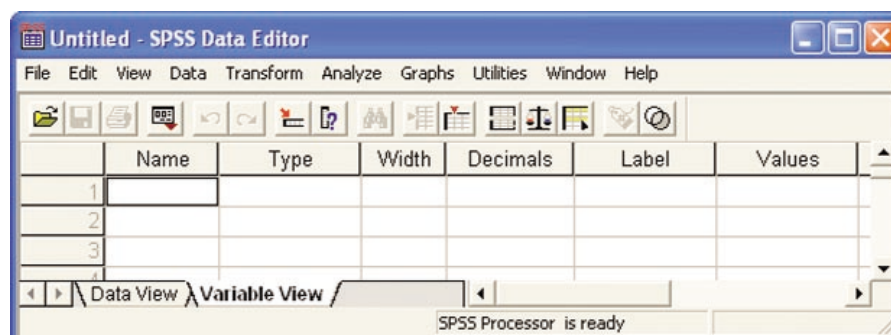


FIGURE A1.9 Variable View Sheet of the Data Editor

You can edit most of the information that appears in the row, and you will probably want to rename your variables to give them self-descriptive names. Other columns for which you want to edit entries are:

Type: Sets the data type for a variable. Most often you will use just two types: **Numeric** or **String**.

Width: Specifies the maximum number of characters for a variable value.

Decimals: Sets the number of decimal places for a numeric value.

Label: Stores the label used by SPSS to identify the variable in output.

Values: Sets the labels for the coded values of a categorical variable. You can tell SPSS to display these values (and not the coded numeric values) by selecting **View Value Labels** after clicking the Data View sheet tab.

Missing: Specifies whether the data set contains missing values, and the missing values, if present, are coded.

If you are defining categorical variables, you should define them as numerically coded variables and then establish the meaning of those codes in the Label column. You should not define such variables as string variables, due to processing quirks in some SPSS procedures.

Opening and Saving Data Sets and Results

You open worksheets to use data that have been created by you or others at an earlier time. To open an SPSS worksheet, first select **File → Open → Data**. In the Open File dialog box that appears (see Figure A1.10), you select the file to be opened and then click the **OK** button. If you cannot find your file, you may need to do one or more of the following:

- Use the scroll bars or the slider, if present, to scroll through the entire list of files.
- Select the correct folder from the **Look in** drop-down list at the top of the dialog box.
- Change the **Files of type** value from the drop-down list at the bottom of the dialog box. For example, you should select **Excel (*.xls)** from the list to see any Excel files. To list every file in the folder, select **All Files (*.*)**.

You can open the results of an analysis by selecting the similar **File → Open → Output**.

To save a data set or the contents of an Output Viewer, first select the window containing the component to be saved and then select **File → Save As** to display the Save As dialog box, which is similar to the Open File dialog box. Enter (or edit) the name of the file in the **File name** box and click the **OK** button. If applicable, you can also do the following:

- Change to another folder by selecting that folder from the **Save in** drop-down list.

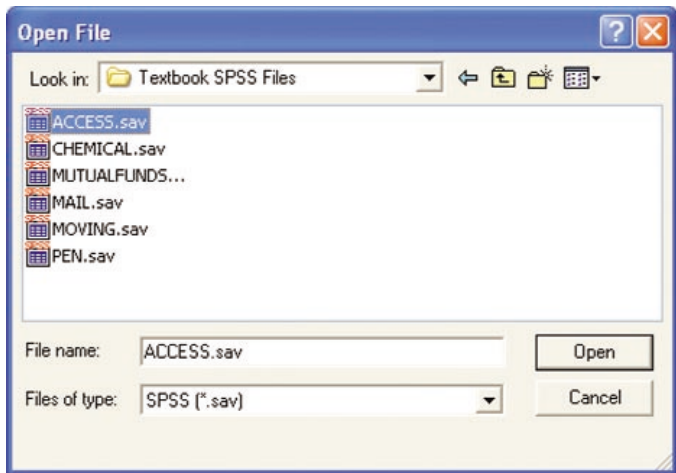


FIGURE A1.10 Open File Dialog Box

- Change the **Save as type** value to something other than the default choices, **SPSS (*.sav)** for data files and **Viewer files (*.spo)** for output files. (Select **Excel (*.xls)** if you want to save your data as an Excel file.)

After saving your work, you should consider saving your file a second time, using a different name, in order to create a backup copy of your work. Files opened from non-writable disks, such as the CD-ROM packaged with this text, cannot be saved to their original folders.

Printing Data Sets and Results

You can select **File → Print** and then click the **OK** button in the Print dialog box that appears to print an opened data set or Output Viewer. If you want to preview the printed output and make any necessary adjustments before actually printing, select **File → Print Preview**. If the preview contains formatting errors, click the **Close** button, make the changes necessary, and reselect **File → Print Preview**. When you are satisfied with the results, click the **Print** button in the Print Preview window and then click the **OK** button in the Print dialog box.

The Print dialog box contains settings to select the printer to be used, what pages to print, and the number of copies to produce (1 is the default). If you need to change these settings, change them before clicking the **OK** button.