

# Reading Data in SPSS

 Rather than typing all of your data directly into the Data Editor, you can read data from applications such as Microsoft Excel.

You can also read column headings as variable names.

✓ From the menus choose:

File > Open > Data...

Select Excel (\*.xls) as the file type you want to view.

> Open demo.xls.

- The Opening Excel Data Source dialog box is displayed, allowing you to specify whether variable names are to be included in the spreadsheet, as well as the cells that you want to import.
- In Excel 95 or later, you can also specify which worksheets you want to import.

Opening Exc	el Data Source	
demo.xls		
📝 Read variak	ble names from the first row of data	
Worksheet:	demo [A1:AB6401]	~
Range:		
Maximum width	for string columns: 32767	
	OK Cancel Help	

- Make sure that Read variable names from the first row of data is selected. This option reads column headings as variable names.
- If the column headings do not conform to the IBM® SPSS® Statistics variable-naming rules, they are converted into valid variable names and the original column headings are saved as variable labels.
- If you want to import only a portion of the spreadsheet, specify the range of cells to be imported in the Range text box.

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24 :	Inco	meCategor	/ 2			
		Age	Maritalstatus	Address	Income	IncomeCategory
	1	55	1	12	72.00	3.00 =
	2	56	0	29	153.00	4.00
	3	28	1	9	28.00	2.00
	4	24	1	4	26.00	2.00
	- 5	25	1	2	23.00	1.00
	6	45	0	9	76.00	4.00
	- 7	44	1	17	144.00	4.00
	8	46	1	20	75.00	4.00
	9	41	0	10	26.00	2.00
	<u></u> 10	29	0,	.4	19.00	1.00
<u>I</u>	\Da	ita View 🔏 \	'ariable View 🖊	<		>
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 Data from database sources are easily imported using the Database Wizard.

✓ From the menus choose:

File > Open Database > New Query...

×

# Reading Data from a Database

Select MS Access
 Database from the
 list of data sources
 and click Next.

### 🚰 Database Wizard

### Welcome to the Database Wizard!

This wizard will help you get data from a non-PASW Statistics data source.

You can choose the data source, specify which cases are retrieved, aggregate and sort the data before retrieval, and specify variable names and properties here. Some features are available only when connected to PASW Statistics Server.

Next >

Cancel

Help

From which data source would you like to retrieve data?



ODBC Data Sources

- 🔁 dBASE Files
- MS Access Database

Add ODBC Data Source..

- Click Browse to navigate to the Access database file that you want to open.
- ✓ Open demo.mdb.
- ✓ Click OK in the login dialog box.

📴 ODBC Drive	er Login	
Data Source:	MS Access Database	
Database:	demo.mdb	Browse)
	OK Cancel	

 $\mathbf{X}$ 

### Reading Data from a Database

In the next step,
 you can specify
 the tables and
 variables that you
 want to import.

Drag the entire
 demo table to the
 Retrieve Fields In
 This Order list.

### 🔠 Database Wizard

### Select Data

Select the fields you want to retrieve. Then click the arrow button or drag the fields to the Retrieve Fields list.

Tip: Selecting a table selects all of its fields.





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### Reading Data from a Database

### ✓ Click Next.

 In the next step, you select which records (cases) to import.

### 🔢 Database Wizard

### Limit Retrieved Cases

Limit the cases that are retrieved by specifying selection criteria. Tip: Fields and Functions can be added to an expression by dragging and dropping into a cell. See help for how to express date and time values.



< Back Next > Finish Cancel Help

- If you do not want to import all cases, you can import a subset of cases (for example, males older than 30), or you can import a random sample of cases from the data source.
- For large data sources, you may want to limit the number of cases to a small, representative sample to reduce the processing time.
- Click Next to continue.

- Field names are used to create variable names. If necessary, the names are converted to valid variable names.
- The original field names are preserved as variable labels. You can also change the variable names before importing the database.
- Click the Recode to Numeric cell in the Gender field. This option converts string variables to numeric variables and retains the original value as the value label for the new variable.
- ✓ Click Next to continue.

🔠 Database Wizard

### **Define Variables**

Edit variable names and properties.

Names will be automatically generated if left blank.

To convert a string variable to numeric using the original values as value labels, check Recode to Numeric.

< Back

	Result Variable Name	Data Type	Recode to Numeric
no: ID	D	Numeric	
no: AGE	AGE	Numeric	
no: MARITAL	MARITAL	Numeric	
no: ADDRESS	ADDRESS	Numeric	
no: INCOME	INCOME	Numeric	
no: INCCAT	INCCAT	Numeric	
no: CAR	CAR	Numeric	
no: CARCAT	CARCAT	Numeric	
no: ED	ED	Numeric	
no: EMPLOY	EMPLOY	Numeric	
no: RETIRE	RETIRE	Numeric	
no: EMPCAT	EMPCAT	Numeric	
no: GENDER	GENDER	String	-
no: RESIDE	RESIDE	Numeric	
no: WIRELESS	WIRELESS	Numeric	
no: MULTLINE	MULTLINE	Numeric	
no: VOICE	VOICE	Numeric	
no: PAGER	PAGER	Numeric	
no: INTERNET	INTERNET	Numeric	
no: CALLID	CALLID	Numeric	
no: CALLWAIT	CALLWAIT	Numeric	
no: OWNTV	OWNTV	Numeric	
4		<b>.</b>	
no: INTERNET no: CALLID no: CALLWAIT no: OWNTV	INTERNET CALLID CALLWAIT OWNTV	Numeric Numeric Numeric Numeric	

14

X

- The SQL statement created from your selections in the Database Wizard appears in the Results step.
- This statement can be executed now or saved to a file for later use.

Database Wizard	
Results	
Your selection has resulted in the following SQL query:	
SELECT ID, AGE, MARITAL, ADDRESS, INCOME, INCCAT, CAR, CARCAT, ED, EMPLOY, RETIRE, EMPCAT, GENDER, RESIDE, WIRELESS, MULTLINE, VOICE, PAGER, INTERNET, CALLID, CALLVVAIT, OWNTV, OWNVCR, OWNPDA, OWNPDA, OWNPCA, NEWS, RESPONS FROM demo	E
-What would you like to do with this query?	
O Paste it into the syntax editor for further modification	
	_
Save query to file	
Save query to the Browse	

✓ Click Finish to import the data.

All of the data in the Access database that you selected to import are now available in the Data Editor.

🛅 Untit	led - Data E	ditor			- 2	×
<u>File E</u> dit	<u>V</u> iew <u>D</u> ata	<u>T</u> ransform <u>A</u> nal	yze <u>G</u> raphs	Utilities Add-	<u>o</u> ns <u>W</u> indow <u>H</u> elp	
24 : Inco	omeCategory	2				
	Age	Maritalstatus	Address	Income	IncomeCategory	~
1	55	1	12	72.00	3.00	
2	56	0	29	153.00	4.00	
3	28	1	9	28.00	2.00	
4	24	1	4	26.00	2.00	
5	25	1	2	23.00	1.00	
6	45	0	9	76.00	4.00	
7	44	1	17	144.00	4.00	
8	46	1	20	75.00	4.00	
9	41	0	10	26.00	2.00	
10	29	,0	.4	19.00	1.00	$\mathbf{v}$
	ata View 🔏 Va	ariable View /	<		>	
			SPSS	5 Processor is r	eady	

- Text files are another common source of data. Many spreadsheet programs and databases can save their contents in one of many text file formats.
- Comma- or tab-delimited files refer to rows of data that use commas or tabs to indicate each variable.
- $\checkmark$  In this example, the data are tab delimited.

✓ From the menus choose:

- File > Read Text Data...
- Select Text (\*.txt) as the file type you want to view.
  Open demo.txt.
- The Text Import Wizard guides you through the process of defining how the specified text file should be interpreted.

🔛 Text Imp	ort Wizard - Step	) 1 of 6					X	
628 840 1 81 2	28.5	Welcom	e to the text	t import wiz	ard!			IΥ
630 2400 0 73 632 10200 0 8 633 870 0 93 3 635 17401 8	40.33 33 31.08 31.17 33 41.91	This wi: informat	zard will hel tion about th	p you read ne variables	data from	your text file	and specify	
		Does y © <u>Y</u> e: © N <u>o</u>	vour text file	match a pr	edefined	format?	Browse	
	Program Files(SPSS)r	20	30	ampiesveng	40	50	6(	
							<b>L</b>	
	ige marital	address	income	inccat	car	carcat	ed	
2 5	5 1	12	72	3	37	3	1	
5	6 0	29	153	4	76	3	1	
4 2	8 1	9	28	2	14	1	3	
	4 1	4	26	2	13	1	4 👻	

< Back Next >

Cancel

Help

Finish

- In Step 1, you can choose a predefined format or create a new format in the wizard.
- Select No to indicate that a new format should be created.
- ✓ Click Next to continue.

 As stated earlier, this file uses tab-delimited formatting. Also, the variable names are defined on the top line of this file.

### $\mathbf{x}$ 🔛 Text Import Wizard - Step 2 of 6 How are your variables arranged? Openimited - Variables are delimited by a specific character (i.e., comma, tab). Fixed width - Variables are aligned in fixed width columns. Are variable names included at the top of your file? 🔘 Yes 🔘 No Text file: C:\Program Files\SPSSInc\PASWStatistics18\Samples\English\demo.txt; 10 20 30 IIII Next > Help < Back Finish Cancel

Select Delimited to indicate that the data use a delimited formatting structure.

 Select Yes to indicate that variable names should be read from the top of the file.

✓ Click Next to continue.

 Type 2 in the top section of next dialog box to indicate that the first row of data starts on the second line of the text file.

🖼 Text Import Wizard - Delimited Step 3 of 6 🛛 🛛 🔀
The <u>fi</u> rst case of data begins on which line number? 2
C A specific number of variables represents a case: 28
How many cases do you want to import?
© <u>T</u> he first 1000 cases.
◎ A random percentage of the cases (approximate): 10 🖕 %
CData preview
0 10 20 30 40 50 60
1 55 1 12 72 3 37 3 1
2 56 0 29 153 4 76 3 1
< Back Next > Finish Cancel Help

Keep the default values for the remainder of this dialog box, and click Next to continue.



- The Data preview in Step 4 provides you with a quick way to ensure that your data are being properly read.
- Select Tab and deselect the other options.



age	marital	address	income	inccat	car	car
55	1	12	72	3	37	3 🔺
56	0	29	153	4	76	3
28	1	9	28	2	14	1
24	1	4	26	2	13	1
25	1	2	23	1	11	1
45	0	9	76	4	37	3
44	1	17	144	4	72	3
46	1	20	75	4	37	3
4		40	he	2	40	

Click Next to continue.

 Because the variable names may have been truncated to fit formatting requirements, this dialog box gives you the opportunity to edit any undesirable names.

⊻ariał	ole name:	Origina	al Name:			
age		age				
Data 1	ormat:					
Nume	ric	~				
ata previe	2007					
ata previe	3W					
ata previe	sw	address	income	inccat	car	Cat
ata previa age 55	ew marital	address 12	income 72	inccat 3	car 37	Cat 3 4
ata previa age 55 56	ew marital	address 12 29	income 72 153	inccat 3 4	car 37 76	car 3 4 3 3
ata previa age 55 56 28	ew marital	address 12 29 9	income 72 153 28	inccat 3 4 2	car 37 76 14	car 3 4 3
ata previa age 55 56 28 24	ew	address 12 29 9 4	income 72 153 28 26	inccat 3 4 2 2	car 37 76 14 13	car 3 4 3 1
ata previa age 55 56 28 24 25	ew	address 12 29 9 4 2	income 72 153 28 26 23	inccat 3 4 2 2 1	car 37 76 14 13 11	Car 3 3 1 1

- Data types can be defined here as well. For example, it's safe to assume that the income variable is meant to contain a certain dollar amount.
- ✓ To change a data type:
- Under Data preview, select the variable you want to change, which is Income in this case.
- Select Dollar from the Data format drop-down list.

# Click Next to continue.

⊻ariable name:	Original Name:	
income	income	
Dollar	~	
Numeric	<u>~</u>	
String		
Date/Time		
Dollar	*	

### Data preview marital address income inccat age car cat Þ

< <u>B</u>ack <u>N</u>ext >

Cancel Help

2

# Reading Data from a Text File

Leave the default
 selections in this
 dialog box, and click
 Finish to import the
 data.

					You have successfully defined the format of your text file.
					└Would you like to save this file format for future use?───
	var1	var2	yar3		O Yes Save As
1	628	8-40	1		No
2	630	2400	0		
3	632	10200	0		-VVould you like to paste the syntax?
4	633	870	0		O Yes 🔽 Cache data localiy
•		******	-	•	No     No

### Press the Finish button to complete the text import wizard.

age	marital	address	income	inceat	car	car
55	1	12	72	3	37	3
56	0	29	153	4	76	3
28	1	9	28	2	14	1
24	1	4	26	2	13	1
25	1	2	23	1	11	1
15	0	9	76	4	37	3
14	1	17	144	4	72	3

Finish

Cancel

Help

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