

Session 6 - SPSS¹

Running a program in batch mode. Making tables for publication: bringing SPSS output into Excel, letting excel round for you. Finding the first and last of a set of cases using the lag function.

Running a Job in Batch Mode:

Find an icon that says “SPSS 10.0 Production Facility”, and click (or double click) on it.



SPSS 10.0 Production Facility.Ink

A window will open up that allows you to specify syntax files that you want to run. At the bottom of the window you can specify where you want the output files to be written. (I usually specify the directory where the program file is located. When you are done filling in the information, click on File in the upper left, and save this SPSS Production file. (I usually specify the directory where the program file is located.) This file will be saved with the suffix of “.spp”. When I run it, it will create a file with the same first name, and the suffix of “.spo”. For example, if I save a file as “run1.spp”, I will get an output file called “run1.spo”. Double clicking on the .spp file will allow you to modify it. To run it, from Windows Explorer, right click on the file, and then click on Run.

As mentioned in a previous lesson, the rules for SPSS are different in batch mode than in windows mode. Because of this, a program that runs perfectly in Windows mode may show errors in batch mode. In interactive SPSS, periods are very important. Each command must end in a period. Failure to put a period where it belongs, or putting one where it does not belong will result in an error. For SPSS in the batch mode, putting a period in a place where one belongs for SPSS PC does not cause an error, but is not required. Periods indicate that a command has ended in SPSS PC, but in batch mode, SPSS uses SPACING. The first column is reserved for the beginning of commands. It will cause an error if the second line of a command begins in column 1. I always try to write my programs so that they can run in either mode.

Error detection is sometimes easier if you run a program in batch mode. Line numbers are included, and referred to when an error is noted.

Creating tables from SPSS output:

For class today you have brought a program that runs a regression equation that you want to put into a table. Of course it is possible to type results into a table for presentation or publication. Here, I will show you techniques for creating tables without as much typing. This reduces the risk of typing errors, and saves time. See the last page of this handout for an example of a table that might be produced using these techniques.

Your goal will be to put information from your SPSS output into excel, and let it do some of your work for you. Configuring SPSS so that it puts the output in a way that is easy to capture is the first step. There are two options - capturing output from the “Viewer” or the “Draft Viewer”. We will start with capturing output from the “Viewer”. I will also explain how to do it from the “Draft Viewer”, and you can decide which works best for you.

If you have not already done so, configure SPSS so that Academic 2 (narrow).tlo is selected on the pivot table. Click on: Edit; Options; Pivot Tables; Academic 2 (narrow).tlo; Okay
Make sure that the Viewer is selected on the lower left of your General tab.

We will also check and make changes to the configuration of the Draft Viewer. Go to the Draft Viewer tab. If the font specified in the lower left is not Courier New 8, change it so that it is. Now look at the Row and Column Separators. Change them from - and | to spaces.

Exit from SPSS and get back in so that these configuration changes will be executed.

¹This document has been prepared by Patty Glynn, University of Washington.

Option 1: Viewer

Run the SPSS program that you have that has a regression equation in it, and find the results - for example:

Model		Unstandardized		Standardized		Sig.
		Coefficients	Std. Error	Beta	t	
1	(Constant)	23.240	.118		196.765	.000
	BUDDHIST	-6.954E-02	.226	-.008	-.308	.758
	CATHOLIC	-2.156	.238	-.241	-9.057	.000
	OTHREL	2.510	1.712	.038	1.466	.143

a. Dependent Variable: AGE1BRTH Age of woman at 1st birth

Each number in this output is in a cell that can be copied. And, a column of numbers can also be copied. Use your mouse to highlight all of the numbers for the coefficient and the standard errors for your regression equation in your SPSS output. Put this in your windows clipboard with Ctrl C.

Using Excel to help with tables:

1. Bring up Excel, and paste the contents of your windows clipboard into cell A-5.
2. Now we will have Excel round for us. Highlight all of the columns A to M. Click on Format and then Cells. With the Number tab highlighted, click on Number, and then set the number of decimal places to 3 and then click OK.
3. Click on the column header of the column just to the right of the column that has the parameter estimates, right-click, and then click on Insert. Look at the column that holds the information for significance and put the proper number of asterisks.
4. At this point, what you will want to do to make to output presentable depends on the word processing package you use. I use WordPerfect, and copy cells that have the numbers for the coefficients, the asterisks, and the standard errors to my WordPerfect document. With WordPerfect, I can delete the spreadsheet structure, but keep the numbers in the spreadsheet. I do this, and use decimal tabs to have my numbers line up properly. I put the standard errors under the coefficients, put parentheses around them. I often do these repetitive tasks by creating a macro. Depending on the number of models I have to present, and the number of variables in the models, I may use landscape or portrait. I suspect that Word can do these same things (though I don't know how). And, I know that some people use Excel to format their tables completely. Work out your own technique using the tools and software that you know best.

Option 2: Draft Viewer

Configure SPSS so that output will be written into a Draft Viewer. (Edit, Options, bottom left of General tab.) Exit SPSS and get back in so that these configuration changes will be invoked. Run your program. You will see that your output will look different than it does with the Viewer selected. The output is ASCII text, and is more easily copied and pasted into other applications. Find the output for your regression that includes the values for the results – as in the highlighted area below. Highlight it, and put it into your windows clipboard.

Model	B	Std. Error	Beta		
1	(Constant)	23.240	.118	196.765	.000
	BUDDHIST	-6.954E-02	.226	-.308	.758
	CATHOLIC	-2.156	.238	-9.057	.000
	OTHREL	2.510	1.712	1.466	.143

1. Bring up a new work sheet Excel, and paste the text cell A-5. You will see that part of column A is highlighted. It is important that this remain highlighted during the next steps.

2. Use your mouse to click on Data menu, then Text to Columns. This will bring up a window that will allow you to convert the information from text to columns.
3. Select "Fixed Width" and click on Next. You will see what Excel thinks is the proper parsing and formatting. Usually it is correct and requires no alterations, but if it doesn't do a good job, you can alter in at this point. When you are done, click on Finish, and you will see that what was text is now a combination of columns of text and numbers.
4. Now we will have Excel round for us. Highlight all of the columns A to M. Click on Format and then Cells. With the Number tab highlighted, click on Number, and then set the number of decimal places to 3 and then click OK.
5. Click on the column header of the column just to the right of the column that has the parameter estimates, right-click, and then click on Insert. Look at the column that holds the information for significance and put the proper number of asterisks.
6. Copy this information to the word processor you use and create a table from it.

Finding the First or Last Case in a Series - Using the LAG Function

```
* fstlst.sps - May copy this program and run in SPSS.
title 'fstlst.sps' .
* Use lag functions to create indicators of first and last in a series .
DATA LIST FREE / School * Person (a6) .
BEGIN DATA
1 Jack
1 Sara
1 Flora
1 Bubba
1 Louis
1 Al
3 Cooper
3 Robin
3 Kyle
3 Harry
3 Pete
3 Jebbie
2 Hannah
2 Lilly
2 Lucas
end data.
variable labels school 'School Number' / Person 'Person Name' .

* The cases must be sorted properly for this to work.
sort cases by School Person .

** The following code will create a variable called "fcase" .
** that will have a value of 1 for the first case of each school .
if missing(lag(school)) fcase = 1 .
if lag(school) ne school fcase = 1 .
variable label fcase 'First Case in School' .

** You may create a variable indicating the LAST case in a school by .
** sorting the file in a different order and using the lag function .
sort cases by School (a) Person (d) .

** The following code will create a variable called "lcase" .
** that will have a value of 1 for the first case of each school .
if missing(lag(school)) lcase = 1 .
if lag(school) ne school lcase = 1 .
variable label lcase 'Last Case in School' .

* sort cases in ascending order again so that we can examine results.
sort cases by School Person .
list var = all .
```

Table 2: Coefficients from the Multilevel Regression of Neighborhood Characteristics on Selected Independent Variables:
Black and White Household Heads Living in Northern and Western Cities, 1920.

	Percent Native-White Native-Parents			Percent Literate		
	1	2	3	4	5	6
Black Northern Born	5.903*** (.925) ^{wn ws}	5.518*** (.911) ^{wn ws}	1.196* (.520) ^{wn ws}	.660*** (.166) ^{wn ws}	.490** (.164) ^{ws}	.306* (.151) ^{wn ws}
White Northern Born	8.655*** (.484) ^{bn ws}	7.064*** (.501) ^{bn ws}	6.494*** (.290) ^{bn}	1.436*** (.087) ^{bn ws}	.718*** (.090) ^{ws}	.675*** (.084) ^{bn}
White Southern Born	14.480*** (.672) ^{bn wn}	13.175*** (.676) ^{bn wn}	6.946*** (.388) ^{bn}	1.799*** (.121) ^{bn wn}	1.114*** (.122) ^{bn wn}	.735*** (.113) ^{bn}
Male		1.083** (.401)	-.042 (.229)		-.010 (.072)	-.005 (.067)
Age		.053*** (.009)	.040*** (.005)		.008*** (.002)	.008*** (.001)
Family Size		-.382*** (.061)	-.135*** (.035)		-.070*** (.011)	-.034*** (.010)
Literate		-2.533* (1.135)	2.912*** (.647)		1.100*** (.204)	1.328*** (.188)
Duncan SEI		.022*** (.005)	.084*** (.003)		.021*** (.001)	.022*** (.001)
Owens Home		6.975*** (.237)	1.305*** (.139)		.614*** (.043)	.307*** (.040)
City-Level Control			.936*** (.016)			.718*** (.022)
Intercept	33.373*** (.471)	32.616*** (1.249)	-7.919*** (1.038)	95.505*** (.085)	94.037*** (.225)	24.705*** (2.144)
Adjusted R-Square	.016	.052	.684	.011	.044	.098

Standard errors in parentheses. * p ≤ .05 ** p ≤ .01 *** p ≤ .001 (two-tailed tests) N of Cases 29,977

^{bn} significant difference from black northern born p ≤ .05; ^{wn} difference from white northern born p ≤ .05; ^{ws} difference from white southern born p ≤ .05