

# Create and Export Tables Using Stata

MICHAEL N. MITCHELL



**stata**® *Press*

A Stata Press Publication  
StataCorp LLC  
College Station, Texas



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Published by Stata Press, 4905 Lakeway Drive, College Station, Texas 77845  
Typeset in L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub>  
Printed in the United States of America  
10 9 8 7 6 5 4 3 2 1

Print ISBN-10: 1-59718-369-5  
Print ISBN-13: 978-1-59718-369-7  
ePub ISBN-10: 1-59718-370-9  
ePub ISBN-13: 978-1-59718-370-3

Library of Congress Control Number: 2024945727

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# Contents

	<b>Acknowledgments</b>	<b>v</b>
	<b>List of figures</b>	<b>xiii</b>
	<b>Preface</b>	<b>xvii</b>
<b>1</b>	<b>Introduction</b>	<b>1</b>
1.1	Read me first . . . . .	1
1.2	Overview of creating tables in Stata . . . . .	1
1.3	Overview of this book . . . . .	2
1.4	Introduction to making and exporting tables . . . . .	4
1.5	Using Unicode characters . . . . .	10
1.6	Useful Stata concepts and commands . . . . .	12
1.6.1	Display formatting . . . . .	12
1.6.2	Stata macros . . . . .	14
1.6.3	Accessing results stored from Stata commands . . . . .	17
1.6.4	Repeating commands by looping over variables . . . . .	21
<b>2</b>	<b>Twenty-four sample tables</b>	<b>25</b>
2.1	Sample 1: Regression with model statistics in the footer . . . . .	26
2.2	Sample 2: Regression with multiple outcomes . . . . .	32
2.3	Sample 3: Regression with multiple groups . . . . .	35
2.4	Sample 4: Regression with multiple models . . . . .	40
2.5	Sample 4b: Regression with multiple models using etable . . . . .	45
2.6	Sample 5: Regression with multiple outcomes and multiple groups . . . . .	51
2.7	Sample 6: Regression with multiple models and multiple groups . . . . .	57
2.8	Sample 7: Regression with multiple outcomes and multiple models . . . . .	63

2.9	Sample 8: Regression with multiple outcomes, multiple models, and multiple groups . . . . .	67
2.10	Sample 9: Student's t test . . . . .	73
2.11	Sample 10: Student's t test with Cohen's d . . . . .	77
2.12	Sample 11: Student's t test with difference in means . . . . .	81
2.13	Sample 12: Student's t test with Cohen's d and difference in means . . . . .	85
2.14	Sample 13: Columns of correlations . . . . .	88
2.15	Sample 14: Column of correlations: Two groups . . . . .	90
2.16	Sample 15: Correlation matrix . . . . .	93
2.17	Sample 16: Correlation matrix with mean and SD in columns . . . . .	98
2.18	Sample 17: Correlation matrix with mean and SD in rows . . . . .	102
2.19	Sample 18: Pretest–posttest randomized controlled trial . . . . .	105
2.20	Sample 19: Table 1 showing all categorical variables, one group . . . . .	112
2.21	Sample 20: Table 1 showing categorical variables by two groups . . . . .	114
2.22	Sample 21: Table 1 showing categorical variables by two groups, with p-values . . . . .	119
2.23	Sample 22: Table 1 showing categorical and continuous variables by two groups . . . . .	125
2.24	Sample 23: Table 1 showing categorical and continuous variables by two groups, with p-values . . . . .	131
2.25	Sample 24: Table 1 showing categorical variables, only “yes” responses . . . . .	139
<b>3</b>	<b>Creating tables of descriptive statistics with dtable</b>	<b>145</b>
3.1	Exploring how to make tables with dtable . . . . .	146
3.1.1	Exporting to a Word document with collect commands . . . . .	151
3.1.2	Exporting to a Word document with the export option . . . . .	152
3.2	Customizing variable labels and factor labels . . . . .	153
3.2.1	Customizing variable labels . . . . .	153
3.2.2	Customizing labels of the levels of factor variables . . . . .	154
3.2.3	Reordering the levels of factor variables . . . . .	156
3.2.4	Summary . . . . .	158

3.3	Customizing the numeric format . . . . .	159
3.4	Customizing the string format . . . . .	162
3.5	Selecting the variable statistics . . . . .	165
3.5.1	Statistics for continuous variables . . . . .	165
3.5.2	Statistics for factor variables . . . . .	168
3.6	Composite results . . . . .	170
3.6.1	Composite 1: [minimum-maximum] . . . . .	170
3.6.2	Composite 2: mean±SD . . . . .	172
3.6.3	Composite 3: mean±SD and sometimes [minimum-maximum] . . . . .	174
3.7	Customizing titles, notes, and display of the sample frequency . . . . .	176
3.7.1	Column header for summary statistics . . . . .	177
3.7.2	Titles and notes . . . . .	178
3.7.3	The sample frequency . . . . .	179
3.8	Grouping results with the <code>by()</code> option . . . . .	183
3.8.1	Adding and customizing tests comparing groups . . . . .	185
3.8.2	Customizing display of the sample frequency . . . . .	188
3.8.3	Customizing the column order of the by-groups . . . . .	190
3.9	Adding row headers . . . . .	192
3.9.1	Row headers for all variables . . . . .	195
3.9.2	Row headers for some variables . . . . .	196
3.9.3	Row headers with by-groups, tests, and N as separate labels . . . . .	199
3.9.4	Row headers with by-groups, placing total first . . . . .	201
3.9.5	Showing yes-only responses . . . . .	203
3.10	Complete examples . . . . .	207
3.10.1	Table of summary statistics, one group . . . . .	207
3.10.2	Summary statistics, by two groups, with p-values . . . . .	209
3.10.3	Composite results, by two groups, with p-values . . . . .	210
3.10.4	Summary statistics, by two groups, with p-values, headers, and yes-only responses . . . . .	212

<b>4</b>	<b>Creating and exporting regression tables</b>	<b>215</b>
4.1	The big picture of creating regression tables . . . . .	216
4.2	Multiple regression models . . . . .	219
4.3	Several models (model 1, model 2, and model 3) . . . . .	234
4.4	Multivariate models . . . . .	245
4.4.1	Multivariate regression . . . . .	245
4.4.2	Multivariate regression using sem command . . . . .	248
4.5	Tables with multiple multivariate models . . . . .	252
4.6	Models including factor variables . . . . .	262
4.7	Models including interactions of factor variables . . . . .	273
4.8	Logistic and other nonlinear models . . . . .	288
4.8.1	Logistic regression . . . . .	289
4.8.2	Poisson regression . . . . .	292
4.9	Models with multiple equations . . . . .	293
4.9.1	Multinomial logistic regression . . . . .	294
4.9.2	Zero-inflated models . . . . .	301
4.10	Customizing regression tables . . . . .	304
4.10.1	Formatting p-values . . . . .	304
4.10.2	Titles, notes, and stars . . . . .	305
4.10.3	Composite results . . . . .	309
4.10.4	Standardized coefficients . . . . .	314
4.10.5	Customizing labels and headers . . . . .	315
4.10.6	Adding customized headers . . . . .	321
4.10.7	Making tables that include model statistics . . . . .	325
4.10.8	Results you can access via the result dimension . . . . .	341
4.10.9	Using autolevels . . . . .	347
4.10.10	Customizing cells . . . . .	350
4.10.11	Custom styles . . . . .	365

<b>5</b>	<b>Creating tables: Under the hood</b>	<b>377</b>
5.1	Multiple regression . . . . .	377
5.2	Regression tables with multiple models . . . . .	389
5.3	Correlations with summary statistics in the rows . . . . .	393
5.4	Correlations with summary statistics in the columns . . . . .	397
	<b>Appendixes</b>	<b>403</b>
<b>A</b>	<b>More on exporting tables</b>	<b>405</b>
A.1	More on exporting tables to Word . . . . .	405
A.1.1	Controlling the table width and column widths . . . . .	405
A.1.2	Adding and customizing text . . . . .	408
A.1.3	Adding formatted titles and formatted notes . . . . .	409
A.1.4	Multiple lines of formatted notes . . . . .	410
A.1.5	Dropping a row . . . . .	411
A.1.6	Titles, notes, and stars with regression results . . . . .	412
A.2	More on exporting PDF files . . . . .	414
A.2.1	Specifying the table width and relative column widths . . . . .	414
A.2.2	Adding and customizing text . . . . .	415
A.2.3	Adding formatted titles and formatted notes . . . . .	416
A.2.4	Multiple lines of formatted notes . . . . .	417
A.2.5	Dropping a row . . . . .	418
A.2.6	Titles, notes, and stars with regression results . . . . .	419
A.3	More on exporting Excel files . . . . .	420
A.3.1	Create a simple table; export it to Excel . . . . .	420
A.3.2	Adding titles and notes . . . . .	421
A.3.3	Export via putexcel . . . . .	422
A.3.4	Adding and customizing text . . . . .	423



<b>B</b>	<b>Creating tables of estimation results using etable</b>	<b>425</b>
B.1	Multiple regression . . . . .	425
B.2	Tables based on multiple estimation commands . . . . .	429
B.3	Multivariate regression . . . . .	432
<b>C</b>	<b>Tips for handling common errors</b>	<b>435</b>
C.1	Forgetting collect clear . . . . .	435
C.2	Forgetting the modify option . . . . .	437
C.3	Changing the wrong label . . . . .	438
C.4	Ignoring notes or warnings . . . . .	441
C.5	Forgetting to display the label . . . . .	443
<b>D</b>	<b>Making reusable code: Nested regression</b>	<b>445</b>
D.1	Table of model statistics . . . . .	445
	D.1.1 Attempt 1 . . . . .	446
	D.1.2 Attempt 2 . . . . .	447
	D.1.3 Recap: nestreg1.do . . . . .	449
D.2	Table with regression coefficients and model statistics . . . . .	450
	D.2.1 Recap: nestreg2.do . . . . .	454
	<b>Subject index</b>	<b>457</b>

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# Preface

A key step in writing a manuscript for publication is creating properly formatted tables presenting statistical results. There are many ways to approach creating such tables. You might create the tables manually, typing in each result. You might write a program to help automate the process. Or you might use one of the community-contributed tools that help create publication-quality tables from statistical output.

Starting with Stata 17, you have new options. You can use the tools built into Stata for creating publication-quality tables. These tools include the reimagined `table` command, the new `dtable` command (which requires Stata 18), the new `etable` command, and the new `collect` suite of commands. Each of these is based on the `collect` system and can be used independently or collaboratively. These tools can gather statistical results, format them as a table, customize the table, and export the table in various file formats (for example, a Word document, an Excel file, a PDF file, an HTML file, or a  $\text{\LaTeX}$  file).

The focus of this book is on the `dtable` command and the `collect` suite of commands. The `dtable` command allows you to create tables of descriptive statistics, such as those shown in “Table 1” of a journal article. The `collect` commands for creating and exporting tables are general—they can be used with any estimation command and any command that stores results. These tools are flexible—you can format the tables in many ways. They are also powerful—you can combine and customize results from multiple commands. However, any tool that is general, flexible, and powerful will naturally be complex. I have specifically designed this book to address the unique challenges of learning these tools.

- **This book includes numerous complete examples.** The commands to create a table can feel like a jigsaw puzzle. Even if you have all the pieces, it can be unclear how to assemble them to make the picture. I show how the commands combine to create a table and show how to export that table. In fact, chapter 2 includes 24 sample tables. These samples are designed to illustrate how you can create many common tables. I hope that these samples can act as templates that you can use as starting points for creating your tables, letting you succeed in creating complex tables with many customizations.
- **This book focuses on both the trees and the forest.** While I do focus on complete examples, I also focus on building those examples one step at a time. Once an example is completed, I bring the pieces together in sections I call *Recap*, which show the assembled puzzle showing you the complete picture.

- **This book goes under the hood.** I take you under the hood in chapter 5 to explain the inner workings of creating tables, illustrating the contents of collections and the inner workings of the `collect` system. This chapter will help build your skills in understanding and creating tables.

Writing this book, which illustrates and explains how to create and export tables, has been uniquely challenging, perhaps the most challenging book I have written. I hope it is useful to you, and I hope you like it!

*(Pages omitted)*

## 4 Creating and exporting regression tables

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4.1	The big picture of creating regression tables . . . . .	216
4.2	Multiple regression models . . . . .	219
4.3	Several models (model 1, model 2, and model 3) . . . . .	234
4.4	Multivariate models . . . . .	245
4.4.1	Multivariate regression . . . . .	245
4.4.2	Multivariate regression using sem command . . . . .	248
4.5	Tables with multiple multivariate models . . . . .	252
4.6	Models including factor variables . . . . .	262
4.7	Models including interactions of factor variables . . . . .	273
4.8	Logistic and other nonlinear models . . . . .	288
4.8.1	Logistic regression . . . . .	289
4.8.2	Poisson regression . . . . .	292
4.9	Models with multiple equations . . . . .	293
4.9.1	Multinomial logistic regression . . . . .	294
4.9.2	Zero-inflated models . . . . .	301
4.10	Customizing regression tables . . . . .	304
4.10.1	Formatting p-values . . . . .	304
4.10.2	Titles, notes, and stars . . . . .	305
4.10.3	Composite results . . . . .	309
4.10.4	Standardized coefficients . . . . .	314
4.10.5	Customizing labels and headers . . . . .	315
4.10.6	Adding customized headers . . . . .	321
4.10.7	Making tables that include model statistics . . . . .	325
4.10.8	Results you can access via the result dimension . . . . .	341
4.10.9	Using autolevels . . . . .	347
4.10.10	Customizing cells . . . . .	350
4.10.11	Custom styles . . . . .	365

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This chapter will illustrate how to create regression tables based on various regression models. At key junctures, I will have a section titled *Recap*, where I illustrate the entire process of creating and exporting a table. For this chapter, the examples will illustrate

how to export tables as Word documents. You can see more complete examples showing how to create and export eight different sample regression tables in chapter 2—see samples 1 to 8.

## 4.1 The big picture of creating regression tables

In this chapter, I provide examples that I hope clearly show how you can create tables of your regression results. The examples can sometimes be filled with so many details that you can lose sight of the big picture. I want to begin this chapter by emphasizing the major steps of creating tables of regression results. I describe this as a four-step process.

### Step 1: Collect the regression results

The first step is to use `collect` in conjunction with an estimation command (like `regress`, `logistic`, `mlogit`, or `mixed`).

```
. use nhanes2-cetus
. collect clear
. collect: regress tresult bmi age
```

Source	SS	df	MS	Number of obs	=	10,351
Model	4251212.07	2	2125606.04	F(2, 10348)	=	1047.76
Residual	20993163.6	10,348	2028.71701	Prob > F	=	0.0000
				R-squared	=	0.1684
				Adj R-squared	=	0.1682
Total	25244375.7	10,350	2439.07011	Root MSE	=	45.041

tresult	Coefficient	Std. err.	t	P> t	[95% conf. interval]
bmi	1.055147	.0914279	11.54	0.000	.8759302 1.234363
age	1.087691	.0261034	41.67	0.000	1.036523 1.138858
_cons	138.9718	2.489416	55.83	0.000	134.0921 143.8516

### Step 2: Lay out the results into rows and columns

I next use the `collect composite define` command to create a composite result named `coefse`, containing the coefficient and standard error (SE). Next I use the `collect layout` command to lay out the structure of the table, specifying the rows and columns.

```
. collect composite define coefse = _r_b _r_se, trim
. collect layout (colname) (result[coefse])
Collection: default
  Rows: colname
  Columns: result[coefse]
Table 1: 3 x 1
```

	Coefficient	Std. error
Body mass index	1.055147	.0914279
Age	1.087691	.0261034
Intercept	138.9718	2.489416

### Step 3: Customize the table

In this step, I format the results, specifying three digits after the decimal. I also place parentheses around the SEs. Then I customize the labels. Lastly, I use the `collect stars` command to create and add stars that indicate the statistical significance, showing the stars after the coefficient.<sup>1</sup>

```
01: * Format results
02: collect style cell, nformat(%5.3f)
03: collect style cell result[_r_se], sformat("(%s)")
04: * Customize labels
05: collect label levels colname bmi "BMI", modify
06: collect label levels result coefse "Coef (SE)", modify
07: * Additional customizations
08: collect stars _r_p 0.001 "***" 0.01 "**" 0.05 "*", attach(_r_b) shownote
```

The `collect preview` command shows the customized table.

```
. collect preview
```

	Coef (SE)
BMI	1.055*** (0.091)
Age	1.088*** (0.026)
Intercept	138.972*** (2.489)

\*\*\* p<.001, \*\* p<.01, \* p<.05

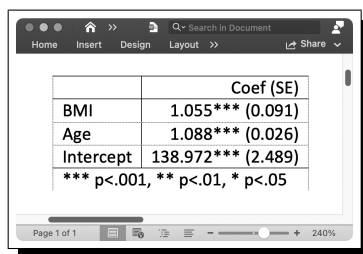
1. You could also customize the table using a style file as described in section 4.10.11 on page 365.



## Step 4: Export the table

At this stage, you might want to export the table. In this example, I want to export the table as a .docx file. I first use the `collect style` command to specify that the table width should automatically fit the table contents. I then use the `collect export` command to export the table as a Word document. This exports the document in memory to `Reg1.docx`, which is shown in figure 4.1.

```
. collect style putdocx, layout(autofitcontents)
. collect export Reg1.docx
(collection default exported to file Reg1.docx)
```



	Coef (SE)
BMI	1.055*** (0.091)
Age	1.088*** (0.026)
Intercept	138.972*** (2.489)
*** p<.001, ** p<.01, * p<.05	

Figure 4.1. Reg1.docx

## Recap

I gathered the commands from the prior four steps and have repeated them below so that you can see all the commands at once.

```
01: *** Step 1: Collect the regression results
02: use nhanes2-cetus
03: collect clear
04: collect: regress tresult bmi age
05: *** Step 2: Lay out the results into rows and columns
06: collect composite define coefse = _r_b _r_se, trim
07: collect layout (colname) (result[coefse])
08: *** Step 3: Customize the table
09: * Format results
10: collect style cell, nformat(%5.3f)
11: collect style cell result[_r_se], sformat("(%)s")
12: * Customize labels
13: collect label levels colname bmi "BMI", modify
14: collect label levels result coefse "Coef (SE)", modify
15: * Additional customizations
16: collect stars _r_p 0.001 "***" 0.01 "***" 0.05 "*", attach(_r_b) shownote
17: *** Step 4: Export table as Word document
18: collect style putdocx, layout(autofitcontents)
19: collect export Reg1.docx
```