Title

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Example 5 — Table of regression coefficients and confidence intervals

Description Remarks and examples Reference Also see

Description

In this example, we demonstrate how to collect results from a regression and create a table of coefficients and confidence intervals. We also show how to customize the resulting table.

Remarks and examples

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Remarks are presented under the following headings:

Collecting regression results and creating a table

Below, we use data from the Second National Health and Nutrition Examination Survey (NHANES II) (McDowell et al. 1981). We fit a model for systolic blood pressure (`bpsystol`) as a function of `age`, `weight`, and the region of the country the individual resides in. We first create a new collection named `ex5` and then use the `collect` prefix to collect the coefficients (`_r_b`) and confidence intervals (`_r_ci`) into the this collection.

```
. use https://www.stata-press.com/data/r18/nhanes2l
(Second National Health and Nutrition Examination Survey)
. collect create ex5
(current collection is ex5)
. collect _r_b _r_ci: regress bpsystol age weight i.region
```

Source	SS	df	MS	Number of obs	=	10,351
				F(5, 10345)	=	900.55
Model	1708779.02	5	341755.804	Prob > F	=	0.0000
Residual	3925891	10,345	379.496472	R-squared	=	0.3033
				Adj R-squared	=	0.3029
Total	5634670.03	10,350	544.412563	Root MSE	=	19.481

bpsystol	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
age	.6383029	.0111397	57.30	0.000	.6164668	.6601389
weight	.4069294	.0124796	32.61	0.000	.382467	.4313917
region						
MW	-.2397311	.5640029	-0.43	0.671	-1.345286	.8658237
S	-.6187414	.5604584	-1.10	0.270	-1.717348	.4798654
W	-.8617777	.570496	-1.51	0.131	-1.98006	.2565047
_cons	71.70779	1.107732	64.73	0.000	69.53642	73.87916

In fact, all visible `e()` results are collected from our regression and stored as levels of the dimension `result`. But by specifying those two results, we have set them to be automatically included in a table when we include the dimension `result`.

Now, we can use `collect layout` to arrange the results into a table. We place the covariate names (`colname`) on the rows and the statistics (`result`) on the columns:

```
. collect layout (colname) (result)
Collection: ex5
      Rows: colname
   Columns: result
   Table 1: 7 x 2
```

	Coefficient	95% CI	
Age (years)	.6383029	.6164668	.6601389
Weight (kg)	.4069294	.382467	.4313917
NE	0		
MW	-.2397311	-1.345286	.8658237
S	-.6187414	-1.717348	.4798654
W	-.8617777	-1.98006	.2565047
Intercept	71.70779	69.53642	73.87916

Notice that the statistics are labeled and that the variable labels and value labels are used in the table as well.

Customizing the table

With just a few modifications, we can make the table above look better.

By default, the base levels of factor variables are included in the table. Below, we remove the base levels. Then, we get a preview of our table.

```
. collect style showbase off
. collect preview
```

	Coefficient	95% CI	
Age (years)	.6383029	.6164668	.6601389
Weight (kg)	.4069294	.382467	.4313917
MW	-.2397311	-1.345286	.8658237
S	-.6187414	-1.717348	.4798654
W	-.8617777	-1.98006	.2565047
Intercept	71.70779	69.53642	73.87916

We would also like to format the statistics to two decimal places. We can do this with `collect style cell`. By not specifying a dimension, we have applied this formatting to all cells in the table with numeric content. The table would look neater if we enclose the confidence intervals in brackets and use a comma as the delimiter. This formatting applies only to the confidence intervals (`_r_ci`), so we specify the dimension and level with `collect style cell`. Then, we remove the vertical border and preview our table once more.

```
. collect style cell, nformat(%5.2f)
. collect style cell result[_r_ci], sformat("[%s]") cidelimiter(", ")
. collect style cell border_block, border(right, pattern(nil))
. collect preview
```

	Coefficient	95% CI
Age (years)	0.64	[0.62, 0.66]
Weight (kg)	0.41	[0.38, 0.43]
MW	-0.24	[-1.35, 0.87]
S	-0.62	[-1.72, 0.48]
W	-0.86	[-1.98, 0.26]
Intercept	71.71	[69.54, 73.88]

The last thing that would make this table complete would be to display stars for significance. Below, we define the levels of the p-values, stored in `_r_p`, for which stars should be shown. We will display three stars for p-values less than 0.01, two stars for values less than 0.05, and one star for values less than 0.1. Additionally, we have added three spaces to all other results, so that our results will be aligned when viewing them in plain text or in the Stata Markup and Control Language format. We can display the stars in a separate column, but below we attach them to the coefficients (`_r_b`). Then, we simply add a note explaining the significance represented by the stars and preview our table for the last time.

```
. collect stars _r_p 0.01 "***" 0.05 "** " 0.1 "*  " 1 "   ", attach(_r_b)
. collect notes : "*** p<.01, ** p<.05, * p<.1"
. collect preview
```

	Coefficient	95% CI
Age (years)	0.64***	[0.62, 0.66]
Weight (kg)	0.41***	[0.38, 0.43]
MW	-0.24	[-1.35, 0.87]
S	-0.62	[-1.72, 0.48]
W	-0.86	[-1.98, 0.26]
Intercept	71.71***	[69.54, 73.88]

*** p<.01, ** p<.05, * p<.1

Note that we could have easily added the note using the `shownote` option with `collect stars`. However, this note would have included `p<1`, so we instead added our custom note with `collect notes`.

Reference

McDowell, A., A. Engel, J. T. Massey, and K. Maurer. 1981. Plan and operation of the Second National Health and Nutrition Examination Survey, 1976–1980. *Vital and Health Statistics* 1(15): 1–144.

Also see

[TABLES] **collect style cell** — Collection styles for cells

[TABLES] **collect style showbase** — Collection styles for displaying base levels