

# Reproducible and automated reporting

- Reproducible reports in Word, Excel, HTML, and PDF
  - Markdown with dynamic document features creates HTML and Word documents
  - Create customized Word, Excel, and PDF documents
- Automated reports
  - Update reports as data change
  - Rerun one command or do-file to automatically update your entire document
- Create reports that intermix
  - Formatted text and tables
  - Summary statistics
  - Regression results
  - Stata graphics and other images in SVG, PNG, EPS, TIFF, and EMF formats
- Customize tables of Stata results
  - Create tables of results from any Stata command
  - Customize layout, fonts, headers, formats, titles, footnotes, and more
  - Reuse your style in future tables
  - Export to Word, Excel, L<sup>A</sup>T<sub>E</sub>X, PDF, HTML, and Markdown
  - Incorporate tables in complete reports

## Truly reproducible

Stata makes reproducible research easy. With Stata's integrated version control, you can use the **version 19** command, and any code you run today will produce the same results in whatever release of Stata you are running 10, 20, or more years from now. Stata handles backward compatibility for you. With the **datasignature** command, you can verify that your data have not changed. And when these tools for reproducibility are paired with the scripts that create your reports, you can easily create reproducible reports. Rerun your commands at any time and re-create your report.

## Customizable tables

With the **table** command, you can easily create cross-tabulations, tables of summary statistics, and tables of results from other Stata commands while customizing numeric formats, table layout, and more. Additionally, you can create a table with descriptive statistics, commonly known as a "Table 1", and export the results in a single step with the **dtable** command. And when you want to report results from one or more regression commands—whether they are linear regressions, panel-data models, survival models, or other regression models—the **etable** command makes this easy. With the **collect** suite of commands, you can collect results from Stata commands and then customize your layout, labels, headers, fonts, titles, and other features of the table. When you have a style you like, you can save it and apply it to tables you create in the future.

## Dynamic and automated documents

Whether you prefer reporting in HTML, Word, Excel, or PDF, you can easily make your reports dynamic. Say that you need to run the same report each month, updating the results using new data. Simply rerun the commands that created the report with the updated dataset. All Stata results in the report, including graphs and tables, are updated automatically.

The screenshot shows the Stata Tables Builder interface. The 'Tables Builder' window is open, displaying a 'Preview' section with a table of results. The table has columns for 'Nomunion', 'Union', and 't or  $\chi^2$ '. The rows include 'College graduate', 'SMSA', 'NonSMSA', 'Central City', 'Job tenure (years)', 'Usual hours worked', and 'Hourly wage'. The 'Preview' section also shows a regression results table with columns for '1', '2', '3', and '4'. The regression results table includes variables like 'mvalue', 'kstock', and 'mvalue x kstock', along with coefficients, standard errors, and p-values. The 'Tables Builder' window also shows a 'Dimensions' section with 'collection', 'Levels', and 'Columns' options.

	Nomunion	Union	t or $\chi^2$
College graduate			
No	1,101 (78%)	313 (68%)	p<0.001
Yes	316 (22%)	148 (32%)	
SMSA			
NonSMSA	443 (31%)	106 (23%)	p<0.001
SMSA	591 (42%)	182 (39%)	
Central City	383 (27%)	173 (38%)	
Job tenure (years)	6.14 (5.41)	7.89 (6.11)	
Usual hours worked	37.26 (10.23)	38.66 (9.11)	p<0.009
Hourly wage	7.20 (4.10)	8.67 (4.17)	p<0.001

	1	2	3	4
mvalue	0.05*** [0.02, 0.07]	0.07*** [0.05, 0.09]	0.09*** [0.08, 0.11]	0.09*** [0.08, 0.10]
kstock	-0.10* [-0.20, 0.00]	0.07** [0.01, 0.13]	0.01 [-0.07, 0.10]	0.05 [-0.02, 0.12]
mvalue x kstock	0.00*** [0.00, 0.00]	0.00*** [0.00, 0.00]	0.00*** [0.00, 0.00]	0.00*** [0.00, 0.00]
Year fixed effects	YES	NO	YES	NO
Company fixed effects	YES	YES	NO	NO
R-squared	0.87	0.84	0.85	0.85
Number of observations	200	200	200	200

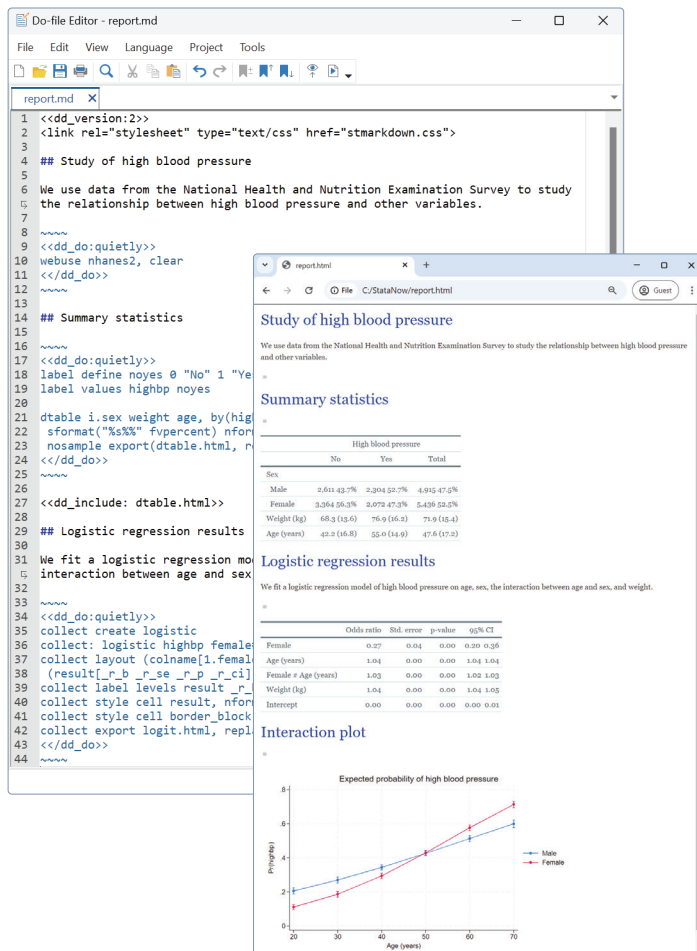
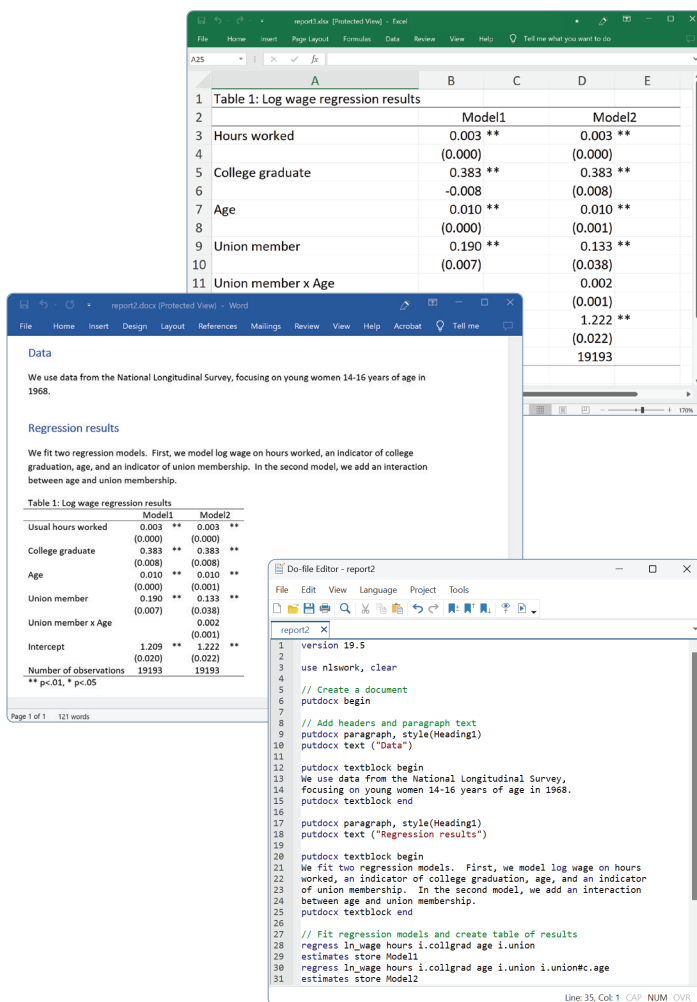
\*p<0.05, \*\*p<0.01, \*\*\*p<0.001

## Markdown to HTML or Word

Convert dynamic Markdown documents to HTML and Word using **dyndoc**. To start, create a text file that intermixes the Markdown text-formatting language with the Stata commands that create the output you want. Include dynamic tags (terms in `<< ... >>`) to give Stata instructions about executing commands and incorporating results. Then create your HTML or Word document by typing

- `dyndoc report.md`
- or
- `dyndoc report.md, docx`

Want to change the style? Use different CSS, and automatically change the look and feel of your document.



## Customized Word, PDF, and Excel files

With **putdocx**, **putpdf**, and **putexcel**, you can create customized Word, PDF, and Excel files that incorporate results from Stata commands, graphs, formatted text, and tables. For example,

Begin a document

- `putdocx begin`

Add text

- `putdocx textblock begin`
- • •
- `putdocx textblock end`

Add a graph

- `putdocx image`

Add a customized table

- `putdocx collect`

Save a document

- `putdocx save`

With a short script composed of similar commands, you can easily create a complete report.