Creating \LaTeX\ documents from within Stata

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Introduction

- texdoc is a new command to create $\LaTeX$ documents from within Stata.
- texdoc is especially convenient to create $\LaTeX$ documents that contain Stata output.
- texdoc is like weaving, but all Stata.
- I use it for teaching, e.g. to create solutions for class assignments.
- I also use it for Stata Journal articles.
Create a \LaTeX{} document (interactive mode)

\begin{verbatim}
texdoc init docname [, replace ]
tex line 1
tex line 2
...
texdoc close
\end{verbatim}
Syntax and Usage

- Include Stata output in \LaTeX{} document

```
texdoc_init docname [, replace ... ]
...
```

```
texdoc_stlog [name]
... commands ...
texdoc_stlog_close
```

```
...
texdoc_close
```
Syntax and Usage

- Within `texdoc stlog`, type
  \[
  \texttt{texdoc \_stlog \_oom command}
  \]
  to suppress output (and print "(output omitted)"").

- Furthermore, within `texdoc stlog` type
  \[
  \texttt{texdoc \_stlog \_cnp}
  \]
  to continue output on next page (and print "(continued on next page)"").
Syntax and Usage

- Non-interactive mode: Process a do-file containing \texttt{texdoc} commands.

\begin{verbatim}
texdoc do filename [, init(docname) close replace ... ]
\end{verbatim}

- In non-interactive mode you can use the \texttt{/*tex ... tex*/} comment structure to include blocks of \LaTeX{} code.

- \texttt{init() and close} can also be specified within the do-file using \texttt{texdoc init} and \texttt{texdoc close}

- Get rid of all \LaTeX{} and \texttt{texdoc} commands:

\begin{verbatim}
texdoc strip oldfile newfile [, replace ]
\end{verbatim}
Examples
Create homework assignment (interactive mode)

```
. texdoc init assignment
(texdoc output file is assignment.tex)
. tex \documentclass[12pt]{article}
. tex
. tex \begin{document}
. tex
. tex \section{Assignment A}
. tex
. tex \subsection{Exercise 1}
. tex
. tex Open auto.dta and describe the data.
. tex
. tex \subsection{Exercise 2}
. tex
. tex Run some regressions.
. tex
. tex \subsection{Exercise 3}
. tex
. tex Draw a scatter plot.
. tex
. tex \subsection{Exercise 4}
. tex
. tex Draw a histogram.
. tex
. tex \end{document}
. texdoc close
(texdoc output written to assignment.tex)
```
Assignment A

Exercise 1
Open auto.dta and describe the data.

As we can see, the mean price is 6165.

Exercise 2
Run some regressions.

Exercise 3
Draw a scatter plot.

Exercise 4
Draw a histogram.
Issues

- `texdoc do` always runs everything, that is it
  - cannot process \LaTeX{} without running Stata commands,
  - cannot run Stata commands without processing \LaTeX{}.

- An option to copy the pieces of Stata output directly into the \LaTeX{} document instead of using external log files would be nice.

- `texdoc stlog` relies on `sjlog`, which has some limitations:
  - linesize is fixed
  - closes the (unnamed) default log

- `texdoc do` does not exit the do-file on exit

- Overall, `texdoc` is only for small documents. I would not use it to produce a whole book or so. Also, `texdoc` is suited primarily for documents where Stata plays an important role. If the document is mostly \LaTeX{} then an alternative approach should probably be followed . . .
Alternative approach

- Make \LaTeX{} the default and tag Stata commands.
- That is, define a \LaTeX{} document containing blocks of Stata code such as

\begin{verbatim}
\begin{stata}
  ... commands ...
\end{stata}
\end{verbatim}

\begin{verbatim}
\begin{stlog}
  ... commands ...
\end{stlog}
\end{verbatim}

and then process the file e.g. as follows

\texttt{dotex filename}

- Implementation would not be much more complicated than the implementation of \texttt{texdoc}.
Thanks for listening!