Publication Ready LaTeX Tables in Stata

Using TexResults2

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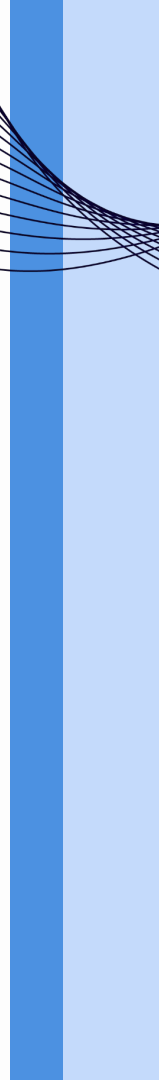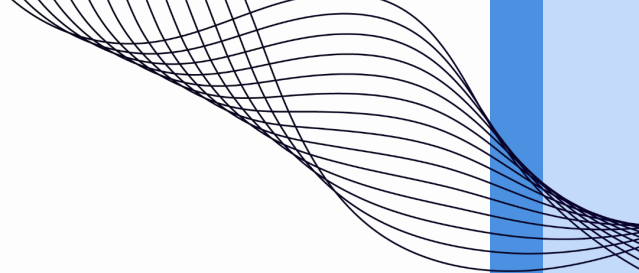
Workshop Outline

01   **Introduction LaTeX & Texresults2**

02   **Stata Demonstration**
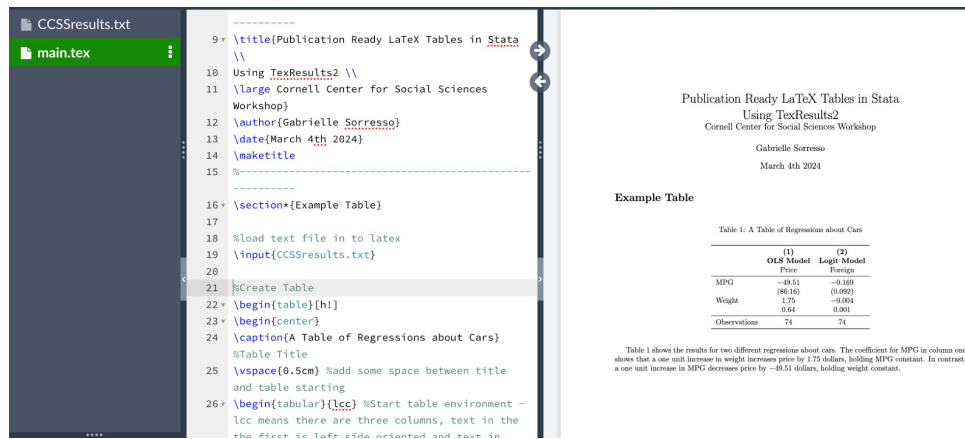
03   **LaTeX Demonstration in Overleaf**

04   **Bonus Content**

What is LaTex?

- A software for creating documents – however, unlike MS Word, users edit the LaTex markup side to describe the document and its features
  - Then a PDF (which can not be directly edited by the user) is compiled
- Commonly used in academia – has many benefits such as:
  - Nice Table Creation Features
  - Citation management system
  - Easy mathematical symbols

  - We will use **Overleaf** to access LaTex– an online LaTex editor

Can I use Stata and LaTeX Together?

- There are a number of different packages you can use that can integrate Stata output (generally as a tables) that is usable in LaTex documents

- Generally these commands output premade text to create a LaTeX table
  - Examples include: <u>estout</u> and <u>outreg2</u>

- Or allow you to create macros that hold estimation results so you can create your own table in LaTeX
  - Examples include: Texresults2!

Why work in this way?

Allows for Automation
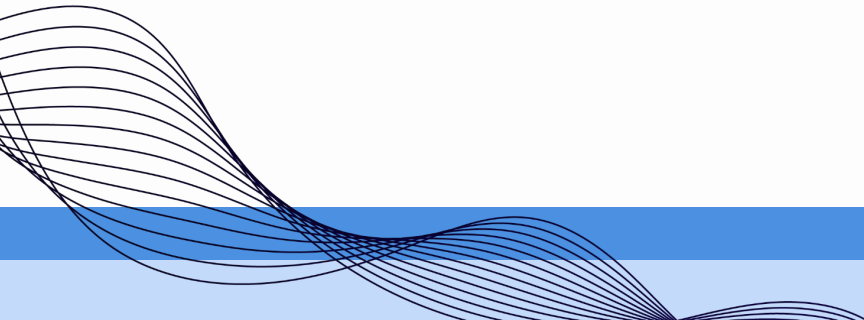
Saves users valuable time by reducing manual table creation

Reduces Error

Eliminates human error from inputting numbers into a table manually

Publication Standard

Many journals require manuscripts to be submitted in LaTex

What is TexResults2?

- Texresults2 is a Stata package that allows users to create text files containing LaTeX Macros that store estimation results (like regression coefficients)
- The text file which can be uploaded to LaTex and the Macros can be referenced in a user created LaTeX table or in text

- It builds on the original package (TexResults by Alvaro Carril) but fixes previous bugs and adds functionality
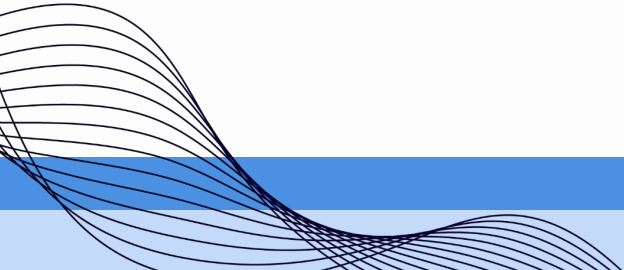
Advantages of TexResults2?

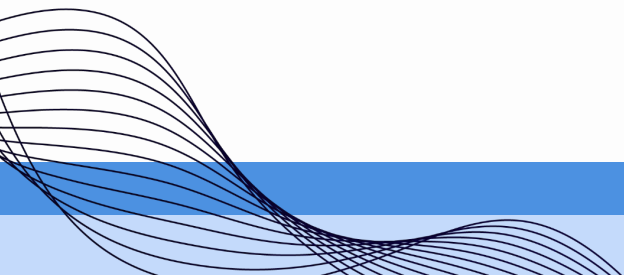- Main advantages of Texresults2 over packages like estout and outreg2:
    1. Complete flexibility in table creation
    2. Ability to reference macros in text

- One clear disadvantage:
    1. High fixed cost of setting up table (although AI can help!)

How to use TexResults2?

After an estimation command (generally a regression) the user can run:

```
texresults2 using {filename}, texmacro(macroname)
resulttype(coefficient or scalar name) replace/append [{options}]
```

- **filename**: name for your text file
- **macroname**: name for your result you are exporting
  - This is how you will reference this result in LaTex
- **resulttype**: What are you exporting? Coefficient, standard error, etc
  - More on next slide
- **replace/append**: are you starting a new text file for the first time in a Do–File (replace) or do you want to add to an existing text file (append)

What Result Types Exist?

- **result** – this is the most general result type, use this to export any scalar stored in Stata
- **coef** – coefficient
- **se** – standard error
- **tstat** – t-statistic
- **pvaluez** – p –value
- **ubz or lbz** – upper or lower bound value in 95% confidence interval

Note: Include the z option when using a regression type where inference is based on a z-distribution instead of a t-distribution (like logit and probit models)

Any other options I should know?

```
texresults2 using {filename}, texmacro(macroname)
resulttype(coefficient or scalar name) replace/append
[{options}]
```

- Another useful option is `round(#)` – which will round your result to any desired number of decimal places
  - So `round(3)` – would round to the nearest thousandth
  - And `round(0)` – would have no decimal places
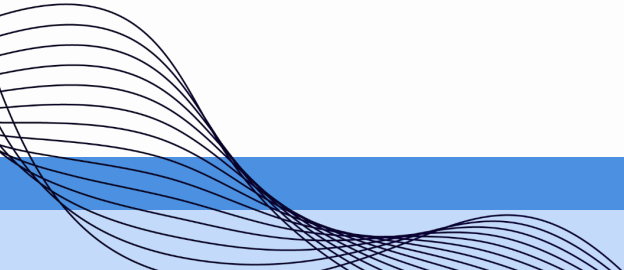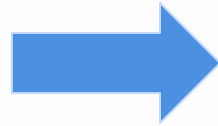 - The default is two decimal places
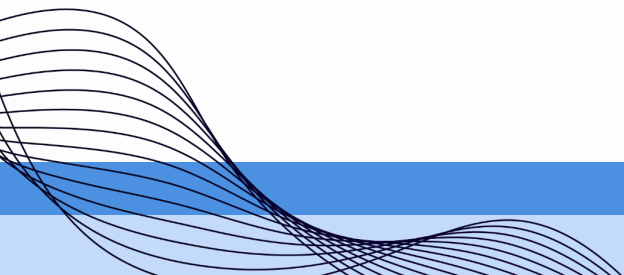
Let's move to Stata for a demo!
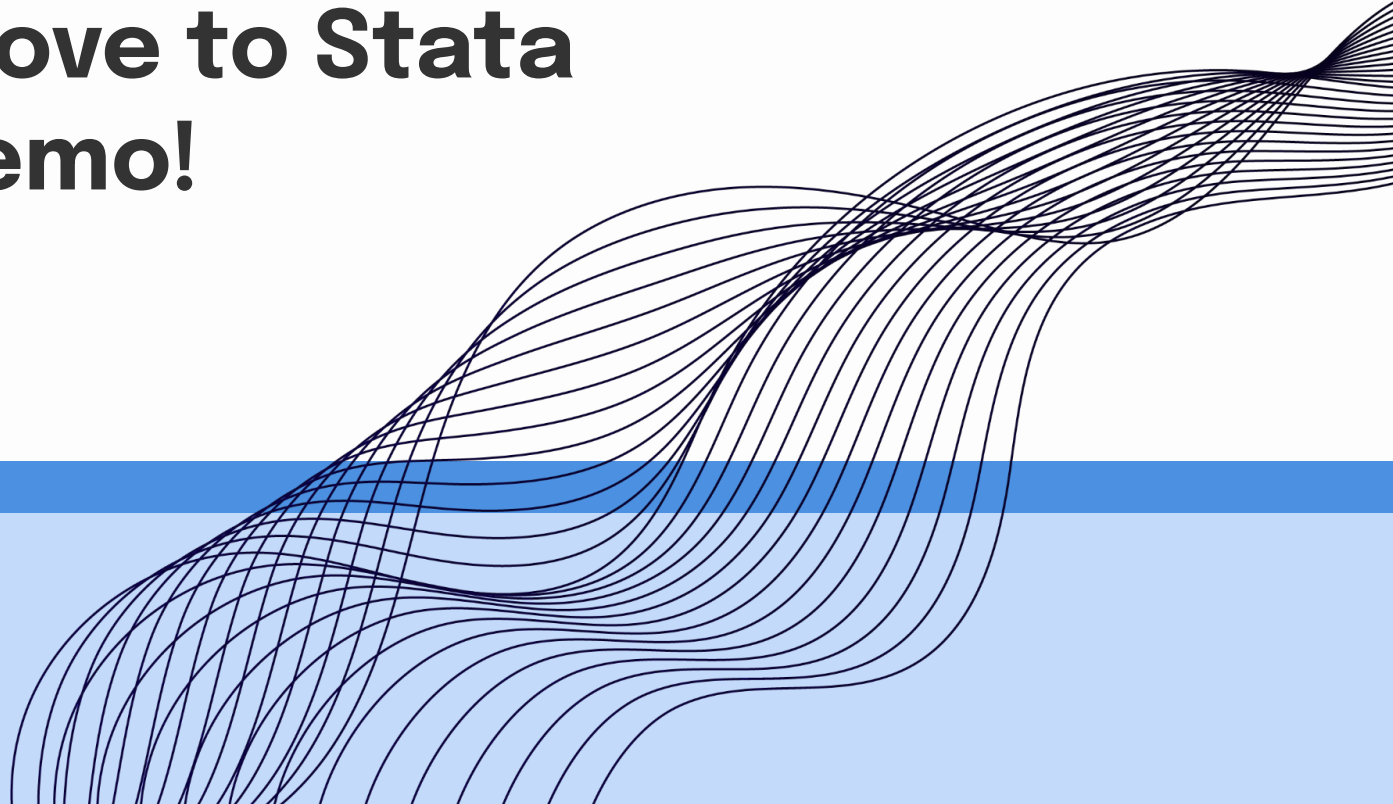
Some LaTex Resources:

- Overleaf – Learn LaTeX in 30 Minutes
- Overleaf Tutorials
- Link Overleaf and Dropbox (requires premium)
- David Wilkins Getting Started with LaTeX Guide

LaTeX Table Basics

```
\begin{table}[]
\begin{center}
\caption{My Table Title}
\begin{tabular}{lcc}
\toprule
   1 & 2  & 3   \\
   4 & 5 & 6   \\
\bottomrule
\end{tabular}
\end{center}
\end{table}
```

Table 1: My Table Title

| 1 | 2 | 3 |
| 4 | 5 | 6 |

LaTeX Table Basics

```
\begin{table}[]
\begin{center}
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\begin{tabular}{lcc}
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   1 & 2  & 3   \\
   4 & 5 & 6    \\
\bottomrule
\end{tabular}
\end{center}
\end{table}
```

Start and end table

Center table on page

Add a title to your table

LaTeX Table Basics

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\begin{table}[]
\begin{center}
\caption{My Table Title}
\begin{tabular}{lcc}
\toprule
    1 & 2 & 3   \\
    4 & 5 & 6   \\
\bottomrule
\end{tabular}
\end{center}
\end{table}
```

Start "table" part of table (rows and columns part)

The lcc tells LaTex this table has three columns, text in the first is left centered and text in the second two are centered

Add lines above and below table

Table content

& separates columns and \\ denotes the end of a row

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