The Stata Journal (2024)
24, Number 1, pp. 161–168 DOI: 10.1177/1536867X241233676

Browse and cite Stata manuals easily: The wwwhelp command

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Abstract. In this article, we describe a new command, `wwwhelp`, that facilitates direct access to online versions of Stata's official help files or PDF documentation. Addressing the challenges associated with storing, citing, and sharing documentation, `wwwhelp` complements the `help` command by enabling access to documentation outside the Stata environment. In addition to fully using the abundant resources available on Stata's website, `wwwhelp` enhances the convenience of citing Stata commands in articles and blog posts, thereby promoting the utilization and dissemination of Stata commands.

Keywords: pr0079, wwwhelp, hhelp, online, cite, help, Stata manuals

1 Introduction

Retrieving Stata's learning materials is crucial to the proficiency of Stata users and the continued development of the software. Users can browse help files offline and click on links for more detailed PDF documentation with the `help` command. However, the offline help files can be read and used only within Stata, and the offline PDF documentation,[1] which can also be accessed outside Stata, is too big to pinpoint and disseminate specific commands quickly and accurately. Fortunately, alternative versions of documentation for each official command are provided on Stata's website, including online help files and corresponding online PDF documentation, which are easier to navigate and share. The help files offer brief overviews of the official commands, while the PDF documentation provides more detailed explanations, such as *Remarks and examples* sections.[2] Below are links to good examples of an online help file and an online PDF documentation entry:

Help file: https://www.stata.com/help.cgi?regress
PDF documentation: https://www.stata.com/manuals/rregress.pdf

1. Users are often amazed at the first sight of the PDF documentation, which can explain complex models and backgrounds concisely. However, the PDF documentation is underutilized: Our survey of over 2,000 Chinese Stata users revealed that less than 20% had read the PDF documentation, and many were unaware that the 18,000-plus pages of PDF documentation are also available on Stata's website.
2. The *Remarks and examples* sections provide readable and easy-to-understand examples of the commands, which are useful for intensive study and for commands engaging complicated backgrounds or complex mathematics.

We developed a command, `wwwhelp`, that enables more convenient access to these resources outside Stata's environment. In addition, with options such as `texfull` or `markdown`, the `wwwhelp` command can display citations and links to online help files or PDF documentation in Stata's Results window that can be easily copied to the clipboard or documents in various formats such as `.tex` or `.md`. For advanced users aiming to share Stata knowledge in articles or blog posts, `wwwhelp` is particularly convenient for referencing Stata commands and providing links to relevant pages for readers' convenience, which enables readers without Stata installed or without a computer at hand to understand the detailed functions of Stata commands. For example, Gould (2010) wrote

> You can read the online help or the manual about the Mata function `luinv()`. I chose it because I needed a matrix inverter that could handle nonsymmetric matrices.

Users can type `wwwhelp mata luinv, texfull` to get the link and citation pasted into the clipboard automatically as

```
\href{https://www.stata.com/manuals/m-5mata luinv.pdf}
> {\bfseries{[\MakeUppercase{m-5}] mata luinv}}
```

which turns out to be the following readable text after being pasted into a `.tex` file and then compiled.

> You can read the online help or the manual about the Mata function **[M-5] mata luinv**. I chose it because I needed a matrix inverter that could handle nonsymmetric matrices.

For more detailed information, see section 2.3.

The remainder of the article is organized as follows. Section 2 introduces the usage of the `wwwhelp` command. Section 3 concludes. For more details of the conceptual framework and programming challenges, please see the appendix.

2 Syntax and usage

2.1 Syntax

`wwwhelp` *command* [`, web markdown txt ms texfull latex format(#) clipoff`]

2.2 Common use

`wwwhelp` is used to open the online help files and PDF documentation of Stata's official commands. Specifically, the documents that can be opened directly using the `help` command can also be opened online using the `wwwhelp` command, including both detailed PDF versions and simple help versions. By default, `wwwhelp` opens the online PDF version, which contains detailed descriptions and explanations of a specific command. When the `web` option is specified, the online help version will be opened so that users can quickly look at the basic information of commands. For example, one can type the following command:

```
. wwwhelp xtreg
```

It will open a 30-page PDF version of the documentation that details how to use the `xtreg` command. The document is opened through the browser and can be easily downloaded, cited, and shared.

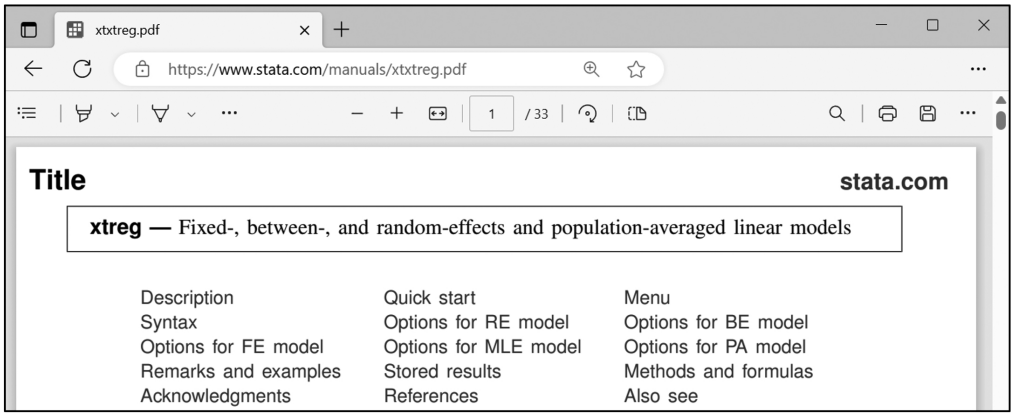

Figure 1. Open PDF documentation via `wwwhelp`

Now we add the `web` option.

```
. wwwhelp xtreg, web
```

This command will open a simple online help file that concisely describes the syntax of `xtreg` and offers a brief introduction of uses and functions of the command. The online help files are small and useful supplements to the PDF documentation, facilitating dissemination and reference. Furthermore, we have written `hhelp`, a simpler command based on `wwwhelp` that allows faster access to the online help versions without any options. So `wwwhelp xtreg, web` is equivalent to `hhelp xtreg`.

Figure 2. Open online help file via `wwwhelp` with option `web` or `hhelp`

2.3 Citing with various formats

To enhance the convenience of citation, the `wwwhelp` command has incorporated various formatting options, including `markdown`, `txt`, `ms`, `latex`, `texfull`, and `format()`, and has enabled users to access web links to the online documentation in their desired format. Notably, the text will be automatically copied to the clipboard; users can disable this automatic copying function with the `clipoff` option if they wish. For more information, refer to the online appendix. In this section, we will introduce the referencing feature of `wwwhelp` through specific scenarios and provide a detailed explanation of formatting options.

In practice, there are numerous scenarios in which a Stata command might be referenced. For example, references in the Stata Blog are frequently seen but seldom hyperlinked to online help files or PDF documentation, as shown in the following excerpt from Balov (2022):

> Quarterly observations on real GDP, measured in billions of dollars, are obtained from the Federal Reserve Economic Data repository using the **import fred** command. I consider observations only between the first quarter of 1947 and second quarter of 2021. A quarterly date variable, **dateq**, is generated and used with **tsset** to set up the time series.

References in the *Stata Journal* also lack hyperlinks to online help files or PDF documentation, as shown in the following excerpt from Cox (2022):

> One more step in technique yields many useful results. The step is to use `generate` and `egen` (see [D] **generate** and [D] **egen**) as workhorses within a framework provided by the `by` (see [D] **by**) prefix. The perspective is now that new variables are needed, so that we can graph, table, and further analyze our results most easily.

In other resources, such as Stata manuals and textbooks, referencing Stata commands is also necessary. However, the lack of hyperlinks prevents users from accessing related information independently of Stata.

With `wwwhelp`, Stata commands can be hyperlinked to the corresponding online help files or PDF documentation, which allows users to obtain detailed information about the commands by simply clicking on the links instead of switching to Stata and searching in the Command window. The `wwwhelp` command provides several hyperlink formatting options that are designed to accommodate the different syntax requirements of various editors. For example, the `texfull` and `markdown` options generate link text that is suitable for LaTeX and Markdown syntax, respectively. In the following sections, we will provide a detailed introduction to the usage of the `markdown`, `txt`, `ms`, `latex`, `texfull`, and `format()` formatting options. In addition, every option has a corresponding abbreviation, such as `m` for `markdown`. For details, see `help wwwhelp`.

`markdown` displays the web link in Markdown format:

```
. wwwhelp regress, markdown
[**[R]** regress](https://www.stata.com/manuals/rregress.pdf)
Text is on clipboard. Press 'Ctrl+V' to paste
```

The text is automatically copied to the clipboard and appears as a clickable link when pasted into Markdown. It looks like this: **[R] regress**. Notably, on macOS, the note will say ... `Press 'Command+V' to paste`, while on Windows it will say ... `Press 'Ctrl+V' to paste`.

`txt` displays the web link as text:

```
. wwwhelp regress, txt
[R] regress: https://www.stata.com/manuals/rregress.pdf
Text is on clipboard. Press 'Ctrl+V' to paste
```

It can be copied to the dialog box of Facebook or WeChat for Chinese users.

`ms` sends rich text punctuated with links to the clipboard, which can be pasted easily to Microsoft Word:

```
. wwwhelp xtreg, ms
[XT]xtreg
Text is on clipboard. Press 'Ctrl+V' to paste
```

When users press *Ctrl+V* in Microsoft Word, the text will appear as a clickable link. It looks like this: **[R] regress**. However, this option has some limitations. It requires Stata 16 or newer versions of Stata to be installed. It also requires Python because the commands call the Windows API through Stata's interaction with Python, and it is currently available only for Windows systems. Otherwise, it will automatically switch to the `txt` option, which displays plain text with links as shown above.

`texfull` displays the web link as full TEX text:

```
. wwwhelp regress, texfull
\href{https://www.stata.com/manuals/rregress.pdf}
> {\bfseries{[\MakeUppercase{r}] regress}}
Text is on clipboard. Press 'Ctrl+V' to paste
```

It can be inserted into a `.tex` document, which will appear as a clickable link in the PDF file when compiled using a TEX editor. It looks like this: **[R] regress**.

`latex` displays the web link in LATEX form:

```
. wwwhelp regress, latex
\stwwwhelp[r]{regress}
Text is on clipboard. Press 'Ctrl+V' to paste
```

It can be inserted into a `.tex` document, which will appear as a clickable link in the PDF file when compiled using a LATEX editor. It looks like this: **[R] regress**.

Note that because `\stwwwhelp` is a new user-defined command in the `.tex` document, it must be defined by adding the following code to the introductory section of the `.tex` file:

```
\newcommand{\stwwwhelp}[2][r]{
     \href{https://www.stata.com/manuals/#1#2.pdf}%
          {\bfseries{[\MakeUppercase{#1}] #2}}
}
```

`format(#)` displays the web link in three supporting Markdown preset formats.

`format(1)` is rendered in Markdown as **[R] regress**.

`format(2)` is rendered in Markdown as **regress**.

`format(3)` is rendered in Markdown as **help regress**.

Below are examples of `format(1)`–`format(3)`:

```
. wwwhelp regress, format(1)
[**[R]** regress](https://www.stata.com/manuals/rregress.pdf)
Text is on clipboard. Press 'Ctrl+V' to paste
. wwwhelp regress, format(2)
[regress](https://www.stata.com/manuals/rregress.pdf)
Text is on clipboard. Press 'Ctrl+V' to paste
. wwwhelp regress, format(3)
[help regress](https://www.stata.com/manuals/rregress.pdf)
Text is on clipboard. Press 'Ctrl+V' to paste
```

All the above are web links to the online PDF documentation. `wwwhelp` can also provide web links to the online help files if you specify the `web` option:

```
. wwwhelp regress, markdown web
[**[R]** regress](https://www.stata.com/help.cgi?regress)
Text is on clipboard. Press 'Command+V' to paste
```

2.4 Special cases

There are some special cases in using the `wwwhelp` command, including the following:

Multiple keywords. Some help files require multiple keywords to be uniquely identified. The basic syntax structure is *category+keyword*, such as the graph class (`wwwhelp graph export`), the Mata class (`wwwhelp mata intro`), and the function class (`wwwhelp math function`, `wwwhelp string function`). For more complicated cases, we recommend using the `help` command to find out the correct keywords at the first step and then using the `wwwhelp` command to get their online help files. More specifically, we can find the target document by searching some keywords with the `help` command, clicking on the relevant hint links, copying the complete command (for example, `help datetime functions`) from the address bar of the Viewer window, and then pasting it into the Stata Command window. If you add the prefix `www` to the retrieved command, the resulting `wwwhelp datetime functions` command can be executed to access the online version.

Sections. For long documents, users can usually locate a particular section in the document using the command `help command##`*Section*, where *Section* refers to the specific subsection of interest and the `##` symbol serves as a locator. For example, `help regress postestimation##estatvif` will open the help file for the `regress postestimation` command and automatically navigate to the location of `estatvif`. However, because the naming of the subsection bookmarks in the PDF documentation is not systematic, subsection positioning through `wwwhelp` might not be exact. For example, when a user enters `wwwhelp regress postestimation##estatvif`, Stata will open the online PDF documentation for `regress postestimation` but will not locate the `estatvif` section accurately.

Command abbreviations. `wwwhelp` also supports command abbreviations. For uniquely identified command abbreviations, `wwwhelp` will open the corresponding online help file or PDF documentation directly. For example, `wwwhelp reg` is equivalent to `wwwhelp regress`, which will open an online PDF version of documentation for the `regress` command. If a command abbreviation does not uniquely identify the official command, `wwwhelp` will provide advice and list several similar commands using the abbreviation as a *keyword* for users to choose from. For example,

```
. wwwhelp tw_lf
Please input the full name of the command to make the link to help file accurate
> and unique. See help tw_lf
Find 2 similar commands:
 twoway_lfit |  twoway_lfitci
```

3 Conclusions

This article introduced `wwwhelp`, which enables direct access to Stata's online documentation, including both detailed PDF versions and simple help versions. It also incorporates various formatting options, enabling users to access web links to the online documentation in their desired format, which will be automatically copied to the clipboard. In brief, just add a "`www`" before "`help`", and you can enjoy Stata's powerful and desirable help.

`wwwhelp` can access only online help files or PDF documentation. We hope that future research can further use other online resources, such as the *Stata Journal* and StataCorp's website, so that users can easily retrieve and browse all Stata resources online.

4 Acknowledgments

We extend our sincere gratitude to Managing Editor Stephen P. Jenkins, the Stata Press editorial team, and an anonymous reviewer for their invaluable professional advice. Their insights significantly enhanced the functionality of our commands and bolstered the readability of our manuscript.

5 Programs and supplemental material

To install the software files as they existed at the time of publication of this article, type

```
. net sj 24-1
. net install pr0079     (to install program files, if available)
. net get pr0079         (to install ancillary files, if available)
```

6 References

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