stata() — Execute Stata command

Syntax

<table>
<thead>
<tr>
<th>Description</th>
<th>Remarks and examples</th>
<th>Conformability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Syntax</td>
<td>Diagnostics</td>
<td>Also see</td>
</tr>
</tbody>
</table>

void stata(cmd)

void stata(cmd, nooutput)

void stata(cmd, nooutput, nomacroexpand)

real scalar _stata(cmd)

real scalar _stata(cmd, nooutput)

real scalar _stata(cmd, nooutput, nomacroexpand)

where

- cmd: string scalar
- nooutput: real scalar
- nomacroexpand: real scalar

Description

stata(cmd) executes the Stata command contained in the string scalar cmd. Output from the command appears at the terminal, and any macros contained in cmd are expanded.

stata(cmd, nooutput) does the same thing, but if nooutput ≠ 0, output produced by the execution is not displayed. stata(cmd, 0) is equivalent to stata(cmd).

stata(cmd, nooutput, nomacroexpand) does the same thing but, before execution, suppresses expansion of any macros contained in cmd if nomacroexpand ≠ 0. stata(cmd, 0, 0) is equivalent to stata(cmd).

_stata() repeats the syntaxes of stata(). The difference is that, whereas stata() aborts with error if the execution results in a nonzero return code, _stata() returns the resulting return code.

Remarks and examples

The command you execute may invoke a process that causes another instance of Mata to be invoked. For instance, Stata program A calls Mata function m1(), which executes stata() to invoke Stata program B, which in turn calls Mata function m2(), which ...

stata(cmd) and _stata(cmd) execute cmd at the current run level. This means that any local macros refer to local macros in the caller’s space. Consider the following:
program example
    ...
    local x = "value from A"
    mata: myfunc()
    display "'x'"
    ...
end

mata void myfunc()
{
    stata("local x = "new value"")
}

After example executes mata: myfunc(), 'x' will be "new value".

That stata() and _stata() work that way was intentional: Mata functions can modify the caller's environment so that they may create temporary variables for the caller's use, etc., and you only have to exercise a little caution. Executing stata() functions to run other ado-files and programs will cause no problems because other ado-files and programs create their own new environment in which temporary variables, local macros, etc., are private.

Also, do not use stata() or _stata() to execute a multiline command or to execute the first line of what could be considered a multiline command. Once the first line is executed, Stata will fetch the remaining lines from the caller’s environment. For instance, consider

----------------------------------------------------------- begin myfile.do -----------

    mata void myfunc()
    {
        stata("if (1==1) {")
    }
    mata: myfunc()
    display "hello"
    }

----------------------------------------------------------- end myfile.do -----------

In the example above, myfunc() will consume the display "hello" and } lines.

Conformability

stata(cmd, nooutput, nomacroexpand):
  cmd: 1 x 1
  nooutput: 1 x 1 (optional)
  nomacroexpand: 1 x 1 (optional)
  result: void

_stata(cmd, nooutput, nomacroexpand):
  cmd: 1 x 1
  nooutput: 1 x 1 (optional)
  nomacroexpand: 1 x 1 (optional)
  result: 1 x 1
Diagnostics

stata() aborts with error if cmd is too long (exceedingly unlikely), if macro expansion fails, or if execution results in a nonzero return code.

stata() aborts with error if cmd is too long.

Also see

[M-3] mata stata — Execute Stata command

[M-4] stata — Stata interface functions