

frame post — Post results to dataset in another frame

[Description](#)[Syntax](#)[Remarks and examples](#)[Also see](#)

Description

These commands are utilities to assist Stata programmers in performing Monte Carlo-type experiments. They are similar to Stata's `postfile` facilities (see [\[P\] postfile](#)) but operate on a dataset in a frame in memory rather than on disk.

`frame create` declares the variable names and frame name of a new Stata frame where results will be stored.

`frame post` adds a new observation to the dataset in the declared frame.

After you have posted all the observations you wish to the declared frame, you should `save` the data in it to disk; see [\[D\] save](#).

These commands manipulate the data in the new frame without disturbing the data in memory in the current frame.

Syntax

Create new frame with specified variables for use with `frame post`

```
frame create newframename newvarlist
```

Add new observation to declared frame

```
frame post framename (exp) (exp) ... (exp)
```

Remarks and examples

stata.com

The typical use of the `frame post` command is

```
tempname memhold
...
frame create 'memhold' ...
...
while ... {
    ...
    frame post 'memhold' ...
    ...
}
save ...
...
```

In our example, we obtain the new frame name from Stata's temporary name facility (see [\[P\] macro](#)). We recommend that `newframename` usually be obtained from `tempname`. This ensures that your program can be nested within any other program and ensures that the memory used by `frame post` is freed if anything goes wrong. You can of course substitute a hard-coded `newframename` for some programming situations.

Because `frame create` accepts a *newvarlist*, storage types may be interspersed, so you could have

```
frame create 'memhold' a b str20 c double(d e f)
```

Note that `frame create` allows `strL` as a variable storage type, unlike [P] [postfile](#).

▷ Example 1

We wish to write a program to collect means and variances from 10,000 randomly constructed 100-observation samples of lognormal data and save the results in `results.dta`. Suppose that we are evaluating the coverage of the 95%, *t*-based confidence interval when applied to lognormal data. As background, we can obtain a 100-observation lognormal sample by typing

```
drop _all
set obs 100
generate z = exp(rnormal())
```

We can obtain the mean and standard deviation by typing

```
summarize z
```

Moreover, `summarize` stores the sample mean in `r(mean)` and variance in `r(Var)`. It is those two values we wish to collect. Our program is

```
program lnsim
  version 18.0           // (or version 18.5 for StataNow)
  tempname sim
  frame create 'sim' mean var
  quietly {
    forvalues i = 1/10000 {
      drop _all
      set obs 100
      generate z = exp(rnormal())
      summarize z
      frame post 'sim' (r(mean)) (r(Var))
    }
  }
  frame 'sim': save results.dta
end
```

The `frame create` command creates a new frame with a temporary name (`'sim'`); `mean` and `var` are the names to be given to the two variables that will contain the information we collect. Because two variable names were specified on the `frame create` line, two expressions must be specified following `frame post`. Here the expressions are simply `r(mean)` and `r(Var)`. If we had wanted, however, to store the mean divided by the standard deviation and the standard deviation, we could have typed

```
frame post 'sim' (r(mean)/r(sd)) (r(sd))
```

There is no need for a command to conclude the simulation. When the dataset in frame `'sim'` has everything in it we wish to have in it, we can either switch to frame `'sim'` to do what we wish with the data or save it to disk to examine later. Here we saved the new data in frame `'sim'` to a file named `results.dta`.

```
. set seed 12345
. lnsim
file results.dta saved
. use results, clear
. describe

Contains data from results.dta
Observations:      10,000
Variables:         2                               23 Mar 2023 17:19
```

Variable name	Storage type	Display format	Value label	Variable label
mean	float	%9.0g		
var	float	%9.0g		

Sorted by:

We set the random-number seed to an arbitrary value, 12345, so that this example would be reproducible.



Also see

- [P] [postfile](#) — Post results in Stata dataset
- [D] [frames intro](#) — Introduction to frames
- [D] [frames](#) — Data frames
- [D] [frame create](#) — Create a new frame
- [R] [simulate](#) — Monte Carlo simulations

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