frames save — Save a set of frames on disk	

Description

frames save saves a set of frames as a Stata frameset (.dtas) file.

Quick start

Save frames A, B, and C in file myframeset.dtas

    frames save myframeset, frames(A B C)

Save, in file myframeset.dtas, frames A and B as well as all frames linked, through frlink, to A and B

    frames save myframeset, frames(A B) linked

Menu

Data > Frames Manager

Syntax

    frames save *filename* , frames(*framelist*) [*options*]

If *filename* is specified without an extension, .dtas is assumed. If *filename* contains embedded spaces or other special characters, enclose it in double quotes.

options	Description
* frames(*framelist*)	specify frames to be saved
replace	overwrite existing .dtas file
linked	save frames linked to those in *framelist*
relaxed	ignore missing linked frames
complevel(*#*)	specify compression level; default is complevel(1)
nolabel	omit value labels from the saved frames
orphans	save all value labels, even if they are not attached to a variable
emptyok	save specified frames even if they have zero observations and zero variables
all	save e(sample) with the frames in which it exists; programmer's option

*frames(*framelist*) is required.

all does not appear in the dialog box.

Options

frames(*framelist*) specifies the frames to be saved. *framelist* is a list of frame names separated by a space. To save all frames in memory, specify frames(_all). frames() is required.

replace permits frames save to overwrite *filename* if it already exists.

linked specifies that all frames linked to those in *framelist* are also saved. Linkages are established by the frlink command. Note that if frame A is linked to frame B through frlink, and frame B is similarly linked to frame C, then saving frame A with the linked option will also save frames B and C, as well as other frames linked to B and C, and so forth.

relaxed is allowed only with the linked option. relaxed specifies that an error message not be issued if a linked frame does not exist.

complevel(#) specifies the compression level to be used. # may be any integer from 0 to 9; the default is complevel(1). complevel(0) means no compression; a larger # means more compression. The compression level can also be set with set dtascomplevel; type help set dtascomplevel to learn more. complevel() overrides the dtascomplevel setting.

nolabel specifies that value labels from the saved frames are omitted.

orphans specifies that all value labels be saved, including those not attached to any variable.

emptyok specifies that the frames be saved even if they contain zero observations and zero variables.

The following option is available with frames save but is not shown in the dialog box:

all specifies that e(sample) be saved with the frames in which it exists. all is a programmer's option.

Remarks and examples

Data frames allow you to work with multiple datasets in memory and to access variables across those datasets. frames save allows you to save the data from multiple frames into a single file; the resulting file is referred to as a Stata frameset and uses the .dtas extension. You can simply specify the list of frames you want to save or specify that the listed frames and those linked to them be saved.

▷ Example 1: Save multiple frames

Suppose that we have two frames in memory and we want to save data from both in a single file. To demonstrate, we first create a frame named census and load a dataset with population data by state:

```
. clear all
. frame create census
. frame change census
. sysuse census
(1980 Census data by state)
```

Next we create a frame named housing in which we load housing data by state:

```
. frame create housing
. frame change housing
. webuse hsng
(1980 Census housing data)
```

Now we save both frames, census and housing, into a file called myframeset.dtas:

```
. frames save myframeset, frames(census housing) replace
(file myframeset.dtas not found)
file myframeset.dtas saved
```

Whenever we wish to load the data frames from myframeset.dtas, we can use frames use.

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▷ Example 2: Save linked frames

One advantage of working with data frames is that you can access values from one frame in another by linking the two frames. Furthermore, when you save data from a frame, you may wish to save data from the frames it is linked to, which we demonstrate below.

Continuing with our frames from example 1, we can use frame pwf to check which frame is the working frame:

```
. frame pwf
  (current frame is housing)
```

Our current frame is housing. We now use frlink to link frame census to frame housing, matching observations on values of state:

```
. frlink 1:1 state, frame(census)
(all observations in frame housing matched)
```

The message indicates that all observations in frame housing matched those in frame census. We can use frames describe to get a summary of the data in each frame:

```
. frames describe
```

Frame: census

Contains data from C:\Program Files\Stata19\ado\base\c\census.dta

| Observations: | 50 | 1980 Census data by state |
| Variables: | 13 | 28 Mar 2025 19:42 |

Variable name	Storage type	Display format	Value label	Variable label
state	str14	%-14s		State
state2	str2	%-2s		Two-letter state abbreviation
region	int	%-8.0g	cenreg	Census region
pop	long	%12.0gc		Population
poplt5	long	%12.0gc		Pop, < 5 year
pop5_17	long	%12.0gc		Pop, 5 to 17 years
pop18p	long	%12.0gc		Pop, 18 and older
pop65p	long	%12.0gc		Pop, 65 and older
popurban	long	%12.0gc		Urban population
medage	float	%9.2f		Median age
death	long	%12.0gc		Number of deaths
marriage	long	%12.0gc		Number of marriages
divorce	long	%12.0gc		Number of divorces

Sorted by: state

```
─────────────────────────────────────────────────────────────────────
Frame: default

Contains data
 Observations:              0
     Variables:             0
Sorted by:
─────────────────────────────────────────────────────────────────────

─────────────────────────────────────────────────────────────────────
Frame: housing

Contains data from https://www.stata-press.com/data/r19/hsng.dta
 Observations:             50                    1980 Census housing data
     Variables:            13                    28 Mar 2025 19:42
─────────────────────────────────────────────────────────────────────
Variable        Storage   Display    Value
    name           type    format    label      Variable label
─────────────────────────────────────────────────────────────────────
state           str14     %14s                  State
division        int       %8.0g      division   Census division
region          int       %8.0g      region     Census region
pop             long      %10.0g                Population in 1980
popgrow         float     %6.1f                 Pop. growth 1970-80
popden          int       %6.1f                 Pop/sq. mile
pcturban        float     %8.1f                 Percent urban
faminc          long      %8.2f                 Median family inc., 1979
hsng            long      %10.0g                Hsng units 1980
hsnggrow        float     %8.1f                 % housing growth
hsngval         long      %9.2f                 Median hsng value
rent            long      %6.2f                 Median gross rent
census          byte      %10.0g
─────────────────────────────────────────────────────────────────────
Sorted by: state
      Note: Dataset has changed since last saved.
─────────────────────────────────────────────────────────────────────
```

We can see that frame housing has a variable named census; this is the variable that frlink created to store the information needed to link the frames. We can also see that the default frame is empty because we have not loaded a dataset into that frame.

We can now save frame housing and all frames linked to it by typing the following:

```
. frames save myframeset, frames(housing) linked replace
file myframeset.dtas saved
```

This saves frame housing, as well as frame census, because it is linked to frame housing. The replace option replaces file myframeset.dtas if it already exists.

We now drop frame census using frame drop:

```
. frame drop census
```

Note that if we try to save frame housing and the frames linked to it, we get an error message:

```
. frames save myframeset, frames(housing) linked replace
linked frame does not exist
    Frame census is linked from frame housing, but frame census does not
    exist. Use option relaxed if you wish to ignore this error and proceed
    anyway.
r(111);
```

Stata is attempting to save frame census because it is linked to frame housing, but it does not exist. To save the frames we specified, and any existing frames linked to them, we can use the relaxed option to ignore any linked frame that does not exist:

```
. frames save datasets, frames(housing) linked replace relaxed
(file datasets.dtas not found)
file datasets.dtas saved
```

We no longer get an error message, but because frame census does not exist, only frame housing gets saved.

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Stored results

frames save stores the following in r():

Scalars
r(complevel)	compression level
r(compsize)	size, in bytes, of compressed file
r(compratio)	compression ratio, defined as the ratio of compressed size to uncompressed size

Macros
r(fn)	pathname of saved frameset file
r(frames)	list of frames saved, listed in the same order as in option frames(); if frames(_all) is used, then the working frame is listed first, followed by the remaining frames in alphabetical order
r(first)	first frame in r(frames)

Also see

[D] **frames describe** — Describe frames in memory or in a file

[D] **frames modify** — Modify a set of frames on disk

[D] **frames use** — Load a set of frames from disk

[D] **frames** — Data frames

[D] **save** — Save Stata dataset