> **stvary —** Report variables that vary over time

Description

stvary is for use with multiple-record datasets, for which id() has been stset. It reports whether values of variables within subject vary over time and reports their pattern of missing values. Although stvary is intended for use with multiple-record st data, it may be used with single-record data as well, but this produces little useful information.

stvary ignores weights, even if you have set them. stvary summarizes the variables in the computer or data sense of the word.

Quick start

Report whether variables vary over time and whether they have missing values using multiple-record stset data

    stvary

Same as above, but only show report for x1 and x2

    stvary x1 x2

Same as above, but with separate reports for each level of v1

    by v1, sort: stvary x1 x2

Menu

Statistics > Survival analysis > Setup and utilities > Report variables that vary over time

Syntax

    stvary [*varlist*] [*if*] [*in*] [, <u>nosh</u>ow]

You must stset your data before using stvary; see [ST] **stset**.

by and collect are allowed; see [U] **11.1.10 Prefix commands**.

fweights, iweights, and pweights may be specified using stset; see [ST] **stset**.

Option

>   Main

noshow prevents stvary from showing the key st variables. This option is seldom used because most people type stset, show or stset, noshow to set whether they want to see these variables mentioned at the top of the output of every st command; see [ST] **stset**.

Remarks and examples

stata.com

Consider a multiple-record dataset. A subject's sex, presumably, does not change, but his or her age might. stvary allows you to verify that values vary in the way that you expect:

```
. use https://www.stata-press.com/data/r18/stan3
(Heart transplant data)
. stvary
       Failure _d: died
  Analysis time _t: t1
      ID variable: id
```

	Subjects for whom the variable is				
Variable	constant	varying	never missing	always missing	sometimes missing
year	103	0	103	0	0
age	103	0	103	0	0
stime	103	0	103	0	0
surgery	103	0	103	0	0
transplant	103	0	103	0	0
wait	103	0	103	0	0
posttran	34	69	103	0	0

That 103 values for year are "constant" does not mean that year itself is a constant—it means merely that, for each subject, the value of year does not change across the records. Whether the values of year vary across subjects is still an open question.

Now look at the bottom of the table: posttran is constant over time for 34 subjects and varies for the remaining 69.

Below we have another dataset, and we will examine just two of the variables:

```
. use https://www.stata-press.com/data/r18/stvaryex
. stvary sex drug
       Failure _d: fail
  Analysis time _t: t
 Exit on or before: time .
      ID variable: id
```

	Subjects for whom the variable is				
Variable	constant	varying	never missing	always missing	sometimes missing
sex	119	1	119	3	1
drug	121	2	123	0	0

Clearly, there are errors in the sex variable; for 119 of the subjects, sex does not change over time, but for one, it does. Also we see that we do not know the sex of three of the patients, but for another, we sometimes know it and sometimes do not. The latter must be a simple data-construction error. As for drug, we see that for two of our patients, the drug administered varied over time. Perhaps this is an error, or perhaps those two patients were treated differently from all the rest.

Video example

[How to describe and summarize survival data](#)

Stored results

stvary stores the following in r():

Scalars
r(cons)	number of subjects for whom variable is constant when not missing
r(varies)	number of subjects for whom nonmissing values vary
r(never)	number of subjects for whom variable is never missing
r(always)	number of subjects for whom variable is always missing
r(miss)	number of subjects for whom variable is sometimes missing

Reference

Cleves, M. A., W. W. Gould, and Y. V. Marchenko. 2016. *An Introduction to Survival Analysis Using Stata*. Rev. 3rd ed. College Station, TX: Stata Press.

Also see

[ST] **stdescribe** — Describe survival-time data

[ST] **stfill** — Fill in by carrying forward values of covariates

[ST] **stset** — Declare data to be survival-time data