Title

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estat summarize — Summarize estimation sample

Description

`estat summarize` summarizes the variables used by the command and automatically restricts the sample to the estimation sample; it also summarizes the weight variable and cluster structure, if specified.

Quick start

Summary statistics for all variables in the model using estimation sample

```
estat summarize
```

Add variable labels to output

```
estat summarize, labels
```

Obtain summary of estimation sample for each equation

```
estat summarize, equation
```

Ignore weights when calculating summary statistics after weighted estimation

```
estat summarize, noweights
```

Menu for estat

Statistics > Postestimation

Syntax

```
estat summarize [eqlist] [, estat_summ_options]
```

estat_summ_options	Description
`equation`	display summary by equation
`group`	display summary by group; only after `sem` and `gsem`
`labels`	display variable labels
`noheader`	suppress the header
`noweights`	ignore weights
display_options	control row spacing, line width, display of omitted variables and base and empty cells, and factor-variable labeling

eqlist is rarely used and specifies the variables, with optional equation name, to be summarized. *eqlist* may be *varlist* or (*eqname*$_1$`:` *varlist*) (*eqname*$_2$`:` *varlist*) .... *varlist* may contain time-series operators; see [U] **11.4.4 Time-series varlists**.

Options

`equation` requests that the dependent variables and the independent variables in the equations be displayed in the equation-style format of estimation commands, repeating the summary information about variables entered in more than one equation.

`group` displays summary information separately for each group. `group` is only allowed after `sem` or `gsem` with a `group()` variable specified.

`labels` displays variable labels.

`noheader` suppresses the header.

`noweights` ignores the weights, if any, from the previous estimation command. The default when weights are present is to perform a weighted `summarize` on all variables except the weight variable itself. An unweighted `summarize` is performed on the weight variable.

display_options: `noomitted`, `vsquish`, `noemptycells`, `baselevels`, `allbaselevels`, `nofvlabel`, `fvwrap(#)`, and `fvwrapon(`*style*`)`; see [R] **estimation options**.

Remarks and examples

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Often when fitting a model, you will also be interested in obtaining summary statistics, such as the sample means and standard deviations of the variables in the model. `estat summarize` makes this process simple. The output displayed is similar to that obtained by typing

```
. summarize varlist if e(sample)
```

without the need to type the *varlist* containing the dependent and independent variables.

Example 1

Continuing with the example in [R] **estat ic**, here we summarize the variables by using `estat summarize`.

```
. use http://www.stata-press.com/data/r15/sysdsn1
(Health insurance data)
. mlogit insure age male nonwhite i.site
  (output omitted)
. estat summarize, noomitted
Estimation sample mlogit                  Number of obs =        615
```

Variable	Mean	Std. Dev.	Min	Max
insure	1.596748	.6225846	1	3
age	44.46832	14.18523	18.11087	86.07254
male	.2504065	.4335998	0	1
nonwhite	.196748	.3978638	0	1
site				
2	.3707317	.4833939	0	1
3	.3138211	.4644224	0	1

The output in the previous example contains all the variables in one table, though `mlogit` presents its results in a multiple-equation format. For models in which the same variables appear in all equations, that is fine; but for other multiple-equation models, we may prefer to have the variables separated by the equation in which they appear. The `equation` option makes this possible.

▷ Example 2

Systems of simultaneous equations typically have different variables in each equation, and the `equation` option of `estat summarize` is helpful in such situations. In example 2 of [R] **reg3**, we have a model of supply and demand. We first refit the model and then call `estat summarize`.

```
. use http://www.stata-press.com/data/r15/supDem
. reg3 (Demand:quantity price pcompete income) (Supply:quantity price praw),
> endog(price)
```

(*output omitted*)

```
. estat summarize, equation
```

Estimation sample reg3 Number of obs = 49

Variable	Mean	Std. Dev.	Min	Max
depvar				
quantity	12.61818	2.774952	7.710694	20.04767
quantity	12.61818	2.774952	7.710694	20.04767
demale				
price	32.70944	2.882684	26.38185	38.47692
pcompete	5.929975	3.508264	.2076465	11.55491
income	7.811735	4.18859	.5704173	14.00767
Supply				
price	32.70944	2.882684	26.38185	38.47692
praw	4.740891	2.962565	.1510276	9.79881

The first block of the table contains statistics on the dependent (or, more accurately, left-hand-side) variables, and because we specified quantity as the left-hand-side variable in both equations, it is listed twice. The second block refers to the variables in the first equation we specified, which we labeled "Demand" in our call to `reg3`; and the final block refers to the supply equation.

◁

Stored results

`estat summarize` stores the following in `r()`:

Scalars

`r(N_groups)`	number of groups (`group` only)

Matrices

`r(stats)`	$k \times 4$ matrix of means, standard deviations, minimums, and maximums
`r(stats[_#])`	$k \times 4$ matrix of means, standard deviations, minimums, and maximums for group # (`group` only)

Also see

[R] **estat** — Postestimation statistics

[R] **estat ic** — Display information criteria

[R] **estat vce** — Display covariance matrix estimates