

**estat summarize** — Summarize estimation sample

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## 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]
```

<i>estat_summ_options</i>	Description
<b>equation</b>	display summary by equation
<b>group</b>	display summary by group; only after <b>sem</b> and <b>gsem</b>
<b>labels</b>	display variable labels
<b>noheader</b>	suppress the header
<b>noweights</b>	ignore weights
<i>display_options</i>	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 (*eqname1*: *varlist*) (*eqname2*: *varlist*) ... *varlist* may contain time-series operators; see [U] 11.4.4 Time-series varlists.

**collect** is allowed; see [U] 11.1.10 Prefix commands.

## 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

[stata.com](https://www.stata.com)

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 https://www.stata-press.com/data/r18/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 https://www.stata-press.com/data/r18/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
<b>depvar</b>				
quantity	12.61818	2.774952	7.710694	20.04767
quantity	12.61818	2.774952	7.710694	20.04767
<b>demale</b>				
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
<b>Supply</b>				
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

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