

Title

intro — Introduction to time-series manual

Description

This entry describes this manual and what has changed since Stata 10.

Remarks

This manual documents Stata's time-series commands and is referred to as [TS] in cross-references.

After this entry, [TS] **time series** provides an overview of the `ts` commands. The other parts of this manual are arranged alphabetically. If you are new to Stata's time-series features, we recommend that you read the following sections first:

[TS] time series	Introduction to time-series commands
[TS] tsset	Declare a dataset to be time-series data

Stata is continually being updated, and Stata users are always writing new commands. To ensure that you have the latest features, you should install the most recent official update; see [R] **update**.

What's new

1. New estimation command `sspace` estimates linear state-space models by maximum likelihood. In state-space models, the dependent variables are linear functions of unobserved states and observed exogenous variables. A few of the many models are VARMA models, structural time-series models, some linear dynamic models, and some stochastic general-equilibrium models. `sspace` can estimate the parameters of most linear time-series models with time-invariant parameters because they can be cast as state-space models. `sspace` can estimate stationary and nonstationary models. For stationary models, `sspace` uses the Kalman filter to estimate the observed states. For nonstationary models, `sspace` uses the De Jong diffuse Kalman filter. See [TS] **sspace**.
2. New estimation command `dvech` estimates diagonal vech multivariate GARCH models. These models allow the conditional variance matrix of the dependent variables to follow a flexible dynamic structure in which each element of the current conditional variance matrix depends on its own past and on past shocks. See [TS] **dvech**.
3. New estimation command `dfactor` estimates dynamic-factor models. These multivariate time-series models allow the dependent variables and the unobserved factor variables to have vector autoregressive (VAR) structures and to be linear functions of exogenous variables. See [TS] **dfactor**.
4. Estimation commands `newey`, `prais`, `sspace`, `dvech`, and `dfactor` allow Stata's new factor-variable varlist notation; see [U] **11.4.3 Factor variables**. Also, these estimation commands allow the standard set of factor-variable-related reporting options; see [R] **estimation options**.
5. New postestimation command `margins`, which calculates marginal means, predictive margins, marginal effects, and average marginal effects, is available after all time-series estimation commands. See [R] **margins**.
6. New display option `vsquish` for estimation commands, which allows you to control the spacing in output containing time-series operators or factor variables, is available after all time-series estimation commands. See [R] **estimation options**.

7. New display option `coeflegend` for estimation commands, which displays the coefficients' legend showing how to specify them in an expression, is available after all time-series estimation commands. See [R] **estimation options**.
8. `predict` after `regress` now allows time-series operators in option `dfbeta()`; see [R] **regress postestimation**. Also allowing time-series operators are `regress` postestimation commands `estat szroeter`, `estat hettest`, `avplot`, and `avplots`. See [R] **regress postestimation**.
9. Existing estimation commands `mlogit`, `ologit`, and `oprobit` now allow time-series operators; see [R] **mlogit**, [R] **ologit**, and [R] **oprobit**.
10. Existing estimation commands `arch` and `arma` now accept maximization option `showtolerance`; see [R] **maximize**.
11. Existing estimation command `arch` now allows you to fit models assuming that the disturbances follow Student's *t* distribution or the generalized error distribution, as well as the Gaussian (normal) distribution. Specify which distribution to use with option `distribution()`. You can specify the shape or degree-of-freedom parameter, or you can let `arch` estimate it along with the other parameters of the model. See [TS] **arch**.
12. Existing command `tsappend` is now faster. See [TS] **tsappend**.

For a complete list of all the new features in Stata 11, see [U] **1.3 What's new**.

Also see

[U] **1.3 What's new**

[R] **intro** — Introduction to base reference manual