



## Title

**dsimih describe** — Describe **svarih** results and associated dynamic simulation results created by **dsimih**

## Syntax

**dsimih describe** [using filename] [, *options*]

<i>options</i>	Description
<b>modelstats</b>	display basic features of the estimated <b>svarih</b> model
<b>cmdline</b>	display the command that was used to obtain <b>svarih</b> estimates
<b>nostep</b>	do not display availability of forecast steps
<b>bootstrap</b>	displays information on the success and failure of bootstrap replications
<b>all</b>	shortcut to specify options <b>modelstats</b> , <b>cmdline</b> , and <b>bootstrap</b>
<b>number(#)</b>	access results number # ; only allowed if the <b>using</b> modifier refers to a <b>.ster</b> file

## Description

**dsimih describe** lists the forecast horizons/steps of dynamic simulation results created by **dsimih create**. It also displays relevant properties of the underlying estimated **svarih** model.

**dsimih describe** defaults to displaying the forecast steps available, by regime and type of standard error. More information can be accessed by using the options of the command.

## Abbreviations, definitions, notation, syntax elements

This help entry uses terminology defined in **svarih** and **dsimih**.

## Options

**modelstats** displays properties of the underlying **svarih** model that are relevant for the creation of dynamic simulation statistics.

The first set of properties displayed concerns whether the **svarih** estimation has converged, how many GLS iterations were carried out (if applicable), and whether estimates are locally identified (if applicable). Moreover, information on the size of the model is displayed like the number of endogenous variables, the number of lags, and the maximum lag. As a rule of thumb, the "larger" the model the longer it takes to obtain **svarih** estimates, and the longer it takes to run **dsimih** with its bootstrap options **bs** and **bsp**. The size of the model may also be relevant for the time it takes to generate asymptotic DS standard errors since this too may become computationally intensive for long forecast horizons.

**cmdline** displays the command that was used to run **svarih**.

Options **modelstats** and **cmdline** are especially helpful if you choose to or if you are forced to save **dsimih** results in **dsimih files** rather than in **e()**. If you save your results in **e()**, they are firmly associated with the underlying **svarih** estimates and you can always recover all details of estimation from the **e()**-results saved by **svarih**. Here **modelstats** and **cmdline** are merely convenience tools that allow you to check the most important features quickly. If you save your results in **dsimih files**, the **e()**-results of **svarih** are no longer available. **dsimih** therefore records selected features of the **svarih** estimation within these files. This information can be accessed via options **modelstats** and **cmdline**.

**nostep** will not tabulate the availability of forecast steps.

**bootstrap** displays information on the estimation of bootstrapped DS standard errors, if any exist. Separate tables for the residual bootstrap and for the parametric bootstrap are shown. They contain detail about the number of successful bootstrap replications and about the ones that failed.

**all** is a shortcut for specifying options **modelstats**, **cmdline**, and **bootstrap**. **all** overrides the usage of any other options. For example, if option **nostep** is used in addition to **all**, it is ignored.

**number(#)** specifies the results set number when the **using** modifier refers to a **.ster** file. You can store more than one results set in **.ster** files. See estimates save.

### Remarks

**dsimih describe** by default accesses DS results in **e()** but is also capable of accessing DS results stored in files using its **using** modifier. For details on how the **using** modifier works in all **dsimih** subcommands, see dsimih etodta.

Forecast horizons are tabulated by regime and *setype*.

By default, **dsimih describe** looks in **e()** for results left behind by **dsimih create**. If *filename* is specified, **dsimih describe** describes the results stored in *filename*. *filename* must be a **dsimih file**. As detailed in dsimih etodta, you may not change the data in these files. You must specify *filename* if **e()** does not contain results from **dsimih create**. Remember that **dsimih describe** describes either results in **e()** or in *filename*, but never the data set in memory.

### Examples

Executing the following statements will change current **e()**-results.

Bootstrap replication numbers are set to values that are inappropriate for analysis but appropriate for quick execution of example statements.

Generate example estimates (see svarih examples):

```
. webuse lutkepohl2
. svarih examples bfa unconstr , ereplace
. dsimih describe , modelstats cmdline

. dsimih create , step(24)
. dsimih create , step(36) nose
. version 11.2: set seed 123456
. dsimih create , step(12) bsp fromb reps(10)
```

By default, {**dsimih describe**} tabulates the forecast horizon by regime and *setype*:

```
. dsimih describe
```

All information that is requested by the options of **dsimih describe** is stored in **r()**.

```
. return list
. matrix list r(stepmat)
. dsimih describe , bootstrap nostep
. return list
. matrix list r(repmat bsp)
```

**dsimih describe** works with both **.ster** files and dsimih files.

```
. estimates save dsimih examplefile , replace
. ereturn clear
. dsimih describe using dsimih examplefile.ster , bootstrap

. estimates use dsimih examplefile
. dsimih etodta dsimih examplefile2 , replace
. ereturn clear
. dsimih describe using dsimih examplefile2.dta , bootstrap
```

```
. erase dsimih examplefile.ster
. erase dsimih examplefile2.dta
```

### **Saved results**

**dsimih describe** saves the following in **r()**. Some of the results below may not be saved if they are not applicable to the **svarih** model in question.

If option **modelstats** is used or implied by option **all**

#### Scalars

```
r(converged_ml)    1 if the ML iteration converged, 0 otherwise
r(converged_gls) 1 if the GLS iteration converged, 0 otherwise
r(ic_gls)        # of GLS iterations performed
r(mlag)         maximum lag in the model
r(Wald_p)       probability for minimum Wald statistic for IH-LLU global
                    identification check
```

#### Macros

```
r(method)       svarih method (subcommand)
r(depvar)      list of endogenous variables in the model
r(regimes)     regimes of the svarih model
r(lags)       list of lags in the model
r(exog)       exogenous variables in the model, if any
r(idencheck)  one of passed, failed, or skipped
```

If option **cmdline** is used or implied by option **all**

#### Macros

```
r(cmdline)      command as typed in svarih estimation
```

If option **nostep** is not used or if option **all** is used

#### Macros

```
r(stepmat_regimes) list of regimes for which dynamic simulation results exist
```

#### Matrices

```
r(stepmat)      forecast steps available, by regimes and setype
```

If option **bootstrap** is used or implied by option **all**

#### Matrices

```
r(repmat_bs)    information on success and failure of replications of the
                    residual bootstrap
r(repmat_bsp)  information on success and failure of replications of the
                    parametric bootstrap
```

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### **Also see**

Help: [TS] irf, dsimih, dsimih create, dsimih graph, dsimih table, dsimih use, dsimih drop, dsimih etodta