

# Package ‘selcorr’

May 9, 2026

**Title** Post-Selection Inference for Generalized Linear Models

**Version** 1.0

**Description** Calculates (unconditional) post-selection confidence intervals and p-values for the coefficients of (generalized) linear models.

**License** GPL-3

**Imports** MASS, methods

**Encoding** UTF-8

**RoxygenNote** 7.1.2

**NeedsCompilation** no

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**Repository** CRAN

**Date/Publication** 2021-12-21 20:10:02 UTC

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selcorr	<i>Post-Selection Inference for Generalized Linear Models</i>
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## Description

selcorr returns (unconditional) post-selection confidence intervals and p-values for the coefficients of (generalized) linear models.

**Usage**

```
selcorr(
  object,
  fixed.vars = NULL,
  further.vars = NULL,
  boot.repl = 0,
  k = 2,
  conf.level = 0.95,
  quiet = FALSE
)
```

**Arguments**

<code>object</code>	an object representing a model of an appropriate class. This is used as the initial model in a (bidirectional) stepwise model selection.
<code>fixed.vars</code>	the names of all independent variables that must be included in the selected model. The default is none.
<code>further.vars</code>	the names of all independent variables that can be included in the selected model, but are not part of <code>object</code> . The default is none.
<code>boot.repl</code>	a number or list of bootstrap replicates. The default is no bootstrapping. See <a href="#">Details and Examples</a> for clarification.
<code>k</code>	the multiple of the number of degrees of freedom used as penalty in the model selection. The default <code>k = 2</code> corresponds to the AIC.
<code>conf.level</code>	the level of the confidence intervals.
<code>quiet</code>	if TRUE, then <code>selcorr</code> does not generate an output.

**Details**

When `boot.repl = 0`, an approximate asymptotic distribution of the test statistic is used to calculate p-values and calibrate the profile-likelihood confidence intervals. This approach is faster, but p-values and confidence intervals can be more precisely calibrated by parametrically bootstrapping the test statistic (with `boot.repl` the number of replicates). Parallel computing can be used to speed up the bootstrapping; see [Examples](#).

**Value**

the selected model is returned, without correction for model-selection, but with up to two additional components. There is an output component corresponding to the post-selection inference, which is also printed unless `quiet = TRUE`. When `boot.repl` is not 0, there is also a `boot.repl` component corresponding to the bootstrap replicates.

**Examples**

```
## linear regression:
selcorr(lm(Fertility ~ ., swiss))

## logistic regression:
```

```
swiss.lr = within(swiss, Fertility <- (Fertility > 70))
selcorr(glm(Fertility ~ ., binomial, swiss.lr))

## parallel bootstrapping:
## Not run:
library(future.apply)
plan(multisession)
boot.repl = future_replicate(8, selcorr(lm(Fertility ~ ., swiss), boot.repl = 1000,
                                         quiet = TRUE)$boot.repl, simplify = FALSE)

plan(sequential)
selcorr(lm(Fertility ~ ., swiss), boot.repl = do.call("rbind", boot.repl))
## End(Not run)
```

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