



## Title

**tot\_tut** — Implementation for the estimation of treatment on the treated (ToT), treatment on the untreated (TuT) and the average treatment effect (ATE) jointly using the design introduced in "The limits of self-commitment and private paternalism". Other causal statistics of interest like the average selection bias and the average selection on the level are also provided.

## Syntax

```
tot_tut depvar treatvar choicevar [if] [in] [, vce(robust | cluster clustvar) ]
```

## Description

**tot\_tut** estimates jointly the treatment on the treated, treatment on the untreated, the average treatment effect, selection on gains, selection bias, and selection on the level, exploiting a design with three arms: a control arm, a forced arm and a choice arm. The specification strategy involves estimating two iv regressions per each selection estimand, and jointly obtaining errors. Details on the implementation can be found in Section 5 and Appendix of the paper - [The limits of self-commitment and private paternalism](#).

Note : Jointly inference for selection on gains, selection bias, and selection on the > level is not provided.

## Arguments

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**Arguments**

*depvar*, this is the outcome of interest.

*treatvar*, categorical variable indicating treatment status: control arm (0), forced arm (1), choice arm (2).

*choicevar*, binary variable indicating choice.

## Options

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**Options**

**vce(robust | cluster clustvar)** specifies the type of standard error reported, which includes types that are robust to some kinds of misspecification (robust - the default), and that allow for intragroup correlation (cluster *clustvar*).

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## Examples

### "The limits of self-commitment and private paternalism"

```
Setup
use tot_tut_commitment.dta, clear
gen x0 = -(Z==2)*(choose==0)
gen x1 = (Z==2)*(choose==1)
gen z0_ = -(Z==0)
gen z0_ = (Z==0)
gen z1 = (Z==1)
gen z2 = (Z==2)

ToT & ATE using ivregress
ivregress 2sls apr z1 (x1 = z2), vce(cluster clustvar)

TuT & ATE using ivregress
ivregress 2sls apr z0_ (x0 = z2), vce(cluster clustvar)
```

Simultaneous inference for ToT & TuT - selection on gains  
tot\_tut apr Z choose, vce(cluster clustvar)

### **Stored results**

**tot\_tut** stores the following in **e()**:

Scalars

**e(N)**                      number of observations.  
**e(df\_r)**                 residual degrees of freedom.

Matrices

**e(b)**                      coefficient vector.  
**e(V)**                      variance-covariance matrix of the estimators.

### **References**

DiTraglia, McIntosh, Meza, Seira, Sadka. "The limits of self-commitment and private paternalism". Working paper.

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