

Matching Software

Leuven, E. and Sianesi, B. (2003), “`psmatch2`: Stata module to perform full Mahalanobis and propensity score matching, common support graphing, and covariate imbalance testing”, <http://ideas.repec.org/c/boc/bocode/s432001.html>.

```
ssc install psmatch2 [, replace]
```

As of version 2.0.5 (12Apr2004):

Matching estimators

- ***1-to-1***
 - Nearest neighbour or within caliper
 - with or without (ascending or descending) replacement

- ***1-to-many***
 - *k*-nearest neighbours
 - Radius matching

- ***Kernel***

- ***Local linear regression***

- ***Full Mahalanobis***
 - Nearest neighbour
 - Kernel
 - Local linear regression

- ***Spline***

Features

- ***Common support***
 - at the tails
 - trimming
- ***ATNT and ATE***
- ***Multiple outcomes variables***
- ***Kernels*** (allows bandwidth choice)
 - Gaussian
 - Uniform
 - Epanechnikov
 - Biweight
 - Tricube
- ***Propensity score***
 - Probit or Logit
 - Predicted probability, odds ratio or linear index
- ***Ties***
- ***Standard errors***: easy bootstrapping
- ***Tests***
 - `psgraph` Common support graph, before and after matching
 - `pstest` Covariate imbalance testing before and after matching
 - For each variable
 - t-tests for equality of means before and after
 - standardised % bias before and after and achieved % reduction in |bias|
 - Overall measures
 - Pseudo R^2 from probit of treatment on covariates before matching and on matched samples
 - P-values of the likelihood-ratio test of joint insignificance of covariates before and after
 - summary indicators of the distribution of |bias| before and after
 - Hotelling's T-squared test for equality of means by propensity score quantiles