

ECON742: Exercise 6

Matching

1. Use the database `microfinance.dta` under the Lecture Matching.

For the definition of the variables, see Table 1 of Pitt, M. and S. Khandker (1998), “The Impact of Group-Based Credit Programs on Poor Households in Bangladesh: Does the Gender of Participants Matter?”, *The Journal of Political Economy*, 106(5), 958-996. This file contains information on participation to microfinance in 1991/92. We want to estimate the causal impact of microfinance.

- (a) Why can't we compare participants (`part=1`) to non-participants (`part=0`)?
- (b) Regress the participation to the program, with a logit specification, on `HGC sex age landHHpar landHHbro landHHsis landHHSPpar landHHSPbro landHHSPsis HHland HGChad sexhead agehead adultmale adultfemale scohab village11-village243`. What is the R^2 ? Generate `ps1`, the propensity score from this estimation.
- (c) Regress the participation to the program, with a logit specification, on `HGC-dummy` (a dummy equal to 1 if the individual has `HGC>0`, and equal to 0 if `HGC==.`) `savings nfeown livevalue agrincome HHland hhsiz nonagr wage agr-wage fed med mar age2 age3 age4 mliv sex age agehead adultmale village11-village243`. Does this regression seem better? Why? Generate `ps2` from this specification.
- (d) Generate the log of `percaexpenditure`, which will be our outcome.
- (e) Perform a matching with 1 nearest neighbor, with the two scores. Use the `psttest` and `psgraph` command to check your results.
- (f) Perform a matching caliper with 0.2, 0.1, 0.05 as calipers.
- (g) Perform a matching strata with 0.2, 0.1, 0.05 as stratas.
- (h) Perform a matching kernel with 0.05, 0.02, 0.01 as bandwidths.
- (i) What is the best method? The best specification?
- (j) What are the results?