Short Course on the Econometrics of Networks (Prague, 2019)

Professor Bryan Graham

Final Assignment

This assignment is based upon the paper De Weerdt (2004), a copy of which is available online here. The underlying dataset – which is the well known Nyakatoke risk-sharing network – is available online as well here. You my find the Python notebooks prepared for the Prague course (as well as those prepared for the 2018 St. Gallen course useful as you complete this assignment).

A complete assignment consists of (i) code, (ii) output and (iii) a short write-up.

- 1. Replicate as best as you are able to the specification in third column of Table 6 in De Weerdt (2004).¹ In one specification include the "No. of common friends" variable as De Weerdt (2004) does. In another exclude it. Discuss why including this variable is potentially problematic. For computation you can use the dyadic_regression function in the netrics package which is available on my GitHub page. Report standard errors that both account for "dyadic clustering" as well as those that (erroneously) assume independence across dyads.
- 2. Next replicate the results in the third column of Table 7. For computation you can use the dyad_jfe_logit function in the netrics package.
- 3. Next fit the same model, but this time using tetrad logit.
- 4. Summarize your results in a nice table and a few paragraphs of narrative. Try to summarize, in words, the main assumptions underlying each approach to estimation. How do your findings compare with those reported by De Weerdt (2004)?

References

De Weerdt, J. (2004). *Insurance Against Poverty*, chapter Risk-sharing and endogenous network formation, (pp. 197 – 216). Oxford University Press: Oxford.

⁽a) Note that De Weerdt (2004) reports marginal effects, you may report just coefficients; you should not expect to produce the exact same numbers as in the table. Similarly it may be hard to reconstruct all the variables exactly as he does; just get as close as you can!