Topic 5: Two-Way Cluster-Robust (TWCR) Standard Errors

by Sai Zhang

Key points: The validity of Two-Way Cluster-Robust (TWCR) standard errors

Disclaimer: *This note is compiled by Sai Zhang.*

5.1 One-Way Clustering

First, consider the case of one-way clustering. The linear model with one-way clustering

$$y_{ig} = \mathbf{x}_{ig}\boldsymbol{\beta} + u_{ig}$$

where i denotes the ith of the N individuals in the sample, j denotes the gth of the G clusters, assme

Chiang and Sasaki (2023) (Menzel, 2021)

References

Harold D Chiang and Yuya Sasaki. On using the two-way cluster-robust standard errors. *arXiv preprint arXiv:2301.13775*, 2023.

Konrad Menzel. Bootstrap with cluster-dependence in two or more dimensions. *Econometrica*, 89(5):2143–2188, 2021.