Econometrics October 20, 2023

## 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