Department SEMINARS

DEM DIPARTIMENTO DI ECONOMIA E MANAGEMENT

Grouped fixed effects regularization for binary choice models

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ABSTRACT

We study the application of the Grouped Fixed Effects (GFE) estimator (Bonhomme et al., ECMTA 90(2):625-643, 2022) to binary choice models for network and panel data. This approach discretizes unobserved heterogeneity via k-means clustering and performs maximum likelihood estimation, reducing the number of fixed effects in finite samples. This regularization helps analyze small/sparse networks and rare events by mitigating complete separation, which can lead to data loss. We focus on dynamic models with few state transitions and network formation models for sparse networks. The effectiveness of this method is demonstrated through simulations and real data applications.

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