NONPARAMETRIC ESTIMATION OF FINITE-MIXTURE MODELS OF DYNAMIC DISCRETE CHOICES

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October 12, 2021

Abstract

This paper provides new identification results for mixtures of stationary Markov processes. Our results complete and sharpen those of Kasahara and Shimotsu (2009). Our approach is constructive and, contrary to Hu and Shum (2012), does not require monotonicity conditions on component distributions. Identification is achieved from knowledge of the cross-sectional distribution of as little as three effective time-series observations. Nonparametric maximum likelihood is considered for the purpose of estimation and inference. Implementation via the EM algorithm is straightforward and evaluated in a Monte Carlo exercise.

JEL Classification: C14, C23 C51

Keywords: discrete choice, heterogeneity, identification, mixture, state dependence.

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Support from the European Research Council through grant n° 715787 (MiMo), and from the French Government and the ANR under the Investissements d' Avenir program, grant ANR-17-EURE-0010 is gratefully acknowledged.