

Title: Transition models and tests to assess stationarity

Abstract: Transition models, based on Stochastic Processes and Generalized Linear Models, are an important framework that can be used to model longitudinal categorical data. A relevant issue in applying these models is the condition of stationarity, or homogeneity of transition probabilities over time. We propose two tests to assess stationarity in transition models. Also, we present three motivational studies, with ordinal and nominal data, in which the tests are applied to assess the stationarity. Additionally, their performances are assessed through simulation studies and the results show that the proposed tests have good performance. In addition, the correlation between these test statistics and the classical test available in the literature is large, which indicates concordance between the testing approaches.