

## Abstract

In a large variety of applications the data for a variable we wish to explain is ordered and categorical. In this paper we present a new similarity-based model for the scenario and investigate its properties. We establish the rate of decay of the autocorrelation function (ACF) in the general case and derive its explicit form in some special cases. Stationarity and ergodicity of the process are proven, as well as consistency and asymptotic normality of the maximum likelihood estimator (MLE) of the model's parameters. A simulation study supports our findings. The results are applied to the Netflix data set, comprised of a survey on users' grading of movies.

*Key words and phrases:* Consistency; Ergodicity; Mixing; Ordered Probit; Similarity; Stationarity.

*JEL Classification:* C22