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Estimation and empirical likelihood for single-index multiplicative models

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- We study a class of multiplicative models with a single-index structure, called single-index multiplicative models.
- An iterative estimation procedure based on the least product relative error (LPRE) loss is developed.
- Asymptotic normality for both the nonparametric link function and the parameter vector is established.
- An empirical likelihood inference on the estimated parameter vector is made.
- Extensively numerical results are reported to show merits of the proposed approach.

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