Fishing Economic Growth Determinants Using Bayesian Elastic Nets

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We propose a method to deal simultaneously with model uncertainty and correlated regressors in linear regression models by combining elastic net specifications with a spike and slab prior. The estimation method nests ridge regression and the LASSO estimator and thus allows for a more flexible modeling framework than existing model averaging procedures. In particular, the proposed technique has clear advantages when dealing with datasets of (potentially highly) correlated regressors, a pervasive characteristic of the model averaging datasets used hitherto in the econometric literature. We apply our method to the dataset of economic growth determinants by Sala-i-Martin et al. (Sala-i-Martin, X., Doppelhofer, G., and Miller, R. I. (2004). Determi- nants of Long-Term Growth: A Bayesian Averaging of Classical Estimates (BACE) Approach. American Economic Review, 94: 813-835) and show that our procedure has superior out-of-sample predictive abilities as compared to the standard Bayesian model averaging methods currently used in the literature.