Abstract for Mehdi Shoja and Ehsan Soofi

Title: Information Provided by the Uncertainty and Disagreement of Economic Forecasts

Abstract: Central Banks in the US and Europe survey panels of experts quarterly on future states of their economies. Respondents provide their forecasts of economic variables and probability distributions for pre-assigned categories of each variable. These surveys are the main sources for assessing uncertainty and disagreement about the economy. However, the lack of a general framework for measuring these concepts is evident, although entropy sometimes has been used for measuring the uncertainty. We illustrate the utility of the information and Bayesian frameworks for studying uncertainty and disagreement about the economy. Forecast distributions are generated in a random environment and provide aggregate uncertainty measures through pooling the distributions, their uncertainty functions, or their moments. Differences between these measures provide information about the economic variable. Disagreement among the forecasters is measured by information divergence. The maximum entropy models provide upper bounds for the uncertainty. Bayesian hierarchical models are used to explore the dynamics of the individual and aggregate uncertainty measures about the US inflation. These models are used to examine the association of the inflation uncertainty with the anticipated inflation and the dispersion of point forecasts. Dirichlet models are used to capture the uncertainty about the unknown probability distribution of the economic variable.