Model Averaging techniques with Economic applications: a Bayesian perspective

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Abstract

A common situation in applied disciplines is that there is no a universally accepted theory leading to the construction of a single statistical model. More on the contrary, several different statistical models may be built based on the consideration of alternative sensible theories about the problem under study. This context is normally handled choosing one of these competing models then producing inferences conditionally on this (now fixed) model. Nevertheless, this approach obviates the uncertainty regarding which is the true model leading to an underevaluation of the variability and potentially to incorrect inferences. The statistical techniques that explicitly consider this source of extra variability through weighting inferences over the different models are called Model Averaging (MA). These procedures have received great interest in social sciences and in economics in particular and will be the subject of this talk. We will review the basic aspects about the usage of MA with special focus on the Bayesian approach, which arguably is the natural way to approach the problem. The emphasis is placed on applicability and examples of applications in economics will be given jointly with a review of the software that can be used to approach a MA problem.

Key words: Bayesian Model Average, Uncertainty

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