
HKMetrics-Seminar@Heidelberg

Research Seminar in Econometrics and Statistics

New Results on Minimax Regret Treatment Rules in Finite Samples

Patrik Guggenberger

Penn State University

<https://patrikguggenberger.wordpress.com/>

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Abstract: We study minimax regret treatment rules in finite samples under matched treatment assignment in a setup where a policymaker, informed by a sample, needs to decide between T different treatments for a $T \geq 2$. Randomized rules are allowed for. We show that the generalization of the minimax regret rule derived in Stoye (2009) for the case $T = 2$ is minimax regret for general finite $T > 2$. We also show by example, that in the case of random assignment the generalization of the minimax rule in Stoye (2009) to the case $T > 2$ is not necessarily minimax regret and derive minimax regret rules for a few small sample cases, e.g. for $N = 2$ when $T = 3$. In the case where a covariate x is included, it is shown that a minimax regret rule is obtained by using minimax regret rules in the "conditional-on- x " problem if the latter are obtained as Nash equilibria.