

Abstract:

We consider statistical inference in games. Each player obtains a random sample of other players' actions, uses statistical inference to form beliefs about their actions, and best-responds to those beliefs when choosing his action. In a Generalized Sampling Equilibrium (GSE), the random sample is drawn from the distribution of players' actions based on this process. We characterize the set of GSEs in large two-action games, and compare their predictions for different sample sizes and statistical inference procedures. An application to search and matching markets demonstrates that statistical inference from small samples leads to significantly larger unemployment than in Nash equilibrium.