The principal-agent approach to testing experts

Wojciech Olszewski* and Marcin Pęski†

Abstract

Recent literature on testing experts shows that it is difficult, and often impossible, to determine whether an expert knows the stochastic process that generates data. Despite this negative result, we show that often exist contracts that allow a decision maker to attain the first-best payoff in the following sense: in the case in which the expert knows the stochastic process, the decision maker achieves the payoff she would obtain if there were no incentive problems; while in the case in which the expert does not know the stochastic process, she achieves the payoff she would obtain in the absence of any expert.

More precisely, this kind of full-surplus extraction is always possible in infinite-horizon models in which future payoffs are not discounted. If future payoffs are discounted (but the discount factor tends to 1), the possibility of full-surplus extraction depends on a constraint involving the forecasting technology.

1. Introduction

A number of recent papers show that if an empirical test can be passed by an expert who knows a stochastic process that generates states, and reports this knowledge truthfully, then the test can also be passed an expert who knows nothing about the stochastic process, but delivers forecasts strategically in order to pass this particular

*Department of Economics, Northwestern University, 2001 Sheridan Road, Evanston IL 60208
†Economics Department, University of Texas at Austin, 1 University Station, Austin TX 78712