Multi-Dimensional Screening: Buyer-Optimal Learning and Informational Robustness joint work

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Abstract

A monopolist seller of multiple goods screens a buyer whose type is initially unknown to both
but drawn from a commonly known distribution. The buyer privately learns about his type via a
signal. We derive the seller’s optimal mechanism in two different information environments. We
begin by deriving the buyer-optimal outcome. Here, an information designer first selects a signal
and then the seller chooses an optimal mechanism in response; the designer’s objective is to
maximize consumer surplus. Then, we derive the optimal informationally robust mechanism. In
this case, the seller first chooses the mechanism and then nature picks the signal that minimizes
the seller’s profits. We derive the relation between both problems and show that the optimal
mechanism in both cases takes the form of pure bundling.