

Dynamic Mechanism Design with Hidden Income and Hidden Actions *

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Abstract

We develop general recursive methods to solve for optimal contracts in dynamic principal-agent environments with hidden states and hidden actions. Starting from a general mechanism with arbitrary communication, randomization, full history dependence, and without restrictions on preferences or technology, we show that the optimal contract can be implemented as a recursive direct mechanism. A curse of dimensionality which arises from the interaction of hidden income and hidden actions can be overcome by introducing utility bounds for behavior off the equilibrium path. Environments with multiple actions are implemented using multiple layers of such off-path utility bounds.

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