Signaling via Money*

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Abstract

We study the problem of allocating a single object among a group of agents, whose preferences depend on the allocation of that object and the perception of a third party – the aftermarket – about their private information. A mechanism selects an allocation, transfers to the agents and sends signal to the aftermarket. We compare privacy environments: (i) private transfers, where only the allocation and the signal can be observed by the aftermarket and (ii) public transfers, where the aftermarket also observes the transfers to the agents. Our main result shows, that public transfers impose (almost) no constraint on the designer. Any social choice function that is implementable with private transfers remains implementable with public transfers. This result provides a justification for the common assumption in the literature, that transfers remain hidden from aftermarkets.

Keywords: aftermarkets, public transfers mechanisms, signaling mechanisms
JEL classification: D44; D82

1 Introduction

In many mechanism design environments the agents interact with an aftermarket after execution of the initial mechanism. Examples are auctions with resale, where the winning bidder has the opportunity to sell the object further to a third party or takeover auctions, where the bidding firms' (continue to) compete in their respective markets. In many of these aftermarkets the agents' private information remains decision-relevant. For instance a winning bidder who offers the good for resale becomes a privately informed seller, and a firm's bidding in a takeover auction can be used by its competitors as a proxy for competitiveness. It therefore becomes a critical feature for the mechanism design problem to control the information flow to the aftermarket, because each agent's preferences depend not only on the outcome of the mechanism, but also on the outcome of the aftermarket. Put differently, the mechanism design problem is augmented by an information design problem. Importantly, there are two channels of information flow the designer has consider. First, she can directly communicate with the aftermarket by sending signals. Of course, these signals may be correlated with the information revealed by the agents to the mechanism. For instance the designer can fully reveal the agents' messages. Second, there is implicit information revelation from the (observable parts of) the allocation implemented by the mechanism. For example, the fact that an agent was allocated an object is informative about that agent's private information by taking into account the

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