Playing Favorites with Inattentive Buyers

Draft

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Abstract

We study how a seller should design mechanisms when buyers can flexibly acquire costly information before purchase. In our model, two ex ante identical buyers decide not only how much information to acquire but also what kind of information to focus on. We show that the seller may optimally create endogenous exclusivity by inducing one buyer to acquire precise information while leaving the other uninformed. This reflects a core tradeoff between rent extraction and trade probability: exclusivity strengthens inspection incentives but lowers the likelihood of trade, while equal treatment maximizes coverage at the expense of weaker learning. Comparing mechanisms, we find that sequential offers are optimal when rent extraction is paramount, while symmetric simultaneous offers are optimal when trade probability is more valuable. The distinction arises only under flexible information acquisition, highlighting how timing and exclusivity interact with buyers' learning incentives to generate asymmetric treatment of symmetric buyers.

Keywords: Mechanism design, Flexible information acquisition

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1 Introduction

Information is costly, but everywhere buyers pay it. Homebuyers hire inspectors, car buyers pay for diagnostics, investors subscribe to analyst reports, and patients rely on expensive medical trials before choosing treatment. In all of these settings, buyers face the same basic problem: before committing, they must decide how much effort to invest in discovering the truth. Modern surveys show that more than 80% of used car buyers pay for mechanical checks before purchase, and financial firms spend billions annually on research and due diligence. These examples illustrate just how ubiquitous and economically significant costly information acquisition is in markets for unfamiliar goods.

Recognizing this, sellers can shape buyers' incentives to gather such information by carefully designing the selling mechanism—through menus of prices, warranties, or allocation rules—that determine how buyers learn and commit to purchase. When making such offers, sellers face a fundamental tradeoff. On the one hand, they wish to encourage careful learning so that informed buyers will be willing to pay higher prices. On the other hand, this carries the risk that buyers may discover negative information about the product's quality and decide not to purchase at all. The presence of multiple buyers introduces further complexity: if one buyer expects that others may win the item, their incentive to incur the cost of learning diminishes. To address this, sellers may find it optimal to favor a particular buyer by granting a higher probability of allocation, or even to approach buyers sequentially rather than simultaneously, thereby restoring incentives to acquire information.

This paper studies how a seller should treat two ex ante identical buyers who, upon observing the offer, must decide how much, and what kind of information to acquire before purchasing. We show that—even when buyers are symmetric ex ante—the seller may optimally play favorites, offering stronger terms or higher allocation probabilities to one buyer to encourage information acquisition. Moreover, we examine whether the seller should offer the good simultaneously or sequentially, and how this choice interacts with buyers' incentives to acquire information.

The key tradeoff lies between rent extraction and trade probability. Since the information is endogenous, buyers will only choose to inspect if they expect to receive sufficient surplus conditional on receiving a favorable signal. If the seller prioritizes rent extraction, she will want to guarantee some form of exclusivity: by giving a buyer a stronger claim on the good, the seller raises that buyer's expected utility and thus strengthens her incentive to acquire precise information. However, more precise information also increases the likelihood of receiving a bad signal, thereby reducing the overall probability of trade. When the seller instead prioritizes trade probability over rent extraction, she will prefer to spread allocation more evenly—making the good available to multiple buyers and maximizing the likelihood of sale. Which objective the seller

prioritizes—rent extraction or trade probability—depends on the relative costliness of acquiring favorable signals.

We observe how this tradeoff plays out in simultaneous and sequential mechanisms with two buyers. In the simultaneous mechanism, the resource constraint prevents the seller from guaranteeing full allocation to both buyers, so informational rents must typically be shared. If the seller prioritizes trade probability, she spreads allocation more evenly, ensuring broad coverage and a higher chance of sale. If instead the seller seeks higher rent extraction, she can loosen the allocation constraint for one buyer—offering priority or a more favorable allocation menu—thereby creating exclusivity that strengthens incentives for costly inspection. In the sequential mechanism, the seller can extend exclusivity to both buyers in turn: the first buyer receives full allocation initially, and if she declines to trade, the same exclusive opportunity is offered to the second buyer. This arrangement enhances rent extraction by reinforcing inspection incentives but lowers the overall probability of trade.

How the seller weighs these opposing effects determines which mechanism performs better. When rent extraction is more important, the sequential mechanism tends to be preferable, as it provides stronger exclusivity and sharper incentives for information acquisition. When trade probability is more valuable, the simultaneous symmetric mechanism performs better, maximizing coverage and the likelihood of sale. In short: play favorites for rents, equal treatment for trade probability.

This comparison is meaningful only in the flexible information acquisition model, where buyers not only decide how much information to acquire but also what kind of information to focus on. For example, in financial markets, an investor with inflexible information acquisition might only choose the precision of a research report—a coarse forecast versus a more detailed projection. With flexible information acquisition, however, the investor can also decide what dimension of the option to study—stress-testing downside risk (bad outcomes) versus confirming upside potential (good outcomes). In the inflexible case, where buyers choose only from a fixed set of signal precisions, the optimal asymmetric simultaneous mechanism can be implemented sequentially without changing the seller's revenue, making the two mechanisms effectively equivalent.

On the other hand, in the flexible information acquisition case, the same allocation outcome can yield different revenues depending on the timing of the mechanism. This occurs because buyers not only choose how much information to acquire, but also how precisely to learn about unfavorable outcomes. Since the signal realizes privately, the precision of the unfavorable signal determines what price and allocation probability the seller can offer at a given favorable signal. How exact this unfavorable signal can get depends on each buyer's resource constraint, which varies across mechanisms. In the simultaneous mechanism, the resource constraint is tighter: since another buyer is competing for the good, each buyer has weaker incentives to acquire precise

information about bad outcomes, limiting the price the seller can charge when the signal is favorable. As a result, the price the seller can charge at a given signal depends on the intensity of competition. Flexibility in information choice is precisely what makes timing matter.