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Pricing Information Goods: A Strategic Analysis of the  
Selling and On-demand Pricing Mechanisms

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Abstract

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We analyze two pricing mechanisms for information goods -- selling, where an up-front payment allows unrestricted use by the consumer, and on-demand (pay per-use) pricing where the payments are tailored to the consumer's usage patterns. We analytically model these pricing mechanisms in a market where consumers differ in terms of the frequency of information good usage and utility per-use. When a monopolist employs each mechanism independently, we demonstrate that on-demand pricing generally yields higher profits than selling, provided the transaction cost associated with the former is not too high. We then analyze a competitive scenario where one duopolist employs selling and the other employs on-demand pricing. Here, the findings from the monopoly case are reversed and selling always yields higher profits than on-demand pricing. Further, we demonstrate that as the transaction cost associated with on-demand pricing increases, surprisingly, the profits of both duopolists can increase. We then extend the models in two directions.

First, we show that if a monopolist intends to introduce an upgrade to the information good at some point in the future, then on-demand pricing is preferable. In contrast, in a competitive setting, upgrades further enhance the attractiveness of selling. Second, we consider the case where competing, vertically differentiated firms can choose endogenously between the two pricing mechanisms. Here, we show that the profits to each firm derive primarily from selling, but that the firm that offers high quality adopts both pricing mechanisms and the firm that offers lower quality adopts only selling. We conclude by highlighting the implications of the analysis.

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