

MISQ Archivist

The Impact of Customer Valuation Uncertainty on Software Licensing

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Abstract

This paper studies how an important feature of software adoption impacts a software vendor's preference between perpetual and subscription-based licensing: Customers are uncertain about their valuation of the software prior to adoption. We show that customer valuation uncertainty causes the equilibrium outcome to depart from that of standard durable-goods theories in two aspects: (1) Contrary to the conventional wisdom of durable-goods theories that subscription-based licensing is optimal, perpetual licensing can be more profitable for the vendor than subscription-based licensing under some conditions. This result offers a possible explanation for the historical prevalence of perpetual licensing in many software markets. (2) When subscription-based licensing is optimal, our theory suggests a low-then-high variable pricing path. In contrast, standard durable-goods theories suggest charging the monopoly leasing price in each period. Such a variable pricing path and the resulting adoption pattern are consistent with market observations (e.g., pricing strategy by Adobe Systems). We also examine a variation of subscription-based licensing in which the vendor offers a menu of subscription options varying in license duration and shows that customer valuation uncertainty is critical for this strategy to outperform perpetual licensing under some conditions. Moreover, we find that customer valuation uncertainty can cause the vendor to prefer a licensing strategy that is not socially optimal.

Keywords: Software licensing; perpetual licensing; subscription-based licensing; customer valuation uncertainty