The Economics of Buyer Uncertainty: Advance Selling vs. Probabilistic Selling

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Abstract

Two selling strategies, Advance Selling and Probabilistic Selling, have been suggested recently in the marketing literature as valuable marketing tools to improve profit. Although these two strategies are motivated by fundamentally different market phenomena and implemented via completely different market mechanisms, we argue that they share a common characteristic—both offer consumers a choice involving buyer uncertainty. Specifically, Advance Selling offers consumers a choice to buy before their consumption utility is known, and Probabilistic Selling offers consumers a choice to buy a product which can turn out to be any of a set of multiple items. This common characteristic raises several important and interesting research questions. For example, what are the general economic forces behind consumer choices involving uncertainty? How, from a seller’s perspective, does the buyer uncertainty created via Advance Selling differ from that created via Probabilistic Selling? Are the two types of buyer uncertainty substitutable under some conditions (i.e., can the seller achieve the same profit improvement by either offering advance sales or introducing a probabilistic good)? Under what conditions can one type of buyer uncertainty help the seller more than the other, and why?

We develop a formal model to examine these issues. We show that the seller can address unobservable buyer heterogeneity by inducing sales involving buyer uncertainty via two different mechanisms: (1) Homogenizing heterogeneous consumers, and (2) Separating heterogeneous consumers. Offering advance sales encourages customers to purchase while they are uncertain about their consumption states (more homogeneous), but offering probabilistic goods encourages customers to reveal their heterogeneity via self-selecting the uncertainty choices. The relative attractiveness of these two selling strategies depends on the degree of two types of buyer heterogeneity: (1) Max_Value-Heterogeneity, which is the variation in consumers’ valuations for their preferred good; and (2) Strength-Heterogeneity, which is the variation in the strength of consumers’ preferences. Neither strategy is advantageous unless the market exhibits sufficient Max_Value-Heterogeneity. However, while Strength-Heterogeneity can destroy the profit advantage of Advance Selling, a mid-range of Strength-Heterogeneity is necessary for Probabilistic Selling to be advantageous.

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