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Decision bias in the newsvendor problem with a known demand distribution: experimental evidence. (English) [Zbl 1231.90058](#)
Manage. Sci. 46, No. 3, 404-420 (2000).

Summary: In the newsvendor problem, a decision maker orders inventory before a one period selling season with stochastic demand. If too much is ordered, stock is left over at the end of the period, whereas if too little is ordered, sales are lost. The expected profit-maximizing order quantity is well known, but little is known about how managers actually make these decisions. We describe two experiments that investigate newsvendor decisions across different profit conditions. Results from these studies demonstrate that choices systematically deviate from those that maximize expected profit. Subjects order too few of high-profit products and too many of low-profit products. These results are not consistent with risk-aversion, risk-seeking preferences, Prospect Theory preferences, waste aversion, stockout aversion, or the consequences of underestimating opportunity costs. Two explanations are consistent with the data. One, subjects behave as if their utility function incorporates a preference to reduce ex-post inventory error, the absolute difference between the chosen quantity and realized demand. Two, subjects suffer from the anchoring and insufficient adjustment bias. Feedback and training did not mitigate inventory order errors. We suggest techniques to improve decision making.

MSC:

[90B05](#) Inventory, storage, reservoirs

Cited in **1** Review
Cited in **87** Documents

Keywords:

[behavioral operations](#); [newsvendor](#); [inventory decisions](#)

Full Text: [DOI](#)