

[Aviv, Yossi](#)

The effect of collaborative forecasting on supply chain performance. (English) Zbl 1232.90009
Manage. Sci. 47, No. 10, 1326-1343 (2001).

Summary: We consider a cooperative, two-stage supply chain consisting of two members: a retailer and a supplier. In our first model, called local forecasting, each member updates the forecasts of future demands periodically, and is able to integrate the adjusted forecasts into his replenishment process. Forecast adjustments made at both levels of the supply chain can be correlated. The supply chain has a decentralized information structure, so that day-to-day inventory and forecast information are known locally only. In our second model, named collaborative forecasting, the supply chain members jointly maintain and update a single forecasting process in the system. Hence, forecasting information becomes centralized. Finally, we consider as a benchmark the special case in which forecasts are not integrated into the replenishment processes at all. We propose a unified framework that allows us to study and compare the three types of settings. This study comes at a time when various types of collaborative forecasting partnerships are being experimented within industry, and when the drivers for success or failure of such initiatives are not yet fully understood. In addition to providing some managerial insights into questions that arise in this context, our set of models is tailored to serve as building blocks for future work in this emerging area of research.

MSC:

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

[62P05](#) Applications of statistics to actuarial sciences and financial mathematics

Cited in **30** Documents

Keywords:

[collaborative forecasting](#); [CFAR](#); [CPFR](#); [supply chain management](#)

Full Text: [DOI](#)