Dynamic Contract under Quick Response in a Supply Chain

by

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Abstract:

We investigate contracting issues under Quick Response in a supply chain consisting of one manufacturer and one retailer. The manufacturer sells her seasonal product to the retailer over two periods. In the first period, which is before the selling season, none of the firms know the demand information. The retailer might want to order in this period based on the expected demand due to the low production cost associated with the regular production mode at the manufacturer. In the second period, which is the selling season, the retailer can update his demand information. The manufacturer may still produce and supplement the retailer’s stock, but due to the short duration of this period, only Quick Response can work and the production cost has to be higher. We show that the adaption of Quick Response may hurt the manufacturer due to the high information rent the retailer asks for. We also consider the case that the manufacturer can carry over inventory from the first period to the second period. Our analysis shows that carrying inventory may hurt the manufacturer.

Bio:

Shilu Tong is an Associate Professor at the Chinese University of Hong Kong, Shenzhen. He received his Ph.D. degree in Operations Management from the Hong Kong University of Science and Technology, and his B.S. and M.S. degrees from Fudan University. He was previously a faculty member at the University of New South Wales. His research interests focus on the issues of contracting, information sharing and competition in supply chain management, and the interface between marketing and operations.

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All are welcome!