Volume Incentive through Performance-Based Allocation of Business

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Abstract

Buyers want their suppliers to make efforts to improve performance in the delivery of products and services. However, such efforts are costly and often unobservable to the buyers. A common practice for inducing high-level supplier performance is to source from multiple suppliers and to strategically allocate business to such suppliers based on their past performance. To investigate the design of such performance-based volume incentive schemes, we consider a buyer's dual sourcing problem in a dynamic principal-agent setting. We find that to maximize suppliers' competition over time, the optimal allocation scheme should involve the suppliers' current shares of business, which is generally not a simple rank-order tournament. The optimal scheme allocates business according to each supplier's performance relative to their respective optimal performance target, which may not reward the better performer a larger share. A simple way to achieve near-optimal results is the use of "handicapped rules" that can significantly outperform simple first-past-the-post rules.