

SUPPLY CHAIN SOURCING AND PRICING DECISIONS UNDER COMPETITION
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Abstract

As organizations increase their global footprints, sourcing becomes an important issue in management. This dissertation addresses three problems commonly faced by the buyer firms while sourcing in a supply chain. In the first essay, we consider a manufacturing supply chain where competing buyers procure capacity from a supplier. We ask the question will an influential (or powerful) buyer who books the capacity first procures higher quantity from a supplier with limited capacity as compared to the case if the supplier had infinite capacity. In other words, we try to identify the influential buyer's excess procurement strategies when faced with limited upstream supply. In the second essay, we consider the cloud services industry where multiple buyers decide the optimal mix between in-house private cloud and public cloud (from an external cloud provider). We characterize the buyer firms' private cloud investment strategies in the presence of demand-side uncertainties. Finally, in the third essay, we study a scenario in the manufacturing industry where a buyer is evaluating a new sourcing opportunity in the later procurement period. Initially, the buyer allocates some capacity to the incumbent supplier and makes supplier development investments (which leads to process improvements of the entrant). The initial allocation towards the incumbent supplier reduces his unit production cost for the subsequent period production due to production learning. In addition, both the incumbent and the entrant supplier also exert process improvement efforts. We characterize the buyer firm's optimal supplier development investments and her optimal sourcing strategy. Finally, we also determine the optimal process improvement efforts exerted by both the incumbent and the entrant supplier.