

Introduction to the Special Issue on Marketing and Operations Management Interfaces and Coordination

Teck H. Ho

Haas School of Business, University of California, Berkeley, Berkeley, California 94720, hoteck@haas.berkeley.edu

Christopher S. Tang

The Anderson School of Management, University of California, Los Angeles, Los Angeles, California 90095,
ctang@anderson.ucla.edu

This special issue, by addressing problems surrounding marketing and operations management, depicts state-of-the-art approaches, methodologies, and insights to improve a firm's or supply chain's overall performance. Top scholars in the field address many of the ways in which companies can synchronize their marketing and operations departments or their supply chain partners to improve competitiveness and profit. The information in this issue should be of interest both to academics and managers, and represents the current thoughts in an emerging area of marketing and operations interfaces.

Key words: marketing and operations interface; cross-functional coordination; supply chain management; competition

Marketing is the creation of customer demand; operations management is the supply and fulfillment of that demand. Therefore, it is no surprise that marketing and operations management are intimately connected in many firms. When the two areas are in conflict, one often sees a mismatch in demand and supply, leading to production inefficiencies and unsatisfied customers. When they are in sync, we frequently see an improved firm competitiveness and profit. This intrafirm coordination idea can be generalized to interfirm coordination where different firms (e.g., manufacturers and retailers) work together to maximize overall supply chain performance. This special issue includes state-of-the-art approaches, methodologies, and insights about how marketing and operations management or supply chain partners can work together to improve overall firm's or supply chain's performance.

Kulp, Lee, and Ofek conduct a survey in consumer packaged goods to examine whether information sharing, synchronized replenishment, and collaborative product design and development lead to improved supply chain performance. The authors find that sharing information about inventory and customer needs is associated with an improved manufacturer performance only up to a limited extent. Synchronized replenishment, in the form of vendor management inventory (VMI), is positively related to higher manufacturer margins, while collaborative product design and development is positively related

to higher wholesale prices and lower retailer stockouts. While these results do not imply causal relationships, they are indicative of the kinds of benefits a supply chain can achieve as a result of interfirm coordination. On a similar topic, Mishra and Raghunathan analyze the competitive impact of adopting VMI. The authors show that by adopting VMI, the competition between manufacturers of competing brands increases and that this increased competition benefits the retailer because manufacturers will increase their stocking levels to avoid potential brand substitution when stockouts occur. This paper depicts a new benefit for adopting VMI, which is beyond the operational cost savings.

Steckel, Gupta, and Banerji show experimentally that the shortening of the cycle time always leads to reduced costs. They also demonstrate that sharing point-of-sales information via information technology (IT) may increase costs in the now standard "beer" game. Point-of-sales information helps when the demand is a step function but hurts when it is S-shaped. Besides investing in IT to encourage information sharing, some firms offer incentives to entice their customers to share early demand information. Tang, Rajaram, Alptekinoglu, and Ou analyze such a scheme which they call the advanced booking discount (ABD) program. The ABD program entices customers to commit to early orders at a discounted price prior to the selling season. The authors show that the ABD program can yield significant benefits, and they

instruct retailers how to optimally set their discount prices to maximize the expected profits.

Ho and Zheng illustrate how a firm must match its delivery promise with its delivery performance. Building on the classical gap model of service quality from marketing and the standard queuing model from operations management, the authors show that the setting of delivery commitment must take the capacity and customer sensitivities to delivery-time expectation and delivery quality into consideration. The authors show how this delivery-time commitment competition is analogous to the classical Prisoners' Dilemma and will lead to lower profits for the firms but benefit the end customers. Balasubramanian and Bhardwaj obtain a qualitatively similar result. They investigate whether two firms that have coordinated marketing and operations functions compete more intensely than similar firms with conflicting marketing and operations functions. They show that the latter duopoly has a higher total industry profit, thereby suggesting that firms that have coordinated marketing and operations functions compete more intensely. Kim, Shi, and Srinivasan show how rewarding customers with their own products or services (e.g., airlines, hotels, etc.) can lead to higher prices in the industry and encourage firms to increase their levels of capacities. Prices are higher for two reasons. First, a reward program is a credible commitment to competitors that firms will not undersell and thus encourage them to price higher. Second, it provides incentives for the firms to set higher prices now because competitive firms that set lower prices today will suffer a reduction in their available capacity tomorrow through rewards.

Hess and Lucas develop an analytical model for optimally allocating resources between marketing research and production. Surprisingly, they found that a firm should allocate one-third of its total resources to marketing research if it has no prior knowledge of the products that consumers value the most, regardless of the cost of marketing research or production efficiency. This result highlights the crucial role of marketing research in "matching supply with demand" when customers wants are highly uncertain. While looking at new product development, Bajaj, Kekre, and Srinivasan analyze time and resource allocation

between the design and production phases by gathering primary data from an avionics guidance system manufacturer. Their data suggest that managers deploy lower levels of specialists and higher levels of managerial control in the design phase to leverage payoffs downstream in production at the expense of higher resource consumption in design. The authors prescribe a reversal of the above strategy for new product development projects where the design phase dominates the time and cost resource consumptions. Using an infinite-horizon Markov decision process, Souza, Bayus, and Wagner show that more frequent new productions are optimal under faster clockspeed conditions. In addition, they find that a firm's optimal product quality decision is governed by its relative costs of introducing incremental versus revolutionary products.

Finally, Corbett, Zhou, and Tang quantify the values of offering different contract terms (single wholesale price, two-part linear tariff, and two-part nonlinear tariff) when the supplier has partial or full information about the buyer's cost structure. They show that two-part tariff structures have a higher value under full information, and conversely the value of information on cost structure is higher when the supplier chooses the two-part tariff structures.

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