Cannibalization

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Cannibalization is a challenger for any pricing strategist as the topic refers to the reduction in sales volume or revenue as a result of the introduction of a new product or service. For example, when Coca Cola introduced Coke Zero to compete alongside Diet Coke the introduction would have impacted on the product. Too often product cannibalization effects are ignored or neglected by modellers trying to forecast demand, quantify price elasticities and ultimately optimize prices. Leandro and colleagues argue that the main reason is cannibalization effects are hard to measure – and even harder to include in optimization algorithms. The authors present an analysis as an alternative solution to the computationally intensive, commonly infeasible problem of dealing with cannibalization effects in price optimization problems. Although the proposed solution approximates cannibalization effects, it can deliver a result in reasonable computational time frames by leveraging a theoretical game framework for calculating Nash equilibrium in zero-sum games thus allowing for a more accurate representation of the real-life pricing competitive environment, resulting in truly optimal sustainable pricing strategies. Whereas, Ødegaard and Puterman model the problem of selling through channels where the sales price and hence revenue is uncertain, the authors consider a seller, with a fixed inventory, who has to decide when to make items available to the market. The authors assume that there is a holding or depreciation cost associated with the items, which means that the seller would like to make the item available for sale as soon as

possible. Assumptions are made that the expected selling price is decreasing in the number of items made available to the market. That is, there is a price cannibalization effect among the items made available at the same time, resulting in an incentive to make items available sequentially over time. The main managerial insight and contribution the paper makes is that there is a significant value of understanding of the special dynamics of channels with uncertain sales price.

Langer examines the evolution of pricing practice in home improvement retailing, observing how only a small number of retailers use price as a powerful tool to reach their operational and strategic goals. Central to Langer works is the demonstration in detail of the practical techniques used on how to nurture and grow a pricing program learning environment. In a research paper by Philips, the authors draw on the issues of profit maximization as managers often care about goals other than pure short-run profitability. There are at least two reasons for this. One is that the pursuit of long-term profitability might require sacrificing some profitability in the short run. A second reason that a company might deviate from short-term profit maximization is that stock analysts follow a number of metrics other than profitability in judging a stock and may ‘punish’ the stock if some of these metrics suffer. Philips considers the problem of generating the efficient frontier (or Pareto set) between two business goals in a pricing and revenue management context, concluding that an airline uses an EMSR heuristic to calculate protection

limits, then the EMSR-based approach to calculating the efficient frontier should give a better view of the tradeoffs that it faces than using a dynamic approach.

Cai and Chen Flexible note that pricing plans are commonly observed in service industries. In this article, the authors argue that the presence of flexible pricing plans can be attributed to consumers being boundedly rational – these consumers do not always select the best available option; rather, they select better options more often. In the model, the seller faces consumers who are heterogeneous in their degrees of inter temporal inconsistency – their ultimate actions can be different from their intended actions. The results show analysis has several empirical implications. First, boundedly rational consumer behaviours can be used to explain the phenomenon of flexible pricing plans. Second, the optimal pricing patterns depend primarily on the relative discounting factors between the seller and the consumers. And finally conditions are identified for which the seller can offer a single pricing plan to achieve profit maximization when he cannot differentiate consumers.

Moussawi-Haidar and Cakanyildirim's two-dimensional cargo overbooking problem, with the objective of finding the optimal weight and volume overbooking limits that maximize the profit from shipping cargos on a particular flight. As the authors note, in a competitive environment where service offerings are similar, cargo carriers need to adopt RM despite the complexity of the cargo business, or face the consequence of missed revenue opportunity. Hence, there is a need for overbooking models

with limits specified in terms of the weight and volume that ensure higher utilization of the capacity while minimizing the risk of offloads. The authors propose scientific approach that finds the optimal weight and volume overbooking limits. The model represents the actual complex cargo problem in the nonlinear pricing structure used for the revenue and offload cost computations, contrary to the existing additive models which approximate the actual pricing structure. As such, resulting in easy-to solve equations for the optimal overbooking curve, which interestingly turns out to be a box.

Westerman writing the concluding future's piece looks at the future of the low cost carrier (LCC) model that is certainly a successful business model in the airline industry. While there have been a few LCCs already during the 80s and 90s since the beginning of the last decade the number of LCC has increased drastically. Limited growth potential leads to a convergence of the two business models, which requires new forecasting and optimization methods to be developed over the coming years. Finally, Varini reviews Miller's new book *Revenue Management for the Hospitality Industry* concluding the book offers the reader a broad practically focused overview of the operation of revenue management in hospitality.

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