

What if Marketers Put Customers Ahead of Profits?

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We examine a duopoly where one of the firms does not maximize profit, but instead maximizes customer surplus subject to a profit constraint. Products are characterized by two attributes: quality and price, and customer surplus is therefore defined as the dollar value the customer is willing to pay for a product of given quality minus the product's price. For the surplus maximizing firm, profit is constrained to be at least X percent (where X might typically be 90-95%) of the profit it would have obtained under a profit maximization objective. The model assumes customer willingness to pay for quality is uniformly distributed and that customers follow a simple decision rule: when presented with two products of known quality and price, purchase one unit of the product which maximizes surplus, or if surplus is negative for both products, elect not to purchase any product. We further assume that firms' marginal cost of production is convex (quadratic) in quality. Competition between firms is modeled as a two-stage game, which is solvable by backwards induction. In the first stage, one of the firms, whose identity is exogenously specified, moves first and decides its quality level, fully anticipating the quality response of the second firm and the subsequent price competition. The second firm observes the first firm's quality level and then decides its own quality level, anticipating the subsequent price competition. In the second stage, firms take qualities as given and choose prices simultaneously in accordance with a Nash equilibrium. Two possibilities are considered: (a) the first mover is the profit maximizing firm, and (b) the first mover is the customer surplus maximizing firm. We compare the results to the corresponding base case of Moorthy (*Marketing Science* 1988) where both firms are profit maximizing. In contrast to base case, where the first mover always selects the higher quality, we find that the surplus maximizing firm takes the higher quality position regardless of whether it moves first or second. Further, we find that for a small percentage reduction in profits (95% of the base case), the increase in customer surplus can range from 40% to more than 600%, depending upon which firm moves first. Our results imply firms may significantly increase their customers' surplus with minimal sacrifice to their full profit potential.