

Accepted Manuscript

Pricing and quality competition in a brand-differentiated supply chain

Wei Li, Jing Chen

PII: S0925-5273(18)30188-9

DOI: [10.1016/j.ijpe.2018.04.026](https://doi.org/10.1016/j.ijpe.2018.04.026)

Reference: PROECO 7026

To appear in: *International Journal of Production Economics*

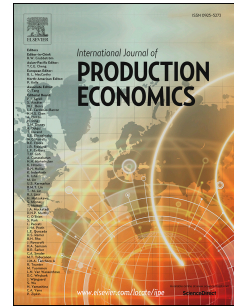
Received Date: 10 August 2017

Revised Date: 19 March 2018

Accepted Date: 26 April 2018

Please cite this article as: Li, W., Chen, J., Pricing and quality competition in a brand-differentiated supply chain, *International Journal of Production Economics* (2018), doi: 10.1016/j.ijpe.2018.04.026.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Pricing and Quality Competition in a Brand-differentiated Supply ChainWei Li^{a,b}, Jing Chen^{b*}*a. School of Management, Northwestern Polytechnical University, Xi'an, 710072, PR China. Wei.Li@dal.ca**b. Rowe School of Business, Dalhousie University, Halifax, NS B3H 4R2, Canada. jchen@dal.ca***Abstract**

We develop game-theoretic models to study a supply chain in which two manufacturers supply a product in quality-differentiated brands to a common retailer. The supply chain involves both vertical competition between the retailer and manufacturers, and horizontal competition between the two manufacturers. We examine the two manufacturers' pricing timing choices, either early or late, in both the manufacturers Stackelberg and retailer Stackelberg supply chains. The manufacturers are in horizontal competition in an endogenous timing game, with quality being exogenous or endogenous. The impact of the manufacturers' timing of pricing on the profits of the retailer, manufacturers, and supply chain are discussed. We find that when quality is exogenous, in the manufacturers Stackelberg supply chain, either sequential pricing game (either the high-quality manufacturer or low-quality manufacturer moves early) can be the equilibrium. The simultaneous game is the dominant equilibrium in a retailer Stackelberg supply chain, and it results in intensified price competition between the two brands. When quality is endogenous, the simultaneous game is always the dominant equilibrium for both manufacturers Stackelberg and retailer Stackelberg supply chains, and leads to a win-win situation for the retailer and the manufacturers, and the best performance for the entire supply chain. In the simultaneous game with endogenous quality, both the price and quality competitions between the two brands are softened as compared to the case in which the low-quality manufacturer moves first, and intensified as compared to the case in which the high-quality manufacturer moves first. The implications of, and new insights on, the two manufacturers' choices of pricing timing are also discussed.

Keywords: Endogenous pricing timing game; price competition; quality competition; vertical product differentiation; supply chain management

1. Introduction

It is common for retailers to sell multiple competing brands of a product (Edirisinghe *et al.* 2011; Zhao *et al.* 2014; Li and Chen 2018). The core idea of the multi-brand strategy is to increase the overall market share through market segmentation (White 2015); retailers try to satisfy the heterogeneity in customers' tastes and preferences through product differentiation, aiming to increase sales and capture profitable niches (Rajagopalan and Xia 2012; Liu and Zhang 2013). Competing brands are sold through various retail outlets, including department stores, supermarkets, convenience stores, and specialty stores, such as sporting goods and customer electronics stores (Choi 1991; Trivedi 1998). Wal-Mart, for example, offers customers national-brand beverages such

Download English Version:

<https://daneshyari.com/en/article/7355077>

Download Persian Version:

<https://daneshyari.com/article/7355077>

[Daneshyari.com](https://daneshyari.com)