

## Chapter 2

# Trade Promotion Mode Choice and Information Sharing in Fashion Retail Supply Chains

**Hisashi Kurata**

*University of Tsukuba, Japan*

**Xiaohang Yue**

*University of Wisconsin-Milwaukee, USA*

**Layth C. Alwan**

*University of Wisconsin-Milwaukee, USA*

### ABSTRACT

*Trade promotion has a significant impact on the fashion retail business. Manufacturers have traditionally been concerned with the inefficient trade promotion due to the low pass-through rate of the trade deals from retailers to customers. The scan-back (SB) trade deal, which monitors a retailer's sales via an IT system, benefits the manufacturer, but may or may not benefit the retailer. We provide insight into when a retailer has incentive to accept the SB trade deal. We show that (1) the manufacturer and the entire supply chain can always benefit from the SB trade deal while the retailer benefits only under some conditions, and that (2) both the retailer and the manufacturer can benefit from the SB trade deal if the SB deal is accompanied by a buyback contract. We examine the effect of a retailer's confidential pass-through rate on a firm's incentive to use the SB trade deal.*

### INTRODUCTION

Consider a two-stage supply chain consisting of a manufacturer and a retailer. This chapter explores the incentives for these two firms in the two-stage fashion supply chain to shift from a traditional

trade promotion mode to a new mode enabled by information sharing. There are generally two modes of trade promotion: the *off-invoice (OI)* trade deal and the *scan-back (SB)* trade deal (Drèze & Bell, 2003). A traditional supply chain uses OI trade promotion in which a manufacturer gives trade promotion money to a retailer to encourage the latter to sell more of the manufacturer's

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product. However, the manufacturer usually cannot monitor whether the retailer fully passes the trade promotion money to the customers. Recent developments in information technology applied to supply chain management can create a new type of trade promotion called a scan-back (SB) trade deal. In the SB trade deal, the manufacturer reimburses the retailer based on the exact number of sales the retailer makes.

Trade promotion has a significant impact on the fashion businesses, particularly in the apparel industry. Kincade, Woodard, and Park (2002) find that retailers' benefits in the apparel sector are significantly related to financial promotional support from manufacturers. Generally, promotion is an important instrument in cases of intense competition with high demand uncertainty, with the manufacturer producing fashion items and often giving the retailer a large trade promotion budget. However, retailers may take advantage of the trade promotion budget to maximize their profits at the expense of the manufacturer.

In the traditional OI trade deal, a manufacturer usually cannot directly ascertain how much the retailer spends on its sales promotion. The manufacturer can only observe the actual order from the retailer. Hence, the OI trade deal leads to the principal-agent problem, which is defined in game theory as the problem of motivating one decision-maker to act on behalf of the other. Therefore, an essential question for the manufacturer is how much of the trade promotion benefit is being passed to customers. In fact, many discussions about the OI trade deal refer to the *pass-through rate*, which is defined as the retailer's actual promotion spending divided by the total trade promotion amount offered to the retailer; often, this figure is not high enough for the manufacturer. Consequently, a critical challenge for manufacturers is to determine how to resolve this principal-agent problem, and more directly, how to monitor the retailer's promotion process.

The SB trade deal is one method of monitoring the retailer's pass-through rate. Whether the

retailer is willing to accept the SB trade deal, however, is another issue. The SB trade deal is implicitly linked to information technology, which frees the manufacturer from the principal-agent problem by allowing it to monitor end-sales to customers. For example, Cachon and Terwiesch (2005, Section 14.2) mention that Vendor Managed Inventory (VMI), a common information sharing system, can eliminate traditional methods of trade promotion. Generating a wholesale price reduction under a VMI system is offered as a scan-back deal. Obviously, since the SB trade deal gives the manufacturer access to end sales information, an SB trade deal eliminates the retailer's opportunity to pocket some portion of the trade promotion money. A retailer has no apparent reason to welcome a SB trade promotion since it forces the retailer to indirectly share its sales information with the manufacturer.

Supply chain management is critical for success in the fashion business. Over the last several years, a considerable number of studies on fashion supply chain and the apparel industry have been conducted. The importance of responsiveness in a fashion supply chain is among the most intensively researched themes of fashion supply chains. For example, Choi (2006) shows how a quick response policy, accompanied by a buyback contract, can benefit the firms belonging to a particular fashion supply chain. Choi and Chow (2008) explore the risk of quick response program to supply chain members using a mean-variance analysis. Bhardwaj and Fairhurst (2010) examine existing articles on fast fashion and responsiveness and then propose directions for future research in the fashion industry. Another important avenue in the study of fashion industry is to discuss design and item variety in apparel and textile industries. For example, developing a numerical decision support model, Vaagen and Wallace (2008) show a hedging portfolio of products benefits apparel firms when uncertainty of demand and fashion trend exist. Aspers (2010) uses the concept of "conceptual knowledge" to examine how design and marketing

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