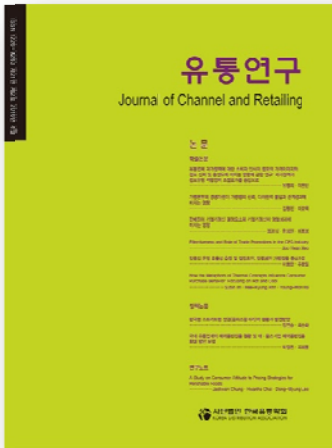


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“Effectiveness and Role of Trade Promotions in the CPG Industry” _학술논문

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Effectiveness and Role of Trade Promotions in the CPG Industry*

Joo Hwan Seo**

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This paper investigates how marketing push strategies such as trade promotions, selling general administration (SGA), and research and development (R&D) in consumer-packaged goods affect net sales. Expenditure costs for such strategies run into billions of dollars annually, and the practices themselves are controversial. However, the empirical literature is limited because direct measures of trade promotions and R&D have not been available. This study contributes to the existing literature in the following ways. First, it uses actual dollar value measures of trade promotions, SGA, and R&D payments. Secondly, it employs quantile regression, a new class of regression methodology that permits the analysis of heterogeneity in firm behaviors. Further, the findings shows that trade promotions are positively related to manufacturer net sales in the consumer packaged goods.

Keywords: Trade Promotions, Consumer Packaged Goods, Market Power, Market Efficiency, Quantile Regression

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I. Introduction

Manufacturers in the consumer-packaged goods (CPG) industry distribute a variety of items across channel members, but retailers have limited shelf space. The interactions between manufacturers and retailers involve different marketing strategies for physical stores. In general, manufacturers choose marketing strategies such as trade promotions (TPs), advertising, and others. In spite of debates concerning the advantages, CPG manufacturers have increased spending for TPs towards channel members. TPs expenditure for CPG manufacturers is currently about 60% of the total marketing budget compared to around 25% two decades ago (Gómez and Rao 2009; Cannondale Associates 2002). For

example, CPG companies spend about \$80 billion on TPs in the US (Ailawadi et al. 2010; Drèze and Bell 2003; Gómez and Rao 2009; Yuan, Gómez, and Rao 2013). Companies direct TPs toward retailers instead of toward consumers. Furthermore, TPs help manufacturers to support retailers' sales and provide various inducements, such as price reductions, discounts, and coupons to the end-point consumer. More specifically, manufacturers use TPs to increase the popularity of their brands in retailers' stores, and retailers are in favor of TPs because their advantages not only improve retail margins but also bring more shoppers into their stores (Gómez, Rao, and McLaughlin 2007).

As for the current literature, Kasulis, Morgan, Griffith, and Kenderdine (1999) divide TPs into five

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categories and 13 types. Gómez and Rao (2009) accounted for discount and performance-based promotions, while Gómez, Rao and McLaughlin (2007) analyzed TPs into four types as discounts, scanbacks and accrual funds, billbacks, and others. Although there are many different types, this paper assumes that TPs encourage not only direct channel members like retailers and wholesalers to expand margins, but also stimulate consumers to demand increased shelf-space. Furthermore, regardless of whether the shoppers' visit to the store is unplanned or planned, the coupon and discount programs in TPs encourage them to increase their spending (Hui, Meyvis, and Assael 2014). Currently, TP costs have been significantly increased in marketing budgets compared with two decades ago. For example, CPG manufacturers have increased TP expenditures to retailers to \$312 billion from \$71 billion between 1996 and 2004 (Gómez and Rao 2009, Yuan, Gómez, and Rao 2013). Even though there are several papers about TPs on consumer purchasing behavior in retailer store, these studies have a limitation. More specifically, empirical studies have analyzed surveys, secondary macro data, and firm level archival data (Achrol 2012, Bloom et al. 2000, Bone, France, and Riley 2006, Sudhir and Rao 2006) since firms have been secretive about TP expenditures. So, firms have had to rely on indirect measures. Thus, this study offers the following contribution to the literature. First, this study takes advantage of the directive by Financial Accounting Standards Board (FASB) in 2001 which studies that firms retrospectively restate their financial statements, treating TP as a reduction in sales rather than a marketing expenditure. It allows the window of opportunity created by an accounting change

required by the FASB to measure the dollar value of TP costs. Second, it applies marketing channel theory such as market power and efficiency to exchange processes by which sales are determined by TP expenditures. TP costs are an important factor in marketing channel relationship. Finally, it employs a new empirical method, quantile regression, to study data when there is reason to believe that the underlying behavior is not homogeneous in firm's marketing expenditures. The goal of this paper is to investigate the effectiveness of TPs in grocery stores and is to provide managerial guidance to manufacturers and retailers regarding this strategy.

The remainder of this paper is organized as follows: section II reviews the current literature on trade promotion; section III discusses the methodology, including the data and the quantile regression method; empirical results are presented in section IV, more specifically, the effect of firm specific variables such as TP, selling general administration (SGA), R&D, Herfindahl-Hirschman Index (HHI), and the impact of the age of firm on company performance; finally, section V provides conclusions for managerial policies, limitations, and scope for future research.

II. Background and Motivation

1. CPG Industry Background

Firstly, CPG is a highly competitive area, since the failure rate for new products in the CPG industry is approximately 90%, while for other industries is

around 66% (Israilevich 2004). Secondly, shelf-space in store supermarkets remains limited, but the number of new products increases significantly every year (Blum 2008). Thus, the assumption that this industry can be representative for a variety of marketing strategies because it can demonstrate the effect of marketing expenditures between manufacturers and retailers on consumer spending in a timely manner.

According to the Financial Accounting Standards Board's (FASB) Emerging Issues Task Force (EITF), in 2001 there were three types of TPs: slotting allowances, buydowns, and cooperative advertising (The CPA Journal 2003). In a previous study, TPs estimated the annual payments of slotting allowances, buydowns, and cooperative advertising to be about from 11% to 22%, from 75% to 85%, and from 5% to 10%, respectively (Gómez and Rao 2009; Seo 2015; Yuan, Gómez, and Rao 2013). This paper considers the main three types of TPs (i.e., slotting allowances, buydowns, and cooperative advertising) as indicators of marketing expenditure. The benefits are provided by manufacturers to customers indirectly, but manufacturers encourage retailers by giving them incentives. More specifically, manufacturers provide discounts, free trial, rebate, and free products to shoppers rather than to retailers (Blattberg and Briesch 2012). However, slotting allowances go to retailers on the operational side. Slotting allowances are one-time lump-sum payments made by manufacturers directed toward channel members for product placement on store shelves in retailers' warehouse (Achrol 2012; Sudhir and Rao 2006). Slotting allowances emerged around 1982 and have rapidly

increased to cover 85% of US retailers (Achrol 2012; Israilevich 2004; Bone, France, and Riley 2006).

The term buydown has various other designations in the marketing literature. Generally, manufacturers reimburse a retailer for decreased revenue during a specific promotional period. Buydowns include two main types: discount-based promotions and performance-based promotions. Discount-based promotions mean that so-called 'off-invoices' discount is given for retailer purchase of a given brand during a specific period. Performance-based promotions are scanback, which manufacturers prefer compared with off-invoices (Ailawadi et al. 1999; Yuan, Gómez, and Rao 2013).

Cooperative advertising means that manufacturers give their retailers support for either some or all of the costs of advertising fees. The purpose of this strategy is to promote the manufacturer's products (Begen and John 1997). Thus, manufacturers and retailers share the advertising costs, which are generally anywhere between 50% and 100% of the total cost (Skibo 2007).

Trade promotions are known under many different names such as consideration payment, free good, slotting fee, off-invoice, scan-back, etc. (Achrol 2012; Bone et al. 2006; Rennhoff 2008). TPs can be divided into several different types in marketing literature (Blattberg and Riesch, 2012; Kasulis et al. 1999). Kasulis et al. (1999) divide commonly used TPs into 13 types within 5 different categories. Also, Blattberg and Riesch (2012) define sales promotions as four different types, which are retailer promotions, trade promotions, consumer promotions, and internet promotions. Those

researchers explain promotions in more detail compared with previous literature. Based on current literature, Table 1 summarizes the several types of TPs for different purposes and targets. In spite of the active debate that has been taking place over the

past three decades, the effects of trade promotions on company performance are still ambiguous (Achrol 2012; Ailawadi et al. 1999; Gómez et al. 2007; Nijs et al. 2010; Sudhir and Rao 2006).

<Table 1> Common Types of Trade Promotions

Types of Trade Promotions	Description	Source
Slotting Allowances	A manufacturer pays a retailer to obtain shelf space in the retailer's store.	Achrol 2012; Bloom, Gundlach, and Cannon 2000; Bone, France, and Riley 2006; Desai 2000; Sudhir and Rao 2006
Inventory Financing	A manufacturer extends payment terms to a retailer for the financing of the retailer's inventory.	Blattberg and Briesch 2012; Kasulis et al. 1999
Display allowances	A manufacturer pays a retailer for a short period of time when the manufacturer wants to sell their inventory to customers.	Achrol 2012; Blattberg and Briesch 2012; Kasulis et al. 1999
Street Money	Lump sum payments from manufacturers to retailers to promote the manufacturers' goods.	Blattberg and Briesch 2012; Kasulis et al. 1999
Free Goods	A manufacturer offers extra cases of free goods to the retailer with a purchase at the regular price.	Blattberg and Briesch 2012; Kasulis et al. 1999
Off-Invoice	For a specific period a manufacturer offers a discount from the invoice price.	Ailawadi et al. 1995; Blattberg and Briesch 2012; Drèze and Bell 2003; Gómez, Maratou and Just 2007; Gómez, Rao, McLaughlin 2007; Kasulis et al. 1999; Yuan, Gómez, and Rao 2013
Scan-Back	A manufacturer gives retailers a discount on units sold through the point-of-sale register during a promotion rather than on units bought by the retailer.	Ailawadi et al. 1995; Drèze and Bell 2003; Gómez, Rao, McLaughlin 2007 ; Yuan, Gómez, and Rao 2013
Bill-Back	Similar to off-invoice. A retailer bills back a manufacturer for discount on the manufacturer's products.	Ailawadi et al. 1995; Blattberg and Briesch 2012; Kasulis et al. 1999; Gómez, Rao, McLaughlin 2007; Yuan, Gómez, and Rao 2013
Cooperative Advertising	Manufacturer-Retailer Cooperation. In more detail, a manufacturer supports a retailer's advertising for the manufacturer's products.	Blattberg and Briesch 2012; Kasulis et al. 1999; Begeen and John 1997; Skibo 2007
Missionary Selling	A manufacturer's employees work with a retailer's customers to promote the manufacturer's products.	Kasulis et al. 1999

2. CPG Industry Marketing Motivation

It is common practice in distribution channels

for resellers and consumers to receive various kinds of promotions in the form of free goods, price reduction, and special payments. These payments loom larger and larger in the marketing strategy and budgets of consumer goods marketers. Such “trade promotions” grew steadily through the 1980s, and by 2000s accounted for over half of the total advertising and marketing promotions budget (Achrol 2012; Ailawadi et al. 2010; Drèze and Bell 2003; Gómez and Rao 2009; Yuan, Gómez, and Rao 2013).

Because consumers are less and less inclined to shop-around, retailers have become a strategic bottleneck in consumer goods marketing. This, coupled with increasing concentration in retailing, has given them substantial market power in their exchange relationships with manufacturers and suppliers. It is not surprising that retailers have become proactive in shaping the trade promotion environment. Also, in order to maintain sales efficiency, manufacturers continuously try to improve their business relationship with the retailers (Achrol 2012; Bloom, Gundlach, and Cannon 2000; Bone, France, and Riley 2006; Sudhir and Rao 2006). It used to be that trade promotions were offered by manufacturers to retailers as sales stimulants and as incentives to get better retailer “push” behind their products. Today it is useful to distinguish between conventional pushed promotions and pulled promotions in CPG industry (Drèze and Bell 2003; Gerstner and Hess 1991).

Trade-pulled promotions are demanded by retailers from manufacturers and designed to support their own sales promotion strategies, help allocate and manage shelf-space, and contribute their bottom lines. They have become such a significant factor in

the economics of distribution that many retailers manage trade promotions like a profit center (Blatteberg and Briesch 2012; Drèze and Bell 2003; Gerstner and Hess 1991; Kim and Seo 2015). The use of pushed and pulled promotion strategies increase the manufacturer profits (Gerstner and Hess 1991).

The theories that have been advanced to account for the prevalence of trade promotions, represent two schools such as power and efficiency schools (Achrol 2012; Bloom, Gundlach, and Cannon 2000; Bone, France, and Riley 2006; Sudhir and Rao 2006). Market power means trade promotions are a manifestation of retail concentration and bargaining power. The allowances are exclusionary and discriminatory for manufacturers in this case. Thus, they can be rather anti-competitive in nature. In contrast, efficiency strategies mean that trade promotions serve as screening mechanisms that result in the efficient allocation of scarce retail shelf space (Achrol 2012; Bone, France, and Riley 2006; Chu 1992; Sudhir and Rao 2006).

According to Achrol (2012), who investigated the effects of the slotting fees and related discounts on firm performance through market efficiency and market power concepts, the market efficiency school shows little support for slotting fees, while market power can explain slotting allowances. In addition, Bone et al. (2006) found that there is no reasonable correlation between trade promotion and firm performance under the efficiency strategy in the consumer and durable goods manufacturing industries when using a logit regression model. However, Sudhir and Rao (2006) found that the efficiency school can explain the TPs types relating

to shelf space in the CPG industry.

Manufacturers and retailers can improve the sales according to the manufacturer's trade promotion strategy. Furthermore, trade promotion would increase profitability in some cases by 80% and decrease cost by around 40% (Gómez, Rao and Mclaughlin 2007; Nijs et al. 2010). Although some articles investigated the effects of TPs on anti-competitive theories, they found that market structure and anti-competitive rationales have a relatively small impact on TPs (Nijs et al. 2010; Sudhir and Rao 2006; Yuan, Gómez, and Rao 2013).

However, it is still very difficult for scholars to find one direction in trade promotions research because of data issues. Many companies do not open to the public. Even though there is extensive research conducted on TPs, it has limitation on data. This paper investigates the TPs effects on firm performance using unique data and advanced research methods.

III. Methodology

1. Data

This study uses longitudinal data such as COMPUTSTAT, CRSP (Center for Research in Security Prices), Security Exchange Commission (SEC) filings, and Yahoo finance from US CPG manufacturers. The data was collected for a 4-year

period between 1998 and 2001, obtaining sales, TPs, and other relevant company information. In 2001, the Financial Accounting Standard Board's (FASB) released a new regulation. FASB asked all companies to re-submit financial statements from 1998 to 2001 with TPs listed as a reduction in the original net sales. Therefore, many companies have two sets of financial statements, before and after the FASB regulation was issued. Having checked the original financial statement and the revised statement, significant caps are considered as TPs because of Emerging Issues Task Force (EITF) No. 01-09 rule "Accounting for Consideration Given by a Vendor to a Customer or a Reseller of the Vendor's Products." The sample used consists of 99 companies analyzed over 4 years, which sums up to 436 observations. The final sample includes 3-digit standard industrial classification (SIC) in the CPG manufacturing industries.¹⁾

2. Quantile Regression Method

Currently, many studies in management employ ordinary least squares (OLS) regression, which generates the conditional mean of a dependent variable. This method is suitable for the central tendency distribution (Hao and Naiman 2007; Koenker 2005). The OLS regression method can estimate only a single value and cannot illustrate the different variation in the different quantiles since the OLS focuses on the conditional mean value of a

1) This study uses the sample in CPG manufacturing industry with 3-digit SIC. Thus, the observations are distributed as follows: 100 for agriculture production; 200 for food and kindred products; 201 for meat products; 202 for dairy products; 203 for preserved fruits and vegetables; 204 for grain mill products; 208 for beverages; 209 for miscellaneous food and kindred products; 211 for cigarettes; 251 for household furniture; 262 for paper mills; 267 for converted paper products; 275 for commercial printing; 283 for drugs; 284 for soaps, cleaners, and cleaning products; and 289 for miscellaneous chemical products.

dependent variable. In addition, the OLS assumption of central tendencies can fail to meet consistently in our study. Consequently, this method cannot explain the variations of the firm's performance. Predictably, the performance of CPG manufacturers may be rather different due to a variety of TPs expenditures. Thus, the OLS method is not the most appropriate for measuring firm performance.

However, quantile regression, introduced by Koenker and Basset (1978), estimates firm performance in the different conditional quantile levels. Furthermore, quantile regression does not need to have strong distribution assumptions and robustly address outliers in the sample (Koenker and Hallock 2001; Seo et al. 2014).

The quantile regression method for asymptotic normality can be expressed as

$$y_i = x_i' \beta_\tau + e_i, \quad (1)$$

where e_i is the independent identical distribution (iid) variable with τ th at 0. This study substitutes the scalar u by a parametric function $u(x'\beta)$ and solves for

$$\min_{\beta_\tau} \sum_{i=1}^n (y_i - x_i' \beta_\tau)^2, \quad (2)$$

It also assumes that the τ th conditional quantile function is

$$Q_\tau(\tau | x) = x' \beta_\tau \quad (3)$$

for some parameter vector $\beta_\tau \in R^p$ value. The estimate tests $\hat{\beta}_\tau$ of β_τ based on a sample of (x_i, y_i) and $i = 1, \dots, n$ are presented. Even though the OLS estimator is obtained by minimizing the sum of the squared errors, the quantile regression model is following the minimization issue:

$$\min_{\beta_\tau} \sum_{i=1}^n \rho_\tau(y_i - x_i' \beta_\tau), \quad (4)$$

where the function

$$\rho_\tau(u) = u(\tau - I(u < 0)), \tau \in (0, 1), \text{ and } I(\cdot)$$

denotes the indicator function. The estimate of the conditional expectation function $E(Y|X)$ is obtained. The τ th conditional quantile function of y_i can be written as

$$\hat{Q}_{y_i}(\tau | x_i) = x_i' \hat{\theta}(\tau), \quad (5)$$

Therefore, the empirical analysis in this study considers the explanatory model for firm performance. The estimated of τ th is included in the set of information on firm variables. The final model can be written as

$$Q_{y_{it}}(\tau | x_{it}) = x_{it}' \hat{\theta}(\tau), \quad (6)$$

where equation y_{it} denotes the firm performance using sales, x_{it} includes all independent and control variables, and t is the time period from 1 to 4 years. In addition, τ_j is a different quantile level and $0 < \tau < 1$. Thus, the empirical final model can be written as

$$Q_{y_{it}}(\tau | x_{it}) = \beta_0(\tau_j) + \beta_1(\tau_j)x_{it} + \beta_2(\tau_j)x_{it} + \dots + \beta_n(\tau_j)x_{it} \quad (7)$$

Both the significance and size of coefficient estimates from the OLS and quantile regression models are examined. This study analyzes the data at quantiles ranging from 0.05 to 0.95.

IV. Empirical Results

1. Descriptive analysis of the data

As noted above in the methodology section, the impact of firm specific variables such as TPs, SGA, including advertising and R&D, is not uniformly distributed. Therefore, there is no simple relationship between specific variables and firm performance. Since the impact of firm specific variables is unequally distributed, a quantile regression model is more suitable for this study. Each quantile of firm performance is estimated by firm specific variables (i.e., TPs, SGA, R&D, HHI, and the age of the firm).

First, a descriptive analysis of 436 observations, including a dependent variable and independent variables, is performed. In Table 2, advertising, TPs, and R&D are reported in dollars. As presented in Table 2 and Figure 1, not only independent variables such as trade promotions, SGA, and R&D have a large range of values, but so does a dependent variable, net sales. In this case, the reasons are company history and sale volumes.

The expenditure for SGA ranges from \$106,300 to \$ 1.2 billion and the TPs expenditure ranges from \$1,000 to \$460 million, while the mean value is around \$24.6 million. As a result, companies seem to spend more on TPs compared with SGA. Furthermore, the mean of R&D expenditure is lower than that TPs costs. Based on these data, it appears that the CPG company considers promotions as important tools that improve company performance.

The average firm age, which is 699 months (58 years), ranges from a minimum of 12 months (1 year) to a maximum of 1968 (164 years). In addition,

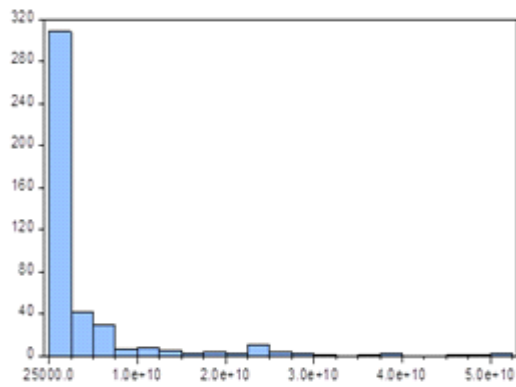
the Herfindahl Hirschman Index (HHI) indicates the industry's competitive level. According to the Department of Justice and FTA (2010), industries with HHI values less than 1000 are considered as competitive markets, industries with HHI values between 1000 and 1500 as moderately competitive, industries with HHI values between 1500 and 2500 as moderately concentrated, and markets with HHI values greater than 2500 as highly concentrated. Even though studies use different SIC codes, such as 2-digit, 3-digit, and 4-digit codes, this study uses 3-digit SIC codes because the 4-digit SIC code can lead to inaccurate inferences (Servaes 1996). The HHI mean is 1773 (Table 2), with a minimum of 332 as highly competitive, and a maximum of 5215 as highly concentrated.

As previously stated, this study analyzes the effects of trade promotion on net sales in the CPG industry. Despite a debate on the effect of promotions for firm performance in the CPG industry, this paper provides a clear explanation in TPS perspectives behind marketing channel behavior.

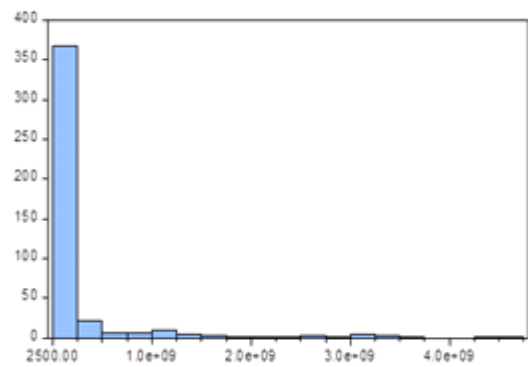
<Table 2> Descriptive Statistics for Variables

	Dependent Variable	Independent Variables				
Variables	Net Sales	Trade Promotions	SGA	R&D	HHI	Age of the Firm
Mean	3.80e+09	2.46e+08	9.69e+08	1.24e+08	1,773	699
Medium	3.23e+08	17,282,500	7,6917,000	3,155,875	1,954	636
Maximum	5.16e+10	4.60e+09	1.25e+10	4.80e+09	5,215	1,968
Minimum	100,000	1,000	106300	1,000	332	12
Std. Deviation	8.19e+09	6.60e+08	2.24e+09	5.23e+08	914	530

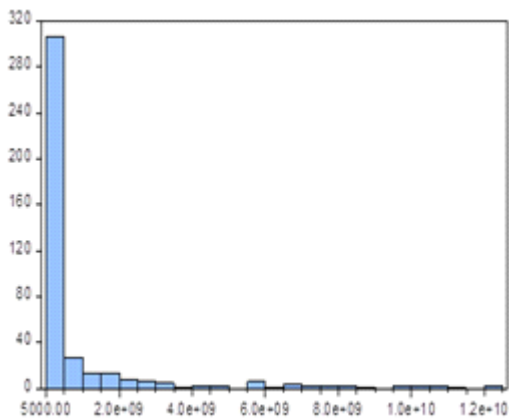
Net sales



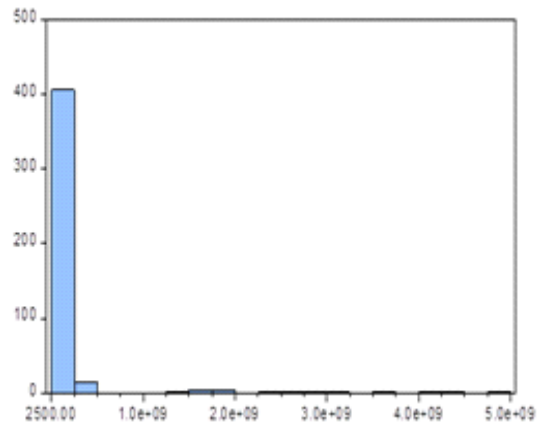
trade promotions



SGA

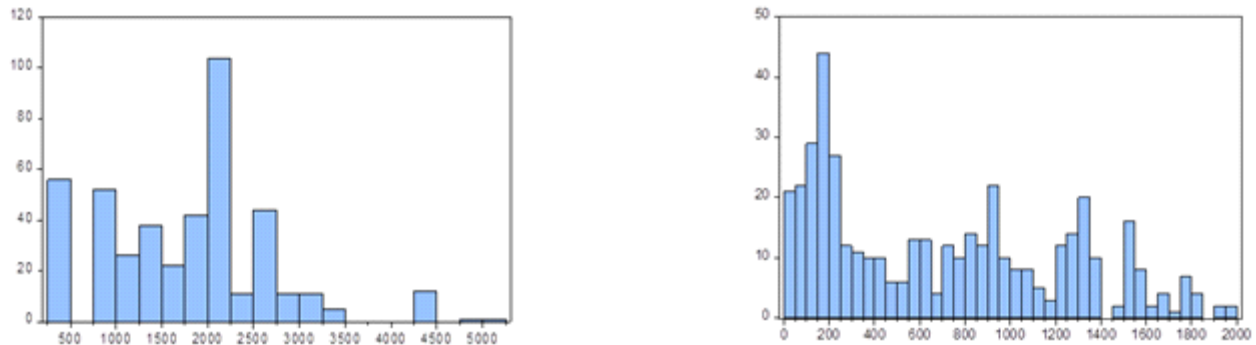


R&D



HHI

Age of the firm



<Figure 1> Variable Characteristics

2. Results on Firm Performance

This section presents the effects of TPs and other firm-related variables on firm performance. Table 3 presents the OLS estimates. First, the OLS method shows an effect on firm performance by means of SGA, TPs, and R&D, even though company operation period and 3-digit HHI as control variables are not significant for firm performance.

Secondly, the results obtained through quantile regression are interesting. Even though an OLS estimate has a significant positive effect on firm performance, there is a clear disparity compared to the OLS. First, SGA including advertising under OLS is 3.27, but based on the quantile regression estimates, the net sales effect on firm performance is asymmetric. The coefficient for SGA varies widely. The coefficient value for net sales as measurement of firm performance at the 10th conditional quantile level is 1.96, while the value for net sales at the 90th conditional quantile level is 5.06. Thus, the relationship with SGA is positive and increases from the lower to the upper quantile level.

Trade promotion has a standardized OLS coefficient of 2.57 as the average effect of TPs on

firm performance. However, the quantile regression results show that for the 10th conditional quantile distribution of net sales the value of the coefficient is 1.74, compared with 4.16 at the 90th quantile level. Therefore, the results indicate that the firm performance is higher for the upper quantile distribution than for the lower quantile level. Furthermore, the shape of trade promotion is similar to that of SGA on net sales.

R&D has a negative effect on firm performance, but it is significant with an OLS estimates. However, the quantile regression results show that although R&D is not significant at quantile level ($\tau = 0.1$), the quantile regression of R&D displays a significant relationship with firm performance in $\tau = [0.2, 0.9]$ quantile levels and the relationship is negative in $\tau = [0.7, 0.9]$ quantile levels. In conclusion, the result of the quantile regression is very different compared to the OLS estimates. R&D is negatively related to net sales in the middle to upper quantile levels. The results can indicate that larger firms which mean higher R&D expenditure, is less in net sales.

The effect of HHI as a control variable with the OLS estimate is statistically significant and positive,

but an operation period as a control variable is not significant at all. For the quantile regression, the results show a different picture. The operation period of the company is not statistically significant in the lower to middle quantile levels, $\tau = [0.1, 0.5]$, but the

coefficient estimates of the operation period are significant ranging $\tau = [0.5, 0.95]$. The coefficient HHI are only significant in $\tau = [0.7, 0.9]$ quantile levels.

<Table 3> Results of Quantile Regression for Firm Performance

Variables	Quantiles					Mean(OLS)
	0.1	0.20	0.5	0.70	0.9	
Intercept	1109 (0.726)	3597 (0.9097)	-2113 (0.3108)	-7636*** (0.007)	-2010** (0.028)	17.77** (0.025)
Trade Promotions	1.749*** (0.000)	1.696*** (0.000)	3.169*** (0.00)	2.57*** (0.000)	4.168*** (0.006)	2.57*** (0.000)
SGA	1.959*** (0.000)	2.122*** (0.000)	2.46*** (0.000)	3.32*** (0.000)	5.062** (0.000)	3.27*** (0.000)
R&D	0.122 (0.850)	0.907** (0.0316)	0.458*** (0.001)	-1.466*** (0.000)	-4.641*** (0.000)	-1.39** (0.0109)
Age of the Firm	-3585 (0.6624)	-9300 (0.8387)	9566** (0.0318)	2411*** (0.003)	9791*** (0.063)	-324 (0.3064)
HHI	-1444 (0.3782)	1609 (0.7008)	4640 (0.6849)	4249** (0.018)	1623*** (0.004)	704*** (0.000)

Note: The significant level is * $p < .01$, ** $p < .05$, and *** $p < .001$, respectively.

V. Conclusion, Implications, and Future Research

1. Conclusions and Implications

Trade promotions account for a large portion of marketing expenditures for consumer-packaged goods. Even though academic research has examined the issue from many different perspectives such as economic power and

efficiency, the effect of TPs has not been concluded yet. It is also difficult to get data from companies because many of them do not want to make the data public. Thus, I cannot exactly analyze company trade promotions easily and this is compounded empirically because measuring the dollar value of TPs payments has not been possible. However, in 2001 FASB asked companies to treat trade promotion payments as a reduction in wholesale price and to restate their financial statements for recent years from 1998 to 2001 after making this adjustment.

This study collects the dollar value of trade promotions from the financial restatements of manufacturing firms and studies them in relation to the firm's SGA, R&D, and sales. The results report the firm's net sales using specific variables and offer interesting inferences through the quantile regression method.

This paper shows that trade promotions are positively related to manufacturer net sales at all quantile levels, which suggests that retailer power is a factor in determining the amount of the allowances and supports the profit shifting argument.

The level of detail offered by the quantile regression method provides additional interesting inferences. The positive relationships found are most pronounced at low and upper levels of TPs. However, there is an increase in the TPs coefficient for the upper quantile levels. At these levels, manufacturers may be more willing and able to exercise countervailing power, and the allowances could be more idiosyncratic to particular categories, which are the types of shelf space. It is also noteworthy that parameter values fall at the low end of the TPs, suggesting there is some truth to the retailer claims that they provide some flexibility.

The channel strategy variables show interesting results. SGA and TPs are positively related to net sales at all quantile levels. Moreover, for middle to upper quantile levels, the coefficient values for firm performance are much higher than in lower quantile levels. Over all, ranges of trade promotions exhibit positive relationships, and the positive relationships get stronger as the amount of the payments increases to retailers. Generally, this is contrary to

the idea of an advertising lead pull strategy. A positive relationship between trade promotions and SGA is accompanied by a positive relationship to net sale expenses as an efficiency strategy.

In contrast, the analysis of investments in R&D shows it is negatively related to net sales with an OLS estimate. However, it is interesting results with the quantile regression. There is no significant relationship with net sales at the lower quantile level ($\tau = 0.1$) and the coefficient is significant in $\tau = [0.2, 0.9]$ quantile levels but negative in $\tau = [0.7, 0.9]$ quantile levels. Even though this result indicates that an innovative solution to manufacturer needs is strategically essential, R&D affects negatively the high quantile of manufacturer sales. In this respect, I consider that R&D needs to make the object of future research as an alternative variable.

Thus, the results indicate that CPG industry and firm specific characteristics are important in understanding the relationship between TP payments and net sales. I use net sales as a dependent variable and firm performance. Even though the Korean market in the CPG is different the U.S., the managerial considerations are still important in determining marketing expenditures like TP, SGA, and advertising. These marketing variables are the expected synergy between them and firm performance. So, a significant part of TP seems to be still related to the net sales. Investment in TP appears to be consistent with a strategy that emphasizing selling and direct marketing to the trade.

Furthermore, this study offers an interesting to the literature on Trade promotions. It proposes a

channel theory perspective on the channel power, efficiency and marketing strategy such as pull and push promotions.

2. Limitation and Future Research

While the data represent dollar values of trade promotions and other firm variables, they are for a limited number of years, from 1998 to 2001. Currently, the market situation has changed significantly from 2001. Moreover, the data is aggregated. This means that brand-level analysis is not possible. However, the data does represent all firms in the population that have published financial statements and restated revenues in response to EITF 01-09. Further, the data is firm-level data. Brand-level data may permit a fine-grained analysis. The gain in objectivity due to measurements in dollar values has to be weighed against the loss of detail due to firm-level aggregation. Also, the number of employees data as a control variable and the measure of the company size is not available.

In this study, advertising as pull strategy was not given much consideration. Advertising is an alternative signaling mechanism to trade promotions (Desai 2000). In future studies, the push and pull strategy in the consumer-packaged goods industry can be considered. This is consistent with the finding that in certain situations advertising as pull strategy acts as a complement and not a substitute for trade promotions (Sudhir and Rao 2006). Traditional pull-push promotions and trade-offs may not be a current viable strategic options. Manufacturers have to invest in both because, on the one hand, retailers take promotional payments for

granted but, on the other hand, also prefer presold brands that have strong consumer draw characteristics.

CPG industry should be analyzed through brand-level data sets even though these are very hard to find as companies do not want to specifically report them to the public. Future studies using other data collection methods may look into brand-level relationships and the firm behavior of smaller and regional firms. The kind of data collected here cannot be replicated in future studies because the circumstances leading to the change in accounting rules that made this possible are unlikely to happen again. However, trade promotions are not as important as they used to be and firms may be more willing to disclose the dollar amounts they spend on trade promotions. In that case, future studies can examine factors behind category differences in TPs. They can study the relationship of trade promotions to other strategy variables like shelf placement, pass through to consumer promotions, and brand composition of retail categories.

In the future research, the majority of the findings favor the channel theory argument that considers the market power and efficiency effects as mutually exclusive. TPs are a means of forward profit shifting in the channel to reflect changing functions, costs, risks, and roles in the channel. However, the net effect is a more efficient channel that benefits suppliers too.

Furthermore, these results are based on the U.S CPG market and may not be generalized to other markets, especially Korea since the CPG industry environment is so different in other countries.

Although the CPG market in Korea is equally competitive, the Korean market environment is vastly different from the U.S market and therefore, the effects of trade promotion, R&D, and SGA on firm performance in the Korean CPG industry should be further investigated.

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소비재 제조회사에서 촉진금액의 효과와 역할

서주환*

요약

본 연구는 대형유통매장에서 판매되는 소비재 제조회사의 촉진금액, 판매비, 그리고 연구개발 비용 등이 얼마만큼 판매에 영향력을 주는지에 조사하였다. 왜냐하면, 이러한 촉진 금액이 해마다 엄청나게 큰 액수로 증가하고 이것에 대해서 여전히 논쟁적이기 때문이다. 하지만, 현재 이 부분에 대한 연구가 제한적일 수밖에 없는 이유는 실제적인 촉진금액 및 연구개발 비용에 대한 자료를 구할 수 없는 한계에 있기 때문이다. 그리하여, 이 연구는 마케팅 분야에서는 흔치않게 실제 회계장부에 달려 단위로 표시된 촉진금액 및 연구개발 비용을 사용하였다. 또한, 분위회귀분석을 사용하여 이질적인 수익이 나타나는 제조회사의 특징을 파악하여 분석하였다. 또한, 이런 소비재 제조회사는 유통채널을 잘 유지하는 것이 수익을 유지할 수 있는 중요한 수단임을 확인했다.

주제어: 촉진금액, 소비재유통매장, 시장지배력, 시장효율성, 분위회귀분석

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