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The Importance of Trade Promotion Versus Advertising in the Consumer Packaged Goods industry*

Joo Hwan Seo**

This study investigates the effects of marketing expenditures on firm performance in the very active and competitive consumer packaged goods industry. Even though the marketing expenditures run into billions of dollars annually, the practices themselves are very debatable. Currently, empirical literature in this field is limited because direct data is not available to the public. This research advances the literature in important ways. Not only has it used the actual dollar value of marketing expenditures, but also it has divided the marketing spending into two categories, trade promotions as push strategy and advertising as pull strategy. This study also employs the quantile regression method, which is suitable in analyzing the heterogeneity in the consumer packaged goods industry. The results show that marketing expenditures, such as trade promotions and advertising, are positively related to net sales in the consumer packaged goods industry.

Keywords: Consumer Packaged Goods, Advertising, Trade Promotion, Emerging Issues Task Force(EITF), Quantile Regression

I. Introduction

Trade promotions, directed to channel partners in the distribution routes, are an increasingly important and costly part of a company's marketing strategy. They are used to boost channel members for manufacturers by giving incentives to either keep or increase distribution partners. This is effective to increase benefits among channel members (Kasulis et al. 1999). In spite of the debated debate surrounding Trade Promotions (TPs), the expenditure for Consumer Packaged Good (CPG) manufacturers amounts to about 60% of their total marketing budget compared to 25% in the 1980s (Gómez and Rao 2009; Yuan, Gómez, and Rao, 2013). Currently, the market power in the CPG industry is fast shifting from manufacturers to retailers because of database marketing and Asymmetric information (Bone, France, & Riley 2006; Sudhir and Rao 2006). Retailers enjoy the substantial market power and have become proactive in shaping the trade promotion environment. There are many different types of trade promotions such as slotting allowances, scan-back, bill-backs, free goods, off-invoices, and so on (Blatteberg and Briesch 2012, Seo 2016).

Trade promotions as sales incentives are initiated by manufacturers for resellers. Trade Promotions are an important factor in channel relationship between

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manufacturers and retailers. Even though trade promotions may increase the wholesale price, trade promotions are demanded or expected by retailers to support their own marketing and sales promotions tactics (Blatteberg and Briesch 2012; Gómez, Rao and McLaughlin 2007; Nijs et al. 2010; Yuan, Gómez and Rao 2013). For example, slotting fees are a prominent and controversial form of trade promotions. Despite nearly two decades of regulatory scrutiny, the Federal Trade Commission (FTC) is not able to take a public policy position on slotting fees. It is to note that there is a dire overall lack of adequate research on the issues related to trade promotions. Research into the magnitude and considerations that go into trade promotions is hampered by the extraordinary secrecy on the part of both resellers and manufacturers cloaking these negotiated arrangements (Achrol 2012; Sudhir and Rao 2006).

Advertising, directed to consumers rather than resellers, is also important for firms in the vital marketing mix. Current literature has shown that firm performance can be measured by firm profits, market share, sales, stock returns, and so on (Currim, Lim and Kim 2012; Osinga et al. 2011; Sridhar, Narayanan, and Srinivasan 2014). Even though controversy rages over the effects of advertising expenditures on firm performance, it is one of an essential parts of the marketing mix (Aaker and Carman 1982; Sethuraman, Tellis, and Briesch 2011; Tellis 2003). However, the impact of advertising on firm performance is not always positive and little consistency can be found. Some empirical studies found there is no clear evidence regarding the effect of advertising expenditures on firm performance, but other studies found that advertising is effective and has a positive impact on firm performance (Shah and Akbar 2014; Currim, Lim and Kim 2012; Joshi and Hanssens 2009; Sethuraman, Tellis, and Briesch 2011). The effect of advertising expenditure directly impacts on firm performance.

In 2001, Financial Accounting Standards Board(FASB) issued the new accounting regulation, Emerging Issues Task Forces(EITF) 00-25, EITF 00-09 and EITF 00-14[1] since accounting practices used to distort sale revenues. As a result of the new FASB rules, companies are now required to treat trade promotions as a reduction in sales revenue. FASB recommended the new rule, EITF 00-25, be implemented retroactively back to 1998. The resulting restatement of company financial offers an opportunity to shed some light on the shadowy world of trade promotions.

This study seeks to do just that. It draws on marketing promotion theory about spillover, market power and efficiency to derive a number of hypotheses to predict some factors that are expected to be related to trade promotions and advertising. I used the security exchange commission (SEC) to identify companies that reported restating their financial statements from 2000 to 2001 in compliance with EITF 00-25. Financial data for all these companies is drawn from the SEC. In this study, I will

1) The purpose of the EITF is to help the FASB in improving financial reporting through the appropriate identification, conversation, and solution of financial accounting issues within the FASB Classification (www.fasb.org).
EITF No. 01-09, "Accounting for Consideration Given by a Vendor to a Customer (Including a Reseller of the Vendor's Products).
EITF No. 00-14, "Accounting for Certain Sales Incentives"
EITF No. 00-25, "Vendor Income Statement Characterization of Consideration Paid to a Reseller of the Vendor's Products"

first discuss the phenomenon and background. Next, I will provide the research background and make a research framework in the context of marketing promotions. Finally, I will conclude the research method, results, and implications.

Ⅱ. Research Background

It is the common practice in distribution channels today for resellers to receive various kinds of sales incentives in the form of discounts, price reduction, free goods and special payments. These payments loom larger and larger in the marketing strategy and budgets of consumer goods marketers (Achrol 2012; Blattberg and Briesch 2012; Kauslis et al. 1999; Yuan, Gómez and Rao 2013). Such trade promotions grew steadily through the 1980s, and by 1991 accounted for half the total advertising and promotions budget. Today in food, health, beauty and cosmetics, and general consumer merchandise categories, trade promotions are estimated to average 16.9% of gross sales. Also, trade promotion expenditures in U.S. manufacturers have increased around an 18% of their gross sales in 2010 compared with about a 13% in 1998 (Cannondale Associates 2002; Yuan, Gómez and Rao 2013). This coupled with increasing focus in retailing has given retailers substantial market power and efficiency in their exchange relationships with manufacturers. Currently, retailers have a more powerful position in shaping the trade promotion environment (Blattberg and Briesch 2012; Seo 2016). Trade promotions were offered by manufacturers to retailers as sales stimulants and as incentives to get better retailer behind their brand and product (Seo 2016).

Trade promotions are demanded by retailers from manufacturers and designed to support their own sales promotion strategies, to help allocate and manage shelf space, and as contributions to their bottom lines. They have become such a significant factor in the economics of distribution that many retailers manage trade promotions (Blatteberg and Briesch 2012).

Trade promotions can be divided into several categories such as scan-back, bill-back, off-invoice, and slotting allowances and each channel member preference is different in trade promotions. More specifically, manufacturers prefer scan-backs to off-invoices, but retailers usually like to choose off-invoices compared with scan-back (Seo 2016; Yuan, Gómez and Rao 2013). For example, a scan-back is when a manufacturer offers channel members, 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. 2010; Seo 2016; Yuan, Gómez and Rao 2013). Also, slotting fees are a prominent part of the trade promotions and have generated much controversy and heated debates. They emerged as one time, relatively modest, up-front payments charged by retailers to defray the costs and some of the risk in accepting new consumer products into distribution (Achrol 2102; Bloom, Gundlach and Cannon 2000; Blatteberg, and Briesch 2012; Kauslis et al. 1999; Seo 2016; Sudhir and Rao 2006). They have rapidly increased in magnitude and frequency into annual, sometimes monthly payments required to keep even successful brands on the shelves. The issues are complicated. Some firms have the brand power to avoid paying

slotting fees, but nevertheless, they channel significant trade promotion money to resellers in the form of product development arrangements. Even as regulators struggle to understand the economic role and consequences of either slotting fees or other trade promotions, new forms of channel management, such as category captains, are adding new layers of complexity to the problem. Thus, there is a whole family of trade promotion practices out there. Some of them appear and probably are more benign than others, but all are potentially troublesome.

Even though some marketers of powerful consumer brands resist paying slotting fees, they have long practiced numerous types of trade promotion programs such as scan-back, off-invoices, free goods and bill-backs. Additionally, these companies have put in place generous brand development allowances for new products and cooperative advertising programs. Thus, the review and analysis by the accounting profession discussed below again can be widely considered as trade promotion programs (Blatteberg and Briesch 2012; Kauslis et al. 1999; Seo 2016).

Likewise, the accounting profession is focusing on the special problems that trade promotions create vis-?-vis financial disclosure. Trade promotions are alternative ways of discounting the real price paid by resellers, but if charged to marketing expenses, as was the common practice, the effect is to inflate the manufacturer's sales revenue. Following the highly publicized accounting scandals in the 1990s involving artificially inflated sale revenues, the EIFT of the FASB, instituted new rules, one of which being EITF Issue No. 00-25, for when trade promotions should be treated as a reduction in sales revenue rather than a marketing cost. Basically, the rule applies two principles to determine whether a payment by a manufacturer to a reseller is a reduction in price or a market expense. First, does the supplier receive an identifiable quid-pro-quo for the payment other than selling its products, and second, if it does, can a clear market value be assessed for this service provided. The rule is elaborated further in the measurement section. The rule, which was to be implemented retrospective effect to 1998, resulted in the restatement of company financials and now provides a unique opportunity to gain some gross insight into trade promotion practices. After the implementation of 00-25 trade promotion spending moved from the cover of SGA to the cover of sales revenue and again became invisible to the public (Bone, France and Riley 2006).

Ⅲ. Research Framework

3.1 Two Schools of Trade Promotions

The theories that have been advanced to explain the prevalence of trade promotions, which represent two schools of the market efficiency and market power schools (Achrol 2012; Bloom, Gundlach, and Cannon 2000; Bone, France and Riley 2006; Sudhir and Rao 2006).

Generally, the efficiency school holds that trade promotions are useful economic instruments (Achrol 2012; Bone, France, Riley 2006; Chu 1992; Sullivan 1997; Sudhir and Rao 2006). For example, more specifically it is argued that slotting allowances in trade promotions help to allocate the costs and risks of

marketing new products more equitably between manufacturers and resellers. In a market flooded with a surplus of new products and facing an acute shortage of shelf space, slotting fees act as a market clearing mechanism, allocating scarce space to potentially stronger products which can afford to pay the most, and discouraging weaker or riskier products from the market (Achrol 2012; Bloom, Gundlach, and Cannon 2000 ; Desai 2000; Kelly 1991; Sullivan 1997). In a market environment in which information about consumer behavior, market potential, and related knowledge is highly impacted in favor of manufacturers, trade promotions act as signaling devices under asymmetric information telling resellers which products are likely to deliver superior performance (Chu 1992; Desai 2000; Kelly 1991). Also, trade promotions gives manufacturers bargaining power and manifestation of retail concentration (Achrol 2012; Chu 1992; Seo 2016).

However, most research about TP is limited to the data available. It is therefore difficult for researchers to find or exam TPs in relation to reseller costs, risks, new product pressure on shelf space and failure rates, and thus does not appear to support the efficiency school argument (Bloom, Gundlach, and Cannon 2000; Bone, France and Riley 2006; Rao and Mahi 2002; Sudhir and Rao 2006). In fact, most of the efficiency theories can be subsumed within a market power framework. For example, asymmetric information gives power to the party with informational advantages. Likewise, control of market access and shelf spaces are sources of power. In particular the evidence that slotting fees vary greatly from region to region and between manufacturers suggest strongly that TP are but one mechanism in the continuing saga of how channel members use market power to adjust realign and coordinate channel factions, risks and rewards within the channel (Bloom, Gundlach, and Cannon 2000; Chu 1992; Desai 2000; Kelly 1991).

Market power theories follow a number of lines of argument, one of which is the conventional argument that trade promotions are exclusionary in nature and eventually lead to market imbalances and higher prices. Some point to industry concentration as the source of power to exclude competitors and charge higher prices and bargaining power which causes market imbalances and a redistribution of profits in favor of the powerful. In contrast in marketing channels theory, the argument is often phrased in terms of power shift from manufacturers to retailers (Achrol 2012; Bloom, Gundlach, and Cannon 2000; Chu 1992; Desai 2000; Sudhir and Rao 2006). This shift is driven by consumer shopping behavior patterns and the growth of large retailer chains. The argument is that the prevalence of trade promotions is a reflection of this shift in channel power.

There is some empirical evidence in the academic literature that suggests the magnitude of TP fees are related to the relative power of retailer over manufacturer (Bone, France and Riley 2006; Rao and Mahi 2002; Sudhir and Rao 2006). In this research, I adopt the argument that TPs are essentially a manifestation of channel power. The shift in channel power reflects a shifting of value added away from manufacturing toward marketing and the reseller firms that are closer to the customer. A more educated and affluent customer, more convenience-minded and time poor, better protected from poor products by law

and with better recourse for dissatisfactory purchase decisions, is less and less interested in shopping as an activity and even less inclined to shop around for preferred brands. When their preferred brand is not available, shoppers will switch brands rather than switch stores. Even in the face of price promotions, there is a relatively small segment of the market that is likely to cross-shop (Huang, Hui, Inman, Suher 2013; Yim et al. 2014).[2)]

Customer's shopping behavior is driven by the store where they tend to shop for particular categories of goods not necessarily by brand preferences. Retailers are playing an increasingly important role in product screening market definition for the customer. Trade promotions may have more to do with reallocating profits to match more closely where the value is being added in marketing channels for consumer goods (Achrol 2012; Yim et al. 2014).

The growth of retailer power due to the strategic high ground they command is further accentuated by increasing concentration in the retailing industry (Messinger and Narasimhan 1995). It has made retailers as powerful as the prominent brand manufacturers used to be, and as argued by small business advocates, significantly more powerful than smaller manufacturers. But concentration and market power notwithstanding, resellers need strong brands supported by strong marketing programs to be successful. Even though it is believed retailers are unable to negotiate slotting fees from manufacturers such as Proctor & Gamble, Kellogg and Kraft that enjoy powerful brand images and strong customer demand, these manufacturers typically offer alternative inducements and rewards to retailers under trade promotions. Proctor and Gamble refuses to pay cash for typical slotting allowances for shelf space, but it contributes brand development funds, paying directly for in-store promotions or special price cuts using different types of trade promotions. Other manufacturers also consider their promotions and need to rearrange their promotional mixes such as advertising and trade promotions (Blatteberg and Briesch 2012; Seo 2016).

Retailers also claim that they do not so much demand trade promotions but that manufacturer willingly pay trade promotions to beat out competitors from preferred shelf-space and increase market share (Achrol 2012; Desai, 2000; Sudhir and Rao 2006). Consequently the effects of market power on TPs is a complex interplay of the balance of power, and some shifting of resources among alternative promotional uses. Retailers probably prefer TPs because the money is paid up-front and has the least strings tied to it. Manufacturers can be expected to prefer other forms of promotion which are tied to specific retailer obligations and marketing quid-pro-quo, but if they have pay TPs, then they compensate in other areas of the promotional mix (Kasulis et al. 1999).

The effects of marketing resource allocation are another important determinant of market power, but also have a special implication for our independent variables, i.e., trade promotions, and advertising expenses. A basic argument is that companies have a limited supply of resources that can be devoted to marketing. If through the firm's strategic choice or the

2) In this paper, I do not consider consumer shopping types either hedonic or utilitarian.

negotiated terms of exchange, a firm allocates a large proportion of their budget to trade promotion, then it will have less available for advertising. Advertising builds brand power and thus supplier power over resellers. Conversely, resellers prefer trade promotion money as it gives them more marketing flexibility and is directed to their local markets. Powerful resellers are likely to press for more promotional support even if it means less brand advertising at the corporate level.

3.2 Spillover Effect of Advertising

Advertising serves as an informative or persuasive signal to consumers about the quality of new products. Consumers and investors develop brand equity through advertising and may perceive the brand more favorably because of it (Grullon, Kanatas, and Weston 2004; Srinivasan, Pauwels, Silva-Risso, and Hanssens 2009). Manufacturers, particularly those who have some consumer loyalty, seek to directly communicate with consumers through product advertising, and this, in turn, may cause a spill over effect in the number of consumers. In general, advertising has a direct effect on firm performance.

Advertising can promote awareness of a product vis-à-vis other competitors (Shaffer and Zettelmeyer 2004; Kamakura and Russell 1993), aim to build consumer's awareness of either a brand or product (Srinivasan et al. 2009), and create intangible market-based assets such as sales growth, and market share (Joshi and Hanssen 2010; McAlister, Srinivasan and Kim 2007). Through various marketing activities, the advertising directly affects consumer preference not only on the targeted brand or product but also on other related brands or products due to the spillover effects that stem from investors' increased awareness.

Even though the direct effect of advertising on revenues is uncertain, it generally leads individuals to have a more favorable view of the brand and more firm information through spillover effect (Grullon, Kanatas, and Weston 2004; Joshi and Hanssens 2010).

IV. Research Design

4.1 Data

Prior to the hearings by the Emerging Issues Task Force (EITF) of the FASB which resulted in its issuing rule No. 00-25, the conventional accounting practice was to treat all promotional expenses as a cost of doing business. Rule 00-25, issued in 2001, stated that certain kinds of promotional payments paid by suppliers to retailers are presumed to be a reduction in the price of goods sold to the retailer, rather than a marketing expenditure. As such it shall be treated in the manufacturer's income statements as a reduction in revenue. The new rule covers payments such as trade and consumer promotions. The rule does not include any consideration paid which is contingent on the level of purchases and designed as an incentive to move product. The nature and meaning of these payments which are covered by 00-25 correspond closely with the concept of trade promotions. Rule 00-25 went into effect in 2002 and had a measure of retroactivity. It required that companies restate their financial statements for the

years 2001 and 2000. The retrospective restatement offers a window of opportunity to shed some light on the hitherto closely guarded nature of trade promotions.

This study used search procedures and some sources of company financial disclosures to create and organize the dataset. First, I used the Security Exchange Commission (SEC) to search all SEC filing for all companies that disclosed "EITF 00-25," "consideration fees," "trade promotions," "Slotting fees," "Cooperative advertising," or "buydown" in their recent 10-K annual reports. Also, I used Yahoo finance, COMPUTSTAT, and CRSP (center for research in security price). I investigated the disclosed adjustment of 109 companies for 2-year TPs. In the majority of cases, the dollar amount of TPs was not disclosed. It is possible that the value of TP was immaterial, or that TP was included in other categories in the financial statement (KPMG 2012). Financial data for the independent variables such as sales, TP, and advertising were collected for all the firms identified as acknowledging rule 00-25 restatements.

4.2 Independent and Dependent Variables

The year of restatement was obtained from some sources from SEC filings, Yahoo finance, COMPUTSTAT, and center for research in security price (CRSP). The previous year 10-K was searched to ascertain the pre-restated figure from the COMPUSTAT data base because it can be convenient search by SIC. The term of net sales refers to the dollar value of sales revenue reported by the company for the year, from SEC filings. Market share mean a company's net sales were divided by sales for the entire SIC code, measured at the three-digit level. Finally, advertising means a company's annual advertising expenditures.

The independent variable is Trade Promotion as defined by EITF Issue No, 00-25, since this was the basis of the restatement of company financials that gave rise to this research opportunity. These significant gaps can be considered as TP based on EITF 00-25. TP includes items such as scan-back, off-invoices, cooperative advertising, brand development or new product introduction arrangements, favorable in-store positioning, end-cap placement, or payments for additional shelf space. The fees may be incurred before the reseller buys any of the manufacturer's products, monthly to maintain shelf space, or periodically as negotiated.

It is important to note that 00-25 requires retrospective restatement only if the rule results in more than a marginal change in disclosed sales revenues. Generally, the convention is that a significant change is one which results in more than a 5% change in stated sales revenue[3]. Further, the rule permits companies to acknowledge that complying with the rule requires a restatement of their financials, without having to disclose the dollar amount of the restatement.

4.3 Regression Method

Recently an increasing number of studies have

3) In general, if the gap is less than a 5% change in the financial statement, the value can be considered as immaterial. In this case, companies may not report the change or may report it in the some other categories in their financial (KPMG 2012).

applied the quantile regression method to get heterogeneous covariate effects, a more flexible approach for analysis of data compared with the ordinary least squares (OLS) estimates (Seo et al. 2014; Seo 2016). The OLS method is not suitable for this study since it provides only central tendencies of the conditional distribution and this method cannot explain usefully the variation of the firm performance (Hao and Naiman 2007; Seo 2016). The performance in CPG (Consumer Packaged Goods) industry may be different due to the various marketing spending and competitiveness within each sub-CPG industry.

I assume that the OLS method is not suitable for analyzing the effects of TP and advertising on firm performance. The asymptotic theory of the quantile regression method as introduced by Koenker and Bassett (1978) can be written as

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

Where e_i is an independent identical distribution (iid) variable with τ th at 0. The τ th conditional quantile function can be written as

$$Q_Y(\tau \mid x) = x'\beta_\tau \quad (2)$$

for some parameter vector $\beta_\tau \in R^p$. The estimates $\hat{\beta}_\tau$ of β_τ based on a sample of (x_i, y_i) and $i = 1, \ldots, n$ are obtained by solving,

$$\min_{\beta \in R^p} \sum_{i=1}^{n} \rho_\tau (y_i - x_i'\beta), \quad (3)$$

$\rho_\tau(u) = u(\tau - I(u<)), \tau \in (0,1)$ and $I(\bullet)$ is the indicator for $\mu < 0$ and some $\tau \in (0,1)$. The empirical analysis in this paper considers an explanatory model for TPs, advertising, and Herfindahl-Hirschman Index (HHI) can be written as

$$Q_{y_i}(\tau_j \mid X_i) = \beta_0(\tau_j) + \beta_1(\tau_j)X_1 + \beta_2(\tau_j)X_2 + \beta_3(\tau_j)X_3 + \beta_4(\tau_j)X_4, \quad (4)$$

Where y_i equation denotes the firm performance x_i using net sales and includes all independent and control variables. τ_j means a different quantile levels from $0 < \tau < 1$. Thus, the model can be written as

$$Q_{y_i}(t_j \mid X_i) = b_0(t_j) + b_1(t_j)TP_i + b_2(t_j)AD_i + b_3(t_j)TPAD_i + b_4(t_j)HHI_i \quad (5)$$

This study analyzes the data at quantile level from 0.05 to 0.95.

V. Empirical Analyzing Results

5.1 Descriptive analysis Data

As shown in Table 1 and Table 2, there are descriptive statistics on trade promotions and advertising. These statistics include the dollar amount, the independent variables, and net sales, the dependent variable and the dollar value amount in 2000 and 2001, respectively. A descriptive analysis of 109 observations in each year, including independent and dependent variables is reported. Overall, the mean trade promotion spending is higher than advertising fees in the marketing budgets of 2000 and 2001. More specifically, not only the expenditure for advertising ranges from \$1,283 to \$3.7 billion in 2000 and from \$1,000 to \$3.6 billion in 2001, but also trade promotion spending ranges from \$1,000 to \$3.6 billion in 2000 and in 2001, respectively.

Overall, this result indicates that the expenditure of marketing budget in each firm is very different due to company history, sales strategy, firm size, and so on. Furthermore, since the Herfindahl-Hirschman

Index (HHI) is considered as the industry's competitive level benchmark, the CPG industry generally seems to be at a moderately concentrated level, given its HHI value between 1500 and 2500 (Department of Justice and FTA 2000).

<Table 1> Descriptive Statistics for Variable in 2000

Variables					
Variables	Net Sales	Trade Promotions	Advertising	Assets	HHI
Mean	3,833,148,047	253,537,472	209,088,328	4,281,352,128	1,762
Minimum	91,929	1,000	1,283	270,000	436.61
Maximum	50,581,000,000	3,600,000,000	3,793,000,000	79,067,000,000	4975.43
Std. Deviation	8,278,244,142	676,658,863	209,088,328	10,973,244,113	911.99

<Table 2> Descriptive Statistics For Variable in 2001

Variables					
Variables	Net Sales	Trade Promotions	Advertising	Assets	HHI
Mean	4081,424,014	288,242,507	209,927,827	4,748,915,027	1873.65
Minimum	21,378	1,130	1,000	226,000	460.89
Maximum	51,645,000,000	4,600,000,000	3,612,000,000	84,968,000,000	5215.60
Std. Deviation	8,708,289,929	796,818,280	525,571,695	11,955,930,097	992.43

5.2 Empirical results

This section presents the effects of advertising and TPs on firm performance as net sales. Figure 1 and Figure 2 show the results of quantile regression in 2000 and in 2001, where net sales are the dependent variable, and trade promotions(TP), advertising(AD), the interaction between trade promotion and advertising as TPAD, and HHI are the explanatory variables. The X axis represents the quantile of net sales and the Y axis denotes the estimated coefficient. I analyzed quantile regression method estimates τ from 0.05 to 0.95, and the results are shown as bold lines in the figure. The dotted lines represent the 90 percent confidence levels for the OLS estimated coefficient. The significance of the coefficients for the quantile from 0.05 to 0.95 levels and OLS are reported in Table 3 and in Table 4.

The results of firm performance as net sales obtained through the quantile regression method compared with the OLS are interesting because the quantile regression method provides many values at the different quantile levels. Therefore, since the

results of the quantile regression method in this study are broadly different from the OLS method. Table 3 and Table 4 show that TPs and advertising had a significant positive effect on net sales in 2000 and in 2001 using the OLS method. In this case, the effect of advertising on firm performance was higher than TPs in 2000 and in 2001.

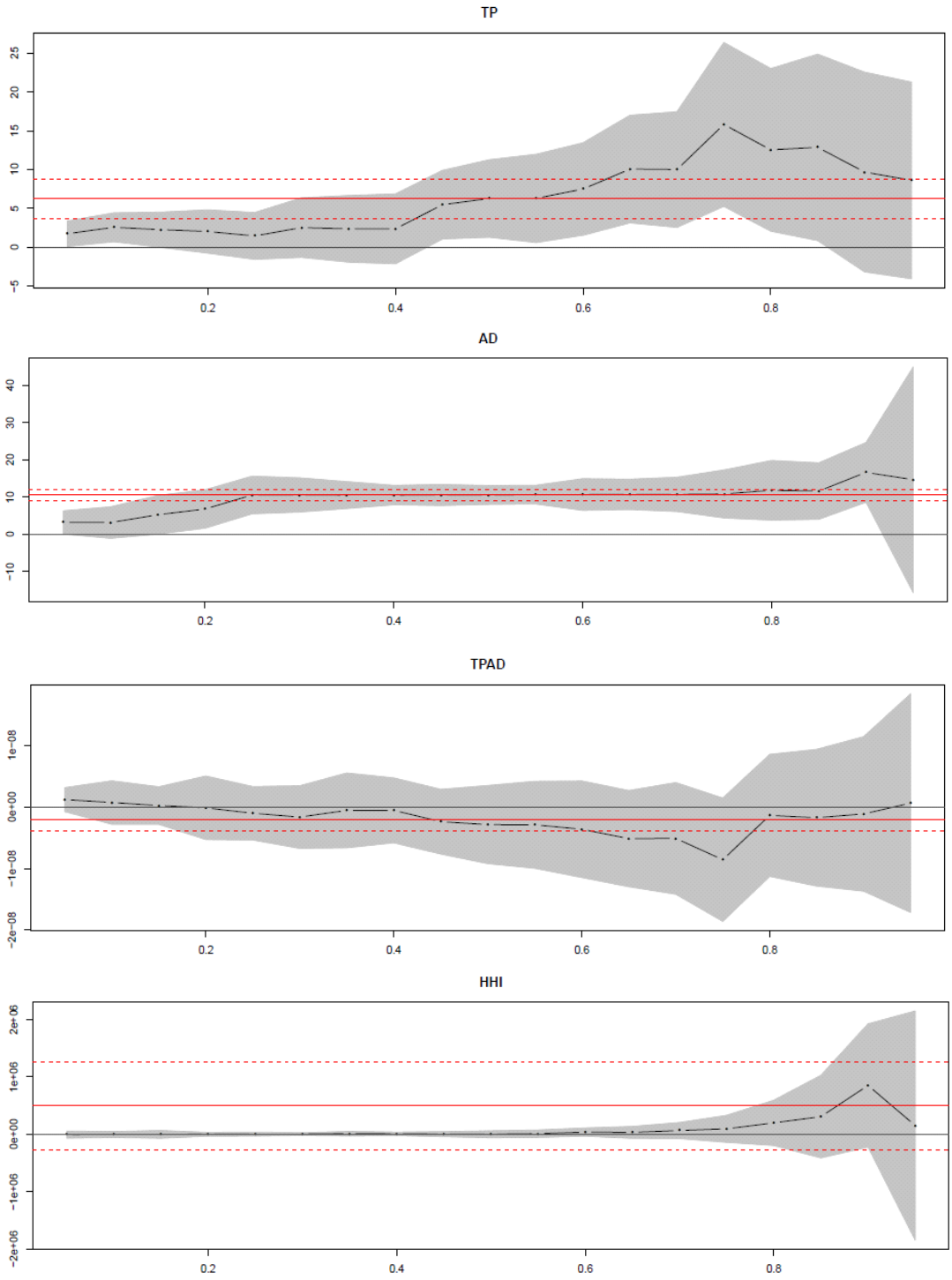
In the case of TPs, overall $\hat{\beta_1}$ is positive and significant except from low to middle quantile levels (τ from 0.1 to 0.45) and at the 0.95 quantile level in 2000. Also, the coefficients of TPs overall are positive to net sales in 2001. The effects of TPs in 2000 and 2001 show a very similar pattern, but the coefficients for TPs in the middle to the upper quantile levels are more effective to net sales. More specifically, the coefficient value of TPs is 1.74 at the 5th quantile level compared with 15.81 at the 75th quantile level in 2000. Also, the coefficient value of TPs is 2.29 at the 5th quantile level compared with 21.88 at the 95th quantile level in 2001.

Thus, the upper quantile levels of net sales are strongly associated with TPs even if in 2000 some upper quantile levels are not significant. All quantile levels of net sales in 2001 are strongly associated with TPs when compared with the net sales of 2000. From these results, TPs seem to be associated with channel efficiencies in a way that manufacturers that employ them gain in overall efficiency of their operations. There is some indication that one can go too far in this direction and bid up TPs for increasing net sales but manufacturers may reach a point where profits begin to diminish.

In the case of advertising, the coefficients of advertising are positive and of significant value, 10.56 and 11.12 for net sales in 2000 and 2001 by using the OLS method. Also, the quantile regression results of advertising are overall significant for net sales except for the 95th conditional quantile level. The coefficients are widely different and range from 3.17 at the lower level to 10.83 at the upper quantile level in 2000. In addition, the coefficients of advertising in 2001 are very similar to those between the lower and the upper quantile levels in 2000. For many firms in the data, the magnitude of spending in TP payments amplifies with investment in advertising. This can explain the resource allocation in the marketing budget.

In the case of interaction between advertising and trade promotions as TPAD, the coefficient value using either the OLS or the quantile regression method is not significant at all in 2000 and 2001. Furthermore, HHI value, which measures industry concentration, is not significant by the OLS estimate and the quantile regression method at all quantile levels in 2000 and in 2001.

In addition, I do not report the net income as a dependent value since all independent variables such as TP, advertising, and TPAD can decrease net income. From the results, I assume that marketers allocate the marketing resources such as push and pull well for their purpose. Some firms choose to increase their net sales or market share, but others elect to boost their net income. In this case, it may appear to be a different marketing strategies.

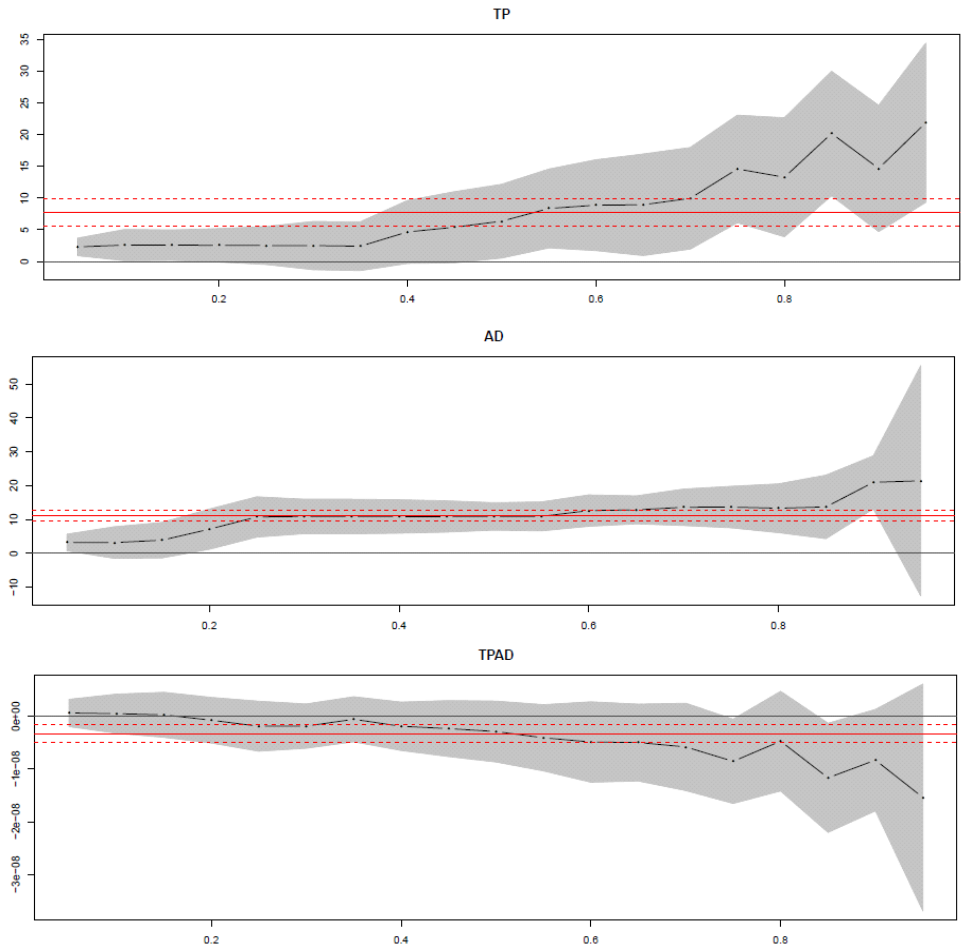


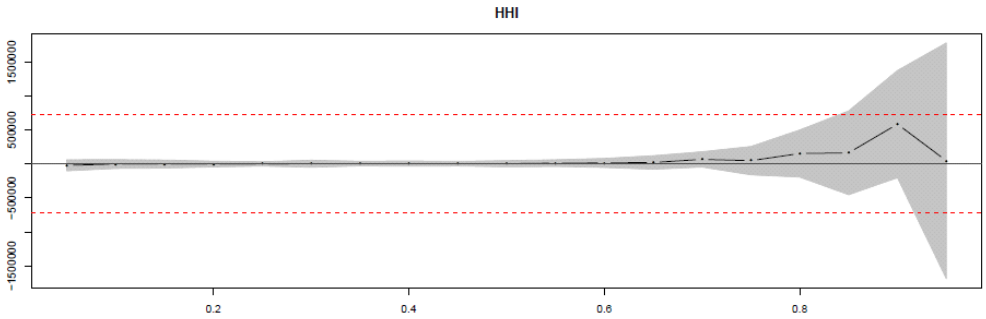
<Figure 1> Net Sales and Marketing Expenditures in 2000

<Table 3> The Result of Firm Performance in 2000

Variables	Quantiles					Mean(OLS)
	0.05	0.25	0.5	0.75	0.95	
Intercept	3.65e+06	-5.36e+06	1.19e+07	-3.31e+07	2.21e+09	-3.77e+08
	(0.92)	(0.90)	(0.78)	(0.849)	(0.96)	(0.6810)
Trade	1.74*	1.836	6.282**	15.81***	8.608	6.23***
Promotions	(0.08)	(0.427)	(0.04)	(0.001)	(0.265)	(0.000)
Advertising	3.17*	10.54***	10.55***	10.83***	14.63	10.56***
	(0.09)	(0.009)	(0.000)	(0.007)	(0.429)	(0.000)
HHI	4882	4865	1429	9.51e+04	1.52e+05	4991
	(0.89)	(0.82)	(0.96)	(0.508)	(0.899)	(0.2843)
TPAD	0	0	0	0	0	-2.01e-09
	(0.32)	(0.698)	(0.46)	(0.162)	(0.953)	(0.0891)

Note: The significant level is * p<0.1, **p<0.05, and ***p<0.01, respectively.





<Figure 2> Net Sales and Marketing Expenditures in 2001

<Table 4> The Result of Firm Performance in 2001

Variables	Quantiles					Mean(OLS)
	0.05	0.25	0.5	0.75	0.95	
Intercept	1.20e+07	-4.63e+06	-4.42e+06	-2.23e+07	1.78e+09	3.46e+08
	(0.81)	(0.90)	(0.89)	(0.89)	(0.49)	(0.707)
Trade	2.29**	2.51	6.355*	14.58***	21.88***	7.73***
Promotions	(0.02)	(0.29)	(0.086)	(0.0008)	(0.007)	(0.000)
Advertising	3.20*	10.72***	10.08***	13.64***	21.40	11.12***
	(0.09)	(0.0005)	(0.000)	(0.0007)	(0.271)	(0.000)
HHI	-18454	2594	5127	4.98e+04	4.82e+04	3380
	(0.83)	(0.82)	(0.84)	(0.661)	(0.96)	(0.9938)
TPAD	0	0	0	0	0	-3.25e-09**
	(0.76)	(0.469)	(0.446)	(0.09)	(0.108)	(0.001)

Note: The significant level is * p<0.1, **p<0.05, and ***p<0.01, respectively.

VI. Conclusion, Implication, and Future Research

1. Summary of Findings, Conclusions, Implications

Marketing expenditures such as trade promotions and advertising spending for consumer packaged goods are strongly tied to net sales. Trade promotions can be considered as a push strategy and advertising is clearly a pull strategy. Even though academic research has investigated overall marketing expenditures and firm performance, it needs to gain access to more detailed marketing budgets that focus on push and pull viewpoint since the initial target for trade promotion and advertising is so different in the consumer packaged goods industry.

However, it is not currently easy for academia to collect the specific marketing data set necessary

because companies do not want to open firm specific information to the public. Even though my data set is old, it was possible for me to collect this data set because of a mega event like the issuance of rule EITF 00-25 in the accounting field in 2001. Thus, the Financial Accounting Standard Board asked all companies in the U.S to treat their sales promotions as a reduction in wholesale price and then to restate their final statements for recent years. At that time many companies ended up with two income statements, one before the corrections were made and another one for after, in the same year. So, I have specifically checked companies in the CPG industry. I collected the dollar value of trade promotion amount based on EITF 00-25 issue. Also, for this research, I collected the dollar amount of advertising expenditures, net sales, and so on from the companies'income statements. This study also supports many of the concepts about the relationship between marketing expenditures and firm performance with the empirical details provided by the quantile regression model.

This research shows that marketing expenditures such as trade promotions and advertising spending are positively related to manufacturers'net sales at all quantile levels for only few cases. Furthermore, the effect of advertising is stronger than that of trade promotion from the lower to the middle quantile level. However, trade promotions are more effective to manufacturers'net sales in from the middle to the upper quantile levels compared with advertising. This result indicates that generally each company has to decide on the proper marketing strategy under their marketing budget for channel members.

This research has the advantage of dividing the marketing budget into dollar value of trade promotions and advertising. Other studies have used survey questions and aggregated marketing expenditure and therefore are less precise.

2. Limitations and Directions for Future Research

This study relied on the data, the dollar value of TPs, advertising, net sales, and other firm variables, but they are only for a limited 2-year span and therefore cannot cover all CPG industry. Furthermore, since the data is in the form of firm level aggregation. I could not examine the relationship between brand level and firm performance. Thus, this data cannot demonstrate the importance of individual either products or brand level effectiveness on firm performance. If the brand level data becomes available, it will allow us to produce a more detailed analysis of the CPG industry. Furthermore, the data set is more than 10 years old, so more recent data is needed.

In future research, first, either brand or product level should be included, even though it is very hard to collect that data since companies do not open their firm confidential information to the public (Seo 2016). Second, future studies can examine more specific trade promotion factors such as slotting allowances, off-invoices, bill-backs, cooperative advertising, scan-backs, and so on (Gómez, Maratou and Just 2007). I will personally endeavor to examine other promotional mix variables such as event and experience, direct marketing, personal selling, and current social media effect in marketing expenditures on firm performance. In addition, I will try to examine the marketing effect on firm performance such as net

profit, stock return, return on the asset and so on. Third, the current CPG industry in Korea is a very dynamic market and it is also very different accounting rules from that of the U.S. If data becomes available to the public, the CPG industry in Korea should be further investigated for the relationship between marketing expenditure and firm performance.

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중간상 판매촉진비와 광고비가 매출에 미치는 영향
- 소비재 제조업체를 중심으로 -

서주환*

ABSTRACT

중간상 판매촉진비 및 광고비용이 소비재 제조회사의 기업 매출에 얼마만큼 영향력을 주는지에 대해서 본 연구는 조사를 하였다. 이 두 가지 부분은 마케팅 촉진전략 중에서 크게 푸쉬(Push)와 풀(Pull) 전략적으로 나누어서 설명할 수 있다. 소비재 제조회사는 다양한 촉진전략이 사용되는 분야이며, 이런 중간상 촉진금액 및 광고비용은 매년 크게 증가하고 있지만 그것의 효과에 대한 부분은 아직도 여전히 논란이 많이 되고 있기 때문이다. 그럼에도 불구하구 이 분야의 연구가 실질적으로 제한적인 이유는 기업의 실질적인 영업이익에 해당되는 자료중 마케팅 비용에 대한 세부적인 항목을 구체적으로 공개하지 않을 뿐만 아니라 구하기가 쉽지 않기 때문이다. 그리하여, 현재까지 이 분야의 대부분 연구는 현재까지 마케팅비용이란 큰 틀에서 논의가 진행되거나, 서베이조사를 통한 방법 그리고 해석적방법(analytical method)을 통한 연구가 진행되었다. 본 연구는 이전 연구와는 달리 마케팅 비용을 세분화 시켜서 진행시켰다. 이러한 시도는 미국 회계기준의 변경이 2001년에 발생하여 가능하였으며, 이를 바탕으로 소비재 제조회사의 회계처리 데이터를 회계기준 이전과 이후를 비교하여 직접 수집하였다. 실제 회계장부에 바탕을 둔 중간상 판매촉진비용, 광고금액, 그리고 매출 자료를 사용하여 분석하였다. 마케팅 촉진전략중 중간상 판매촉진비은 일종의 푸쉬 전략(Push Strategy)으로, 광고비용은 풀전략(Pull Strategy)으로 세분화시켰으며, 다양한 소비재제조회사의 특성을 고려하여 분위회귀분석을 통하여 마케팅촉진비용에 대한 효과를 각각의 분위에서 알아보고자 하였다. 대부분의 분위에서 기업의 매출에 긍정적인 영향력을 미치는 것으로 파악이 되었으며, 하지만 광고 및 중간상 판매촉진비용의 효과는 각각의 분위에 따라 다르게 나타나는 것으로 조사되었다. 구체적으로 소비재 제조회사분야세서 중간상 판매촉진 비용의 효과는 광고비용보다는 중간에서 상위분위에서 조금 더 큰 것으로 나타났으며, 하위분위에서 중간분위는 광고의 효과가 더 큰 것으로 나타났다.

주제어: 소비재 제조회사, 광고, 중간상 촉진비용, Emerging Issues Task Force(EITF), 분위회귀분석

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