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The Relationship between Labor Union and Advertising Expenditures: A Focus on Distribution Firms*

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Abstract

Purpose: The aim of this paper is to investigate whether labor unions are the main determinants of advertising expenditures and whether market competition has an impact on the relation between labor unions and advertising expenditures, focusing on distribution firms. **Research design, data, and methodology:** Using 914 observations of KOSPI market from 2001 to 2009 in distribution firms, this paper examines whether labor union is related to advertising expenditures, focusing on distribution firms. For this, this paper employs not only OLS regressions method but also 2SLS regressions method in which Female_Ratio(percentage of female employees) is used as instrumental. **Results:** This paper finds that in the distribution firms, labor union, as a major stakeholder of the company is, in terms of statistic, negatively associated with advertising expenditures. Also, market competition, in this paper, doesn't have real impact on the relation between labor unions and advertising expenditures. **Conclusions:** This paper presents the influence of labor unions, as a major factor in determining advertising expenditures. An executive who understands that as the amount of advertising expenditure increases, the total pie of wages to be attributed to the members of labor union will decrease.

Keywords: Labor Union, Advertising Expenditures, Product Market Competition, Distribution Firms.

JEL Classification Code : M37

1. Introduction

Advertising costs are expenses used in advertising activities to promote a company's sales activities. Since these expenditures generally occur in proportion to sales, they are considered an important expenditure item within the company (Graham, Harvey, & Rajgopal, 2005; Cohen, Mashuruwala, & Zach, 2010). Prior studies on these advertising costs have reported that these expenditures are systematically related to increased value or profits of the company (Bublitz & Ettredge, 1989; Hirschey, 1982; Chauvin & Hirschey, 1993; Hirschey & Weygandt, 1985). Therefore, in order to pursue shareholder value maximization through corporate value maximization, it is very important to understand the sketch of the overall mechanism in which advertising costs are determined. It would be of great interest both academically and practically to be able to identify key enforcement factors that influence advertising cost decisions. It is, nevertheless, easy to see that corporate advertising spending has increased or decreased on the media, while consumers and investors have difficulty understanding why advertising spending has suddenly increased or decreased. This will provide useful implications for both internal management and stakeholders in the capital market.

Despite the importance of systematic research on the advertising cost determinants, research on the overall business environment or financial situation of a company that systematically influences the advertising cost decision is very rare. In particular, although the determination of arbitrary costs such as advertising costs will be greatly influenced by corporate governance, studies dealing with the process of determining advertising costs from the perspective of corporate internal governance are very rare. However, in Korea, the share of labor unions in corporate governance is very high. The union of Hyundai Heavy Industries insisted in the 2016 newsletter that labor union

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should be guaranteed the right to recommend one outside director. The union of Hyundai Heavy Industries stated that monitoring the management requires the union's right to participate in management. As such, there is little interest in the company's participation in management rights in order to improve the distribution of workers who are union members. In 2014, when the chairman of the chairman of the KB Financial Group was appointed, the chairman recommendation chairman said that he agreed with the union's opinion that he expressed his desire to be elected inside the KB Financial Group. This positive feedback from the board of directors on the union's opinion shows that in our business context, where unions are not involved in corporate management decisions, managers are motivated to create a cooperative atmosphere with their employees. In this way, in domestic companies, labor unions can strongly influence the management decisions of corporate managers.

Therefore, there is a possibility that the executives who decide to enforce advertising costs inside the company will be influenced by labor union in the decision to enforce advertising costs. When, in other words, the bargaining power of labor unions is large within a company, the motivation for managers to establish cooperative relationships with labor unions will be very strong. Corporate management knows that the costs of intangible cohabitation with the company's workers, such as workers' strikes, can be very tangible and intangible. For that reason, managers who understand that increasing advertising expenditures will reduce the total pie of wages attributed to the union's employee group, taking into account labor union's presence and bargaining power in the management decision-making process to determine advertising expenditures. There are no studies, nevertheless, dealing with the impact of labor unions who are internal stakeholders within the company on top management's advertising spending.

The goal, therefore, is to look into whether labor unions are a major determinant in determining advertising costs. External stakeholders, such as consumers and investors, can use advertising costs to indirectly understand the major business environment, such as changes in the company's nature, sales trends and financial status. For example, if cell phone-related advertising continues to be carried out, one can guess that the telecommunications industry is important in our economy or that advertising costs are important in the telecommunications industry. On the other hand, if advertisements such as banks and securities suddenly disappear from the media, it can be assumed that the financial industry's performance is poor or the advertising costs are low. Thus, this paper presents, firstly, the influence of labor union, the main stakeholder of the enterprise, as the main factor determining the expenditure of advertising expenses. At this time, this paper intended to analyze the impact of labor unions, which are the main

stakeholders of enterprises, on advertising costs on distribution businesses that are more important in the formation of corporate continuity and value than other industries. In the past, product quality, highly accessible location, and reasonable pricing were the main success factors in the distribution industry, but now the fourth industrial revolution and the development of the Internet infrastructure have made it very important to share product value messages with end consumers through advertising in distribution firms. For example, in the cosmetics industry, distribution via multi-brand shops is increasing (Yoon, Song, & Kang, 2020).

This study reviewed research background and prior research in chapter 2 and set hypotheses at the same time, and set up research design for empirical analysis in chapter 3. Chapter 4 presents empirical analysis results, and finally chapter 5 summarizes the empirical results and gives implications.

2. Literature Review and Hypothesis Development

Advertising costs vary depending on the scope or timing of advertising activities as expenses incurred to encourage sales activities. Most prior studies related to advertising costs focused on analyzing the relationship between advertising costs and profitability, or whether advertising costs affect the company's profit or corporate value (Bublitz & Ettridge, 1989; Hirschey, 1982; Hirschey & Weigandt, 1985). These studies show that advertising costs have a positive long-term relationship with increased corporate value, but it is difficult to prove the economic effects of advertising costs in the short term. Because advertising expenditure is a typical discretionary nature of expense that can control the amount or timing of expenditure at the discretion of the manager, it can be deliberately adjusted in consideration of short-term management performance or objectives (Graham et al., 2005; Cohen et al., 2010). For example, management in the distribution industry may maintain a negative stance in maintaining the accounting department (An, Ji, & Yoon, 2019). If an entity's external stakeholders, including investors, can identify the mechanisms for determining advertising costs, it can address information asymmetry issues and make reasonable decisions. For example, advertising costs are carried out on an annual budget basis. In addition, according to a prior study, advertising expenditures are affected not only by sales but also by the company's size, financial situation, revenue and electricity advertising expenditures. However, a manager may have an incentive to control advertising expenditure below a certain level, which considers the financial situation of the entity in controlling advertising costs. It would be, namely, possible to have the ability to

spend on advertising by curbing expenditure at a certain rate relative to sales or profits. It is also possible to determine advertising costs by interpreting them from an investment perspective and considering return on investment (ROI). As such, the manager will set the advertising costs in consideration of the entity's solvency, or cash flows, when spending on advertising. As such, the execution of advertising costs is not only affected by the financial situation, but also by macro economic factors such as industrial factors (Peles, 1971).

Labor union studies are arranged in two perspectives: the first view is that labor unions will pressure them to reduce advertising costs, which are discretionary costs, in the process of wage negotiations to increase their share of union membership. In terms of access to company information, labor union has the advantage of acting as an insider to monitor management over external stakeholders, thereby monitoring management to ensure that its companies operate effectively and efficiently (Chen, Kacperczyk, & Ortiz-Molina, 2011). Realistically, the members of labor union are the entire staff, so there are few restrictions on the members of labor union in functions other than internal audit and human resource management. Therefore, union members are real insiders, and it is difficult to see the company's work carried out without the union's recognition. This view of labor unions as part of the governance structure would pressure them to reduce advertising costs to increase the total amount of allocation attributed to their employees through monitoring of managers.

On the other hand, there are many prior studies from the perspective that the management will respond to the role of Rent-seeker in terms of maximizing shareholder value. According to Grout (1984) and Baldwin (1983), labor unions will play the role of Rent-seeker, seeking quasi-rents from the company in accordance with the classic logic of economics through potential threats such as strikes. As a result, it can be seen that in response, corporate management tends to protect corporate resources as the bargaining power of labor union becomes stronger for the purpose of enhancing bargaining power. For example, it has been found that the more powerful a labor union faces, the less cash reserves (Klasa, Maxwell, & Ortiz-Molina, 2009). more debt (Bronars & Deer, 1991), and less positive news disclosure. Research from this perspective believes that managers who understand that labor unions want to achieve their goal of maximizing the wages of union members, especially at wage negotiations, will make efforts to reduce their share of labor unions by lowering their net profit by increasing discretionary costs such as advertising costs. For example, there is also a prior study in which managers make profit adjustments that lower profits before wage negotiations (Mora & Sabater, 2008). Given that labor union will act as a tenant-seeker and that the manager will

respond from the perspective of maximizing shareholder value, it can be predicted that managers will not reduce advertising expenditures to improve competitiveness in the industry even if labor union presses its employees to reduce the total allocation attributed to them.

Therefore, since the direction of significant influence on management's execution of advertising costs is derived in both directions, this study draws the following hypotheses on the effect of whether a labor union exists or not on the execution of advertising costs in the distribution service industry:

H 1: The existence of labor unions in the distribution service sector does not affect the execution of advertising costs by companies.

3. Methodology

3.1. Research Model

To verify the hypothesis, the following empirical research models were established.

 $\begin{aligned} AdvertisingExp &= \beta_0 + \beta_1 UNION + \beta_2 SIZE + \beta_3 PPE + \\ \beta_4 Lnsale + \beta_5 ROA + \beta_6 Leverage + \beta_7 Competition \\ &+ \beta_8 CAPEX + \beta_9 Lnage + \sum YR + \sum IND + \epsilon \end{aligned}$

In the above demonstration model, the dependent variable was the AdvertisingExp (Advertising Exp) variable, which represents the advertising cost of the current period. The AdvertisingExp variable is the value taken in natural logarithm by adding 1 the amount of advertising expenditure divided by the total amount of assets in the prior term.

Test variables are Union variables because this study examines the impact of labor unions on advertising costs.

In this paper, there are two labor union-related variables: First, the Union (union membership) variable is a dummy variable that is given a value of 1 if there is at least one union member, and 1 or more if not more than one. Second, the Union Mem variable is the number of union members divided by the total number of employees (Hirsch & Link 1987; Bronze & Deer 1993; Matsa, 2010; Bronze & Deerre 1991; Klasa et al., 2009). First of all, the introduction of the DumUnion variable in the study suggests that systematic differences in corporate characteristics exist between the existing and non-existing groups of labor unions in the traditional theory of labor-management relations. Next, it was introduced in further analysis of this study because labor union membership rate was used a lot as a variable representing the bargaining power of labor union. In the United States, only industry-specific data about labor

unions existed, so research was designed by inferring corporate variables using industry-specific labor union data. For example, a Hilary (2006) study defines a variable by multiplying the number of employees of an individual entity by the industry's labor union membership rate when looking for an entity's union membership. This is based on the logic of Rosen (1969) that labor unions have a "spillover" effect that they believe has a ripple effect not only on their own businesses but also on other companies belonging to the same industry (Hilary, 2006; Rosen, 1969).

The control variables of this model are included in the demonstration model with sufficient reference to the relevant prior study as follows. First, the SIZE variable was included in the control variable because expenditure on advertising could be affected by the size of the entity. The SIZE (enterprise size) variable is the value calculated by taking the natural log into the total asset. The same logic included PPE variables that represent an entity's investment in property, plant and equipment and CAPEX variables that represent capital expenditure. The PPE variable is the enterprise property, plant and equipment divided by the total assets and the CAPEX variable is the enterprise capital expenditure divided by the total assets. Second, the control variable included the Lnsale variable, which represents the sales of electricity, because expenditure on advertising could be affected by sales. The Lnsale variable is the value of taking a natural log on a company's total sales. B4 will represent a significant amount (+). Third, return on assets (ROA) variable was included as a proxy for the return on investment in the control variable. The return on assets (ROA) variable is the net profit divided by the total assets. Companies with higher returns will increase advertising spending. Fourth, the Leverage (Electrical Debt Ratio) was included in the control variable because spending on advertising could be affected by financial soundness. The Leverage variable is the total debt divided by capital. There is a negative (-) relationship with advertising costs (Bhagat & Welch, 1995). Therefore, $\beta 6$ is expected to have a negative (-) value. Fifth, the control variable included Competitions because the level of market competition in the industry to which the entity belongs could affect advertising expenditure. The Competition variable is the value multiplied by (-)1 in the Heffindal index. This is multiplied by (-)1 to measure the level of competition because the Heffindal index represents the monopoly of the industry to which the entity belongs. If the level of competition in the industry to which the company belongs increases, it can increase the execution of advertising costs to win the competition, but at the same time, efforts may be made to reduce advertising costs as various cost-cutting incentives, including advertising costs, increase. Therefore, the regression coefficient β 7 of the Competition variable is difficult to predict the sign. Sixth, the Lnage variable was included in the control variable because the entity's life

span could affect advertising expenditure. The Lnage variable is the value of the entity's natural logarithm in the year of its existence. If the company's life expectancy increases, the company may increase the execution of advertising costs stably, but it may want to reduce advertising costs for reasons already known to the market. It is, therefore, difficult to predict the sign of the regression coefficient $\beta 9$ of the Lnage variable.

3.2. Data Collection and Analysis

The sample of this study consisted of KOSPI listed companies in the distribution service industry from 2001 to 2009. It means that the company that satisfies all three conditions below was selected as a sample.

- (1) December Settlement Corporation
- (2) Companies with financial data
- (3) Non-financial business

In this study, the sample was constructed from 2001 to 2009 because trade-related variables, the test variables of this study, were only disclosed until 2009. Hypothesis verification was conducted on the distribution service industry, which is highly competitive and branding through advertising is a major factor in competition. At this time, this paper firmly clustered all variables in empirical analysis to mitigate the effects of potential autocorrelation on empirical analysis results (Peterson, 2007).

4. Results

4.1. Descriptive Statistics

<Table 1> is descriptive statistics information for each variable. The distribution service industry was tested separately from other industries, so the results for the distribution service industry were presented. In the panel for the distribution service industry, a total of 46.28% of the companies analyzed are unions. The average union membership rate is 40.60% for companies with unions. That is, in the distribution service industry, it can be seen that the union formation rate is lower than that of other industries.

<Table 2> suggests correlation analysis among the main variables. In the panel for the distribution service industry, it was found that the organization of labor unions had a positive (+) relationship with the expenditure of advertising. These results need to examine more accurate results excluding the influence of control variables through multivariate analysis. As a result of the multicollinearity review, it was confirmed that it was not significant because it was less than 10.

| Variable | N | Mean | Standard deviation | Min | Median | Max |
|---------------------------------------|-----|---------|--------------------|---------|---------|---------|
| Union _{it-1} | 914 | 0.4628 | 0.4989 | 0.0000 | 0.0000 | 1.0000 |
| Union_Hat _{it-1} [Predicted] | 914 | 0.5626 | 0.1922 | 0.0927 | 0.5676 | 0.9799 |
| Advertising_Exp _{it} | 914 | 20.0778 | 2.8815 | 13.9108 | 20.0761 | 25.7801 |
| Size _{it-1} | 914 | 25.5133 | 1.8325 | 22.3357 | 25.2779 | 30.3828 |
| PPE _{it-1} | 914 | 0.1868 | 0.1467 | 0.0015 | 0.1596 | 0.5946 |
| LNSALE _{it-1} | 914 | 19.2012 | 1.7212 | 15.5778 | 19.0355 | 23.3343 |
| ROA _{it-1} | 914 | 0.0358 | 0.1396 | -0.6640 | 0.0472 | 0.4742 |
| LEVERAGE _{it-1} | 914 | 0.4583 | 0.2161 | 0.0325 | 0.4608 | 1.1620 |
| Competition _{it-1} | 914 | -0.1380 | 0.1102 | -0.4908 | -0.1377 | -0.0081 |
| CAPEX _{it-1} | 914 | 0.3201 | 0.4445 | 0.0057 | 0.1713 | 2.6250 |
| LNAGE _{it-1} | 914 | 3.2930 | 0.7458 | 0.6931 | 3.4657 | 4.4427 |
| Union_MEM _{it-1} | 423 | 0.4060 | 0.2517 | 0.0009 | 0.3860 | 0.8268 |

Table 1: Descriptive statistics.

Table 2: Correlations.

| | (2) | (3) | (4) | (5) <i>PPE</i> | (6) | (7) | (8)Leverage | (9) | (10) | (11) | Union_MEM (12) |
|--------------------|-------|-------|-------|----------------|-------|-------|-------------|-------|-------|-------|-------------------|
| Union(1) | 0.44 | 0.30 | 0.20 | 0.26 | 0.33 | 0.10 | -0.01 | -0.06 | -0.17 | 0.21 | - |
| | <.001 | <.001 | <.001 | <.001 | <.001 | 0.00 | 0.79 | 0.05 | <.001 | <.001 | |
| Union_Hat (2) | | 0.36 | 0.40 | 0.47 | 0.71 | 0.14 | 0.12 | -0.06 | -0.24 | 0.60 | 0.03 |
| | | <.001 | <.001 | <.001 | <.001 | <.001 | 0.00 | 0.08 | <.001 | <.001 | 0.60 |
| Advertising_Exp(3) | | | 0.66 | 0.33 | 0.68 | 0.27 | 0.12 | -0.13 | -0.03 | -0.01 | -0.11 |
| <u>9</u> ,(1) | | | <.001 | <.001 | <.001 | <.001 | 0.00 | <.001 | 0.37 | 0.66 | 0.03 |
| Size(4) | | | | 0.24 | 0.74 | 0.36 | -0.14 | -0.31 | -0.02 | -0.02 | 0.04 |
| 0.20(1) | | | | <.001 | <.001 | <.001 | <.001 | <.001 | 0.50 | 0.49 | 0.43 |
| PPE(5) | | | | | 0.29 | 0.14 | 0.11 | -0.01 | -0.06 | 0.04 | 0.17 |
| | | | | | <.001 | <.001 | 0.00 | 0.67 | 0.06 | 0.18 | 0.00 |
| LNSALE(6) | | | | | | 0.29 | 0.20 | -0.21 | -0.07 | 0.16 | -0.01 |
| 2//0/122(0) | | | | | | <.001 | <.001 | <.001 | 0.04 | <.001 | 0.77 |
| ROA(7) | | | | | | | -0.36 | -0.13 | 0.09 | -0.19 | 0.06 |
| | | | | | | | <.001 | <.001 | 0.01 | <.001 | 0.21 |
| Leverage(8) | | | | | | | | 0.13 | 0.04 | 0.17 | -0.03 |
| Levelage(0) | | | | | | | | <.001 | 0.25 | <.001 | 0.53 |
| Competitioni(9) | | | | | | | | | 0.01 | 0.04 | -0.13 |
| compoundin(c) | | | | | | | | | 0.70 | 0.20 | 0.01 |
| CAPEX(10) | | | | | | | | | | -0.13 | 0.08 |
| | | | | | | | | | | <.001 | 0.10 |
| LNAGE(11) | | | | | | | | | | | -0.08 |
| 2.0.02(77) | | | | | | | | | | | 0.12 |

4.2. Hypothesis Test

4.2.1. The Relation between Labor Union and Advertising Expenditures

As explained in the tentative plan, the management and workers differ in the way labor-management negotiations are conducted depending on the existence of labor unions. Therefore, the 2SLS analysis (two-step minimum selfadaptation method) was performed to mitigate the generation-resisting issues. In order to perform a regression analysis by the two-step minimum self-adoption method, an Instrument Variable must be selected, which affects the interest variable in the two-stage regression analysis but does not affect the dependent variable in the two-stage regression analysis. In other words, to act as a tool variable, a variable that affects Union (whether or not organized by a labor union) and that does not affect Advertising_Exp (advertisement expenditure), a variable that satisfies this condition, was selected as the percentage of female employees in the The reason why the Female_Ratio variable was selected as the instrumental variable is because the regression coefficient, which affects Union variable, is statistically significant, as shown in the First-Stage Progress result of Table 3 Panel A below, but you can see in the Second-Stage Response of Panel B as shown in the Adoption result.

Table 3: The Relation between Labor Union and Advertising Expenditures: 2SLS Regressions.

| Veriekle | Dependent variable = Union _{it} | | | |
|-----------------------------------|--|---------|--|--|
| Variable | Coef. | p-value | | |
| Intercept | -1.1504 | <0.01 | | |
| Female_Ratio _{it-1} [IV] | -0.4127 | <0.01 | | |
| Size _{it−1} | -0.0284 | <0.01 | | |
| PPE _{it-1} | 0.4539 | <0.01 | | |
| LNSALE _{it-1} | 0.0828 | <0.01 | | |
| ROA _{it-1} | 0.0308 | 0.6133 | | |
| LEVERAGE _{it-1} | -0.1437 | <0.01 | | |
| Competition _{it-1} | 0.0785 | 0.0979 | | |
| CAPEX _{it-1} | -0.0656 | <0.01 | | |
| LNAGE _{it-1} | 0.0992 | <0.01 | | |
| Firm Clustering | YES | | | |
| Year fixed effect | YES | | | |
| Adj. R² | 0.2671 | | | |
| N | 914 | | | |

Panel A: First-Stage Regression.

In this paper, we refer to the study by Chen, Kacperczyk, and Ortiz-Molina (2012) in the first stage of the model on determining factors of union existence, but the size of the enterprise, LNSALE variables, which represent the size of the enterprise in addition to the Female_Ratio (the percentage of female employees), which is a tool variable that can receive the data, and the corporate structure, PPE, CAP, CEX variables that represent the size, and corporate

investment. They also wanted to control the annual difference by using the year-dummy variables. <Table 3> Panel B's Second-Stage Progress results provide a result of controlling the problem of endogenesis of the Union variable through a two-stage regression analysis (Two-Stage Least Squares: 2SLS). In particular, the Union_Hatit-1[Predicted] variable is the value of the Union variable estimated through the First-Stage Region using the tool

variable Female_Ratio (the percentage of female employees) for the purpose of overcoming the endogenous problem of the Union variable, which is the variable of interest in Second-Stage Progress

The regression analysis of distribution service industry samples presented in $\langle \text{Table } 3 \rangle$ Panel B also showed that the regression coefficient value of the Union_Hatit-1[Predicted] variable, which is a variable of interest that indicates whether a union is organized or not has an effect on advertising expenditure, was -6.972, which is a significant negative (-) value from a statistical perspective. At this time, a regression analysis of distribution service industry samples shows that the regression coefficient value is greater than the regression coefficient of -3.4019for the entire sample. These results confirm that the degree to which labor unions are pressured to reduce advertising costs, a discretionary expense, in the course of wage negotiations to increase their share of workers in the distribution service sector is observed. These empirical results are highly meaningful in that they have identified new factors that affect the execution of advertising costs in the highly competitive distribution industry.

| Variable | Dependent variable = Advertising_Exp _{it} | | | | |
|---------------------------------------|--|---------|--|--|--|
| | Coef. | p-value | | | |
| Intercept | -13.5423 | <0.01 | | | |
| Union_Hat _{it-1} [Predicted] | -6.9722 | <0.01 | | | |
| Size _{it−1} | 0.5335 | <0.01 | | | |
| PPE _{it-1} | 4.7734 | <0.01 | | | |
| LNSALE _{it-1} | 1.0848 | <0.01 | | | |
| ROA _{it-1} | 0.9207 | 0.2340 | | | |
| LEVERAGE _{it-1} | 0.5615 | 0.4971 | | | |
| Competition _{it-1} | 2.0222 | 0.1353 | | | |
| CAPEX _{it-1} | -0.3994 | 0.1429 | | | |
| LNAGE _{it-1} | 0.5575 | 0.0462 | | | |
| Firm Clustering | YES | | | | |
| Year fixed effect | YES | | | | |
| Adj. R ² | 0.5927 | | | | |
| Ν | 914 | | | | |

Panel B: Second-Stage Regression.

4.2.2. The Impact of Market Competition on the Relation between Labor Union and Advertising Expenditures

The level of competition in the industry is the realm of empirical analysis whether to organize labor unions and strengthen or weaken the negative relationship between advertising spending. This is because the higher the level of competition in the industry, the greater the incentive to maintain or increase sales by increasing advertising expenditure to survive the competition in the industry, while the higher the level of competition, the relatively lower the expenditure of advertising under the logic of minimizing costs may occur. A prior study in the accounting sector found that the higher the level of industrial competition in the distribution industry, the lower the audit quality (Shin, 2019). Interestingly, a regression analysis of the distribution service industry sample presented in Table 4 showed that the regression coefficient value of the Union_Hatit-1[Predicated] variable, a variable of interest that indicates whether a labor union is organized or not, was not significant from a statistical point of view between the group's high level of competition and the group's low level of competition within the industry. These results indicate that the phenomenon of reducing advertising expenditure statistically significantly than that of non-existent entities is independent of the level of competition in the industry. In other words, it can be seen that labor union's Rent-Seeking phenomenon is more widespread in the distribution service industry. These results are significant in that they have identified new factors that affect the execution of advertising costs in the highly competitive distribution industry.

| Variable | HIGH Market Competition groups | | LOW Market Co | Difference Test | |
|---------------------------------------|--------------------------------|---------|---------------|-----------------|--------|
| | Coef. | p-value | Coef. | p-value | |
| Intercept | -11.0865 | <0.01 | -17.5673 | <0.01 | |
| Union_Hat _{it-1} [Predicted] | -7.5100 | <0.01 | -6.8623 | <0.01 | 0.1898 |
| Size _{it-1} | 0.4572 | 0.0478 | 0.7295 | <0.01 | |
| PPE _{it-1} | 4.7202 | 0.0145 | 5.0175 | <0.01 | |
| LNSALE _{it-1} | 1.1252 | <0.01 | 0.9896 | <0.01 | |
| ROA _{it-1} | 2.2643 | 0.0150 | -1.4194 | 0.3081 | |
| LEVERAGE _{it-1} | 0.0863 | 0.9402 | 0.4976 | 0.6591 | |
| Competition _{it-1} | 10.2541 | 0.0712 | 0.9282 | 0.5928 | |
| CAPEX _{it-1} | -0.1610 | 0.6191 | -0.6040 | 0.0919 | |
| LNAGE _{it-1} | 0.3382 | 0.4249 | 0.7333 | 0.0209 | |
| Firm Clustering | YES | | YES | | |
| Year fixed effect | YES | | YES | | |
| Adj. R² | 0.5377 | | 0.6705 | | |
| N | 476 | | 438 | | |

4.3. Additional Test : Alternative measure of Labor Union, Union membership ratio

Next, a variable that indicates whether a labor union is strong or not is used a lot, especially in the U.S. prior research, studies that infer corporate variables using industry-specific labor union data because it is not easy to obtain corporate data on labor unions. On the other hand, in Korea's business report, labor union-related data are disclosed by companies until 2009, so labor union membership rate can be calculated by companies. Therefore, this study will conduct an analysis of the effects of union membership on advertising expenditure for the group of enterprises in which labor union exists as an additional The organization of a company's labor union affects its negotiating behavior with its employees, but the union membership rate is meaningful in that it examines the impact of the union's bargaining power on advertising spending within the company, targeting companies that have already organized labor unions.

The regression analysis of the distribution service industry samples presented in Table 5 showed that the regression coefficient value of the Union_MEM variable, a variable of interest that indicates the effect of union membership on advertising expenditure, was -1.5187, a value of significant negative (-) from a statistical point of view below 10% significant level. This suggests that the stronger labor union's bargaining power in the distribution service sector, the more managers are spending on advertising.

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| Variable | Dependent variable = Advertising_Exp _{it} | | | | |
|-----------------------------|--|---------|--|--|--|
| Variable | Coef. | p-value | | | |
| Intercept | -9.0694 | <0.01 | | | |
| Union_MEM | -1.5187 | 0.0614 | | | |
| Size _{it-1} | 1.0206 | <0.01 | | | |
| PPE _{it-1} | 0.5481 | 0.7011 | | | |
| LNSALE _{it-1} | 0.1327 | 0.5224 | | | |
| ROA _{it-1} | -0.4858 | 0.7993 | | | |
| LEVERAGE _{it-1} | 3.9648 | <0.01 | | | |
| Competition _{it-1} | 2.8972 | 0.1053 | | | |
| CAPEX _{it-1} | 0.5661 | 0.1906 | | | |
| LNAGE _{it-1} | -0.0580 | 0.8544 | | | |
| Firm Clustering | YES | | | | |
| Year fixed effect | YES | | | | |
| Adj. R ² | 0.6301 | | | | |
| Ν | 423 | | | | |

 Table 5: Alternative measure of
 Labor Union, Union membership ratio.

5. Conclusions

Advertising costs are expenses incurred to encourage or increase the value of a company's business activities. On average, advertising spending accounts for about 1 percent of sales, but the proportion of advertising spending increases each year, indicating that it is one of the important cost items within the enterprise. Advertising costs are also typical discretionary costs that are not clear in the execution process and can be adjusted at the discretion of the manager (Graham et al., 2005; Cohen et al., 2010).

Because of the large potential variety of opportunity costs (e.g., strikes) that may arise from competitive relationships with employees, an entity will have a strong motif to create a cooperative atmosphere with workers (Hamm et al., 2015), i.e., an entity will consider the stand of a labor union, an important stakeholder within the entity, in making management decisions.

Therefore, this study further identified whether labor unions were the main determinant in determining the expenditure of advertising costs. The results of the study are as follows. It was confirmed that the more labor unions were formed in companies, the less advertising costs were executed. This can be understood as an attempt by a labor union to reduce advertising costs and increase its share through Rent-seeking on behalf of its employees affected the executive's execution of advertising costs. These results were robustly established regardless of the level of competition in the commodity market. In addition, it was confirmed that the higher labor union membership rate within the group where labor union was formed, the lower the execution of advertising costs. This can be understood as an attempt to reduce advertising costs and increase one's share through Rent-seeking, or land-seeking, as labor union's bargaining power grows has affected the executive's execution of advertising costs.

This is the first study to directly verify the correlation between labor unions and advertising execution decisions, which are important stakeholders in the enterprise, especially in the distribution industry where the execution of advertising costs is important. Previous research has focused mainly on corporate characteristic variables and corporate governance variables as factors that determine advertising costs. On the other hand, this study distinguishes itself from the fact that labor unions, which are important stakeholders of a company, have an impact on advertising cost decisions. These empirical results in this paper contribute to enhancing the understanding of the influence of labor unions in determining advertising costs to capital market stakeholders or to corporate internal managers. However, the analysis period is limited to 2008 when labor union-related variables in the project report are disclosed, and the part that does not reflect the recent reality can be judged as the limitation of this paper. It is hoped that this paper will serve as a stepping stone and attempt to improve it in the research of future students.

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