The Effectiveness of Advertising Cost Against Sales and Firm Value

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Abstract. Businesses and companies use advertising as a product promotion tool for customers. Every expenditure utilizing advertising carried out by the company is used to attract public interest in a product, which will increase product sales and ultimately impact increasing company value. This study examines the effectiveness of advertising costs and their impact on sales and company value. The research samples use data from the financial reports included in the consumer goods sector with the food and beverage sub-sector listed on the Indonesia Stock Exchange from 2018-2021. The research method is quantitative, and the sampling method is purposive. The test results show an influence between advertising costs and sales, and there is an effect between advertising costs and sales on firm value. The findings imply that advertising costs by companies can increase public awareness and then increase company sales. So, the higher advertising intensity the company carries can boost profits and increase company value in the eyes of investors or potential investors. This study found that advertising costs, besides influencing sales, also affect company value.

Keywords: Advertising Costs, Sales, Firm Value, Tobin's Q

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Introduction

Advertising is used by many businesses and companies as a product promotion tool to customers. Business competition using creative advertising or promotion is a way for companies to attract customers. The use of advertising media to compare oneself with competitors is something that is common in business competition between companies. For example, the advertising war carried out by The Coca-Cola Company and PepsiCo, competing with each other by using beverage advertisements, both using printed and electronic media in their marketing strategy (Olya (2021, finance.yahoo.com)). In addition, in connection with the occurrence of the SARS Corona Virus Disease 2019 (COVID-19) and government policies through work from home led to an increase in spending by the public, especially for purchasing fast-moving consumer goods such as food and soft drinks which are packaged as food that can last a long time (Elvira (2021, industri.kontan.co.id). Thus, the role of advertising in business competition between companies in the field of consumer goods becomes more obvious to attract consumers.

Spending on advertising costs by companies raises the question of whether the expenses incurred are comparable to the profits earned by the company and their impact on company value. Research conducted by Kim, et al. (2019) shows that the long-term performance of companies engaged in the hospitality industries is better because they spend on advertising during times of crisis. According to Nielsen research media, advertisement spending by the company in 2020 is higher than the realized year 2019 (Wahyudi (2022, Ekonomi.bisnis.com), this is due to advertising started to utilize digital media which is more widely used by the public during the Covid-19 pandemic.

Thus, this study aims to see how the impact of spending on advertising costs by the companies on the number of sales and the relationship between advertising costs and sales on the company value, especially companies listed on the Indonesia Stock Exchange in the consumer goods sector as in food and beverages. The urgency of this research is to provide an overview to investors and researchers regarding the relationship between advertising costs, company sales, and company value which also includes company activities during the pandemic.

Literature Review

Based on signal theory by Spence (1978) using the labor market, companies have little information about job applicants, causing information asymmetry. Information asymmetry causes an imbalance of information held between the parties involved. In other cases, the company will provide news about a situation regarding the company's financial condition to interested parties, generally in the form of a profit or loss announcement. Signal theory in general focuses on the intentional communication of positive information to convey good company conditions (Connelly, et al., 2011), in this case, indicated by company profits which will later affect company value. Profit can be seen through the company's operational activities, namely the difference between sales and the number of costs incurred. Thus, the company will always try to increase sales of its products. One way that companies can do is to increase consumer interest or awareness of a product by using advertising.

Advertising is an effective tool used to attract customers to generate interest in buying products from a company (Munsch, 2021; Nurysecha, 2021). In addition, through advertising, customer awareness of a product can also increase, this is shown through research by Wicaksono and Seminari (2016) that advertising and word of mouth increase brand awareness of Traveloka application users. Gupta (2008) in his dissertation entitled "Advertising and Firms' Performance: An Empirical Analysis", utilizing data from companies in India engaged in the car industry, textile, and food industries, found that spending on advertising in the car industry sector has a significant influence positively with the sales and profitability of the company. However, spending on advertising in companies in the textile and food industry has no effect on company profitability. Based on the combined data, the impact of advertising spending on sales has a positive impact while it has a negative impact on company profitability.

Anwar and Rinna (2015) in a research entitled "The Effect of Advertising Costs and Personal Sales Costs on Sales Value at PT Telekomunikasi Indonesia, Tbk", show the results that spending on advertising costs by PT Telekomunikasi Indonesia affects the number of sales made by the company and together

advertising and personal selling costs simultaneously also affect the value of sales made by the company. Anggita and Kusumawati (2021) in their research "Analysis of the Influence of Advertising Spending on Company Performance with Corporate Social Responsibility as a Moderating Variable" uses companies in the primary consumer goods sector in Indonesia. The results of this study indicate that advertising spending by companies has a positive and significant effect on sales but does not affect company profitability.

Company spending by utilizing advertising is also known to increase sales volume and company profit levels (Barde, et al. (2016)). This is also in line with research conducted by Anggita and Kusumawati (2021) which found that effective advertising promotions can increase product sales by companies. So, it can be said that product promotion by utilizing advertisements carried out by companies can increase public interest or awareness of the company's products. Thus, the hypothesis can be formulated as follows:

H1: Advertising costs affect the company's sales

Advertising spending is calculated based on the amount of money a company spends on advertising in a year. Expenditures for advertising spending are categorized as company costs which will later have an impact on the total profit or loss of the company. The amount of profit and loss is what will be used as an indicator of the company's performance which is assessed by investors so they are interested in investing in the company. When a brand or company is forced to improve its performance, the creativity of the advertisements it produces will get better which will also increase customers and the value of the brand or company itself (Luo and de Jong, 2010). Joshi and Hanssens (2010) found that advertising spending has an impact on company value, and the impact can occur directly and indirectly, namely on company sales and profits and its market capitalization. Shah, et al. (2019) in their research entitled "Advertising, Earning Prediction and Market Value: An Analysis of Persistent UK Advertisers" using company data in the UK found that company expenses related to advertising significantly affect the company's future income and its market value. The results of this study also show that advertising produces an intangible asset that has value for the company. Previous research by Mousa, et al. (2021) entitled "The Effect of Marketing Investment on Firm Value and Systematic Risk" regarding the benefits of marketing through advertising on its impact on firm value and systematic risk. This study uses data from companies listed on stock exchanges in Qatar, Dubai, Abu Dhabi, and Kuwait to show that there is a positive relationship between an increase in advertising investment issued to the company's value model.

Thus, the relationship between advertising costs, sales, and firm value is interrelated. Effective advertising promotion aims to provide information to prospective buyers about the products the company sells. Expenditures for advertising costs incurred by the company are carried out to encourage product sales and which will ultimately increase the value of the company itself. Thus, the hypothesis can be formulated as follows:

H2: Advertising costs have an effect on firm value
H3: Advertising and sales affect firm value.

Research Methods

This research was conducted using a quantitative approach. The population in this study were 39 companies registered in the food and beverage subsector. The selection of the food and beverage company sample was due to the fact that on average these companies carry out vigorous promotional activities to attract consumers' hearts besides that, during the Covid-19 period, food and beverage packaging, both biscuits and milk boxes, were the main items sought after. The selection of company samples used a purposive sampling technique by determining the criteria to be considered for objects that are in accordance with the research objectives as shown in Table 1.

Table 1
Sampling Criteria

Process	Company Sample
Companies listed and registered in the food and beverage subsector in 2021	39
Companies that have just listed above in 2018	(7)
Suspended companies and restructured companies	(2)
The company was excluded because there were no advertising costs	(11)
Final Samples	19 companies

Source: The Processed Primary Data (2022)

The research variables consist of dependent, independent, and control variables. The following is a description of each variable:

1) Independent variable

   To test the first and second hypotheses, the independent variable used is advertising costs (Adv) which are calculated based on advertising expenditures incurred by the company in that one year. For the third hypothesis, the independent variable is sales (Sales) which is calculated based on the number of annual sales made by the company.

2) The dependent variable

   The dependent variable for the first hypothesis is sales (Sales) which is calculated based on the number of annual sales made by the company. The dependent variable for testing the second and third hypotheses is a firm value (Tobin) which is calculated using Tobin's Q formula based on Ibrahim's research (2017) with the following formula:

$$\text{Tobin's Q} = \frac{(MVS+D)}{TA}$$

   Where:

   MVS = Market value of outstanding shares (the price of outstanding shares x number of outstanding shares)

   TA = Total assets of the company

   D = Company debt ((current debt - current assets) + long term debt))

3) Control variable

   The first control variable is company size (Size) which is measured based on the Natural Log of the company's total assets. The second control variable is leverage (Lev), which is the company's leverage level as measured by the ratio between the company's long-term debt and total assets.

This research was conducted using multiple regression analysis. In this study, the classical assumption tests used were tests for normality, multicollinearity, heteroscedasticity, and autocorrelation. The normality test aims to test whether, in the regression model, the confounding or residual variables have a normal distribution (Ghozali, 2018). The multicollinearity test is a test that aims to see whether there is a condition that indicates a linear relationship or correlation between independent variables in a study (Ghozali, 2018). The

heteroscedasticity test is used to find out whether in the regression equation, there is an inequality in the variance value of the residuals in each observation (Ghozali, 2018). The autocorrelation test was carried out to test whether in the linear regression model, there is a correlation between the confounding errors in period t and the confounding errors in the t-1 (previous) period. The regression equation model formed based on the research hypothesis is as follows:

Model 1 (H1):

$$\text{Sales} = \alpha + \beta 1 Adv + \beta 2 Size + \beta 3 Lev + \varepsilon$$

Model 2 (H2 and H3):

$$\text{Tobin} = \alpha + \beta 1 Adv + \beta 2 Sales + \beta 3 Size + \beta 4 Lev + \varepsilon Eqs$$

Where:

Sales   = Annual sales
Adv   = Advertising and promotion costs
Tobin   = Tobin's Q value of the company (Ibrahim, 2017)
Size   = Company size
Lev   = Company Leverage Value

The first model is used to examine the relationship between sales (Sales) and advertising costs (Adv). Testing the first hypothesis with this model will be fulfilled when the value of the coefficient β1, namely the relationship between the Sales variable and the Adv variable, shows a significant influence, where the company's sales are influenced by advertising expenses for promotions carried out by the company. The second model is used to examine the relationship between firm value (Tobin), sales (Sales), and advertising costs (Adv). The test for hypothesis 2 is fulfilled when the coefficient β1, namely the relationship between the Tobin variable and the Adv variable, shows a significant effect. These results show the effect of advertising and promotion spending by the company on firm value. Hypothesis 3 testing is fulfilled when β1 and β2 together have a significant effect. These results show the influence of advertising and sales expenditures made by the company on firm value.

Results And Discussion

This section will discuss the classical assumptions test and the two linear regression models for proving the hypothesis. The following in table 2 shows the descriptive statistics in this study:

Table 2
Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Adv	76	6,635.67	3,631,317,756.36	452,317,788.64	832,775,354.93
Sales	76	157,581,399.73	99,345,618,000	10,203,869,805.25	20,612,300,715.99
Tobin	76	0.70	12,26	2.70	1.99
Size	76	162,749,739.57	179,356,193,000	14,084,646,978	34,983,190,251.02
Lev	76	0.056	1.27	0,15	0.18

Source: The Processed Primary Data (2022)

Descriptive statistics show that the Adv variable has the lowest value of 6,635.67 belonging to PT. Wahana Interfood Nusantara Tbk in 2020, with the highest value being 3,631,317,756 belonging to PT. Mayora Indah Tbk in 2021. Meanwhile, the average Adv variable is 452,317,788 with a standard deviation of 832,775,354.93. The Sales variable has the lowest value of 157,581,399.73 belonging to PT. Wahana Interfood Nusantara Tbk in 2018, with the highest value being 3,631,317,756 belonging to PT. Mayora Indah Tbk in 2021. The average Sales variable from 2018-2021 is 10,203,869,805 and the standard deviation is 20,612,300,715.99. The Tobin variable has a minimum value of 0.70 for PT. Budi Starch & Sweetener Tbk in 2020, while the maximum value is 12.26 for PT. Multi Bintang Indonesia Tbk in 2018. The average Tobin variable from 2018-2021 is 2.70 with a standard deviation of 1.99. The Size variable has the lowest value of 162,749,739.57 for PT. Wahana Interfood Nusantara Tbk in 2018, while the highest score was PT. Indofood Sukses Makmur Tbk in 2021 with a value of 179,356,193,000. the average value of the variable Size is 14,084,646,978 with a standard deviation of 34,983,190,251.02. The Lev variable has the lowest value of 0.0056 belonging to PT. Multi Bintang Indonesia Tbk in 2019 and the highest value of 1.27 belongs to PT. FKS Food Sejahtera Tbk in 2019. The average Lev variable is 0.15 with a standard deviation of 0.18.

The data in this study were transformed for the Sales and Adv variables using the square root (SQRT) and for Size using the Natural Log (Ln) and reduction for outliers was carried out so that the amount of data was reduced from 76 to 70 data. The classical assumption test for normality shows the test results for model 1 and model 2 each with a significance value of 2 tailed 0.117 and 0.097 which is greater than 0.05, this indicates that the data in this study have been normally distributed. The test results to determine whether there is multicollinearity show that there is no tolerance value ≤ 0.10 or a VIF value ≥ 10 (Ghozali, 2018). Based on the tolerance and VIF values for these

two models, it can be concluded that there is no linear relationship between the independent variables in this study. The test results for both models show that there are no statistically significant independent variables affecting the absolute value (AbsMo1 for model 1 and AbsMo2 for model 2). This can be seen from the probability of a significance above 5% or 0.05. Thus, the two regression models do not contain heteroexadity. The test results for autocorrelation for model 1 and model 2 do not show any autocorrelation. In model 1, the dl value is 1.55 while du is 1.67 so that the Durbin Watson value is 1.729 or 1.67 < 1.729 < 2.33 therefore there is no autocorrelation in model 1. In model 2, the dl value is 1 .52 while du is 1.70 so the Durbin Watson value is 1.975 or 1.70 < 1.97 < 2.3 therefore there is also no autocorrelation in model 2. The results of normality, multicollinearity, heteroexadicity, and autocorrelation tests show that the data has met the requirements for carrying out multiple regression tests.

Testing the hypothesis in this study uses 2 regression models, the first model is used to test hypothesis 1 which examines the effect of advertising costs on sales. The second model is used to test hypotheses 2 and 3, each of which is hypothesis 2 testing for the effect of advertising costs on firm value and hypothesis 3 testing for the effect of advertising and sales costs on firm value.

Table 3
Summary of Multiple Regression Testing Results Model 1

Model 1			
Sales=α+β1Adv+β2Size+ β3Lev+ε			
Variable	Regression Coefficient	t-Statistic	Significance
Constant	-68,139.924	-9.277	0.000
Adv	1.077	2.939	0.005
Size	34,324.312	9.462	0.000
Lev	-20,154.605	-1.218	0.228
R Square	= 0.895		
Adjusted R Square	= 0.89		
F-test	= 187.572		
Significance	= 0.000		

Source: The Processed Primary Data (2022)

Table 4
Summary of Model 2 Multiple Regression Testing Results

Model 2			
Tobin= α+ β1Adv+β2Sales+ β3Size+β4Lev+ ε			
Variable	Regression Coefficient	t-Statistic	Significance
Constant	1.040	0.231	0.818
Sales	-1.259E-5	-2.557	0.013
Adv	5.153E-5	3.305	0.002
Size	0.075	0.336	0.738
Lev	-1.094	-1.635	0.107
R Square	= 0.195		
Adjusted R Square	= 0.145		
F-test	= 3.928		
Significance	= 0.006		

Source: The Processed Primary Data (2022)

Based on table 3, it shows that the adjusted R2 value for model 1 is 0.89. This value means that 89% of the Sales variable can be explained by the independent variable Adv and the control variable Size, Lev while the remaining 11% is influenced by other variables outside the regression model. The table also shows the results of the significance test of the regression model 1 showing the F value is 187.572 with a significance level of 0.000. This significance value is below 0.05 which indicates that the Sales variable is simultaneously influenced by the Adv variable and the control variables Lev and Size.

The adjusted R2 value for model 2 in Table 4 is 0.145. This value means that 14.5% of the Tobin variable can be explained by the independent variables Sales, Adv, and the control variables Size, Lev while the remaining 85.5% is influenced by other variables outside the regression model. The results of the regression model significance test for model 2 show that the F value is 3.928 with a significance level of 0.006. This significance value is below 0.05 indicating that the Tobin variable is jointly influenced by the independent variables Adv, Sales, and the control variables Lev and Size.

The results of the t-statistic test in Table 3 for model 1 show that the calculated t value for the independent variable Adv is 2.939 with a probability of 0.005 or still below the significance limit. This means that the Adv variable partially influences Sales in a positive direction. This shows that if there is an increase in advertising costs, the company's sales value will also increase. These results support the statement of the first hypothesis (H1), namely advertising costs affect company sales. This statement also supports research from Anwar and Rinna (2015) which states that there

is a relationship between expenses incurred by companies for advertising and company sales. Company spending by utilizing advertising is also known to increase sales volume and company profit levels (Barde, et al. 2016). This is also in line with the results of research conducted by Anggita and Kusumawati (2021) which found that effective advertising promotions can increase product sales by companies. This is because spending on advertising can increase consumer awareness of the products produced by the company. The control variables, namely Size and Lev, each have a significance of 0.000 and 0.228. These results indicate that the Size variable has an influence on company sales while the Lev variable has no influence on company sales. This is because leverage or debt ratios do not have a direct effect on company sales. Debt is part of the company's funding sources so that the company can carry out its operational activities.

The results of the t-statistic test in Table 4 for model 2 show that the calculated t values for the independent variables Sales and Adv are -2.557 and 3.305 respectively with a probability of 0.013 and 0.002 respectively or still below the significance limit. In Model 2, the control variables, namely Size and Lev, each have a significance of 0.738 and 0.107. These results indicate that both the Size and Lev variables have no effect on firm value (Tobin). This test shows that the Sales variable partially influences the Tobin dependent variable, but with a negative influence. This implies that an increase in sales will cause Tobin's value to decrease. the Adv variable partially influences the dependent variable Tobin with a positive influence direction. This shows that if there is an increase in advertising costs, the value of the company will also increase. Thus, the statement of the second hypothesis (H2), namely advertising costs have an effect on firm value is supported. The results of this test are also consistent with research conducted by Chemmanur and Yan (2019) which shows that an increase in advertising spending will increase stock returns in the future. In addition, according to Shah, et al. (2019), company expenses related to advertising can significantly affect the company's market value. This is because advertising gives the public an idea of the company's condition through the products it produces, which in line with this will increase the company's value in the eyes of investors.

The test results for the third hypothesis (H3), namely the effect of advertising and selling costs on firm value are supported empirically through testing in Table 4 with a significance level of the F-test 0.006, this significance value is below the 0.05 significance

level. These results are consistent with research conducted by Anggita and Kusumawati (2021), Mousa, et al. (2021), and Shah, et al. (2019), which state that the amount of expenditure spent on advertising and sales will affect the company's market value. or the value of the company as a whole. These findings indicate that the company's spending on advertising activities is a form of communication from the company as a sign that the company produces new products which together will increase the company's sales, with increased sales and marketing activities through advertising will provide an overview for investors of the overall company value. which can be seen through the stock price. The values of the control variables, namely leverage, and size, have no significant effect on Tobin or firm value. This is in accordance with research conducted by Al-Slehat (2019) which found that there is no influencing relationship between the company's leverage value on company value. This finding is because companies may prefer to use other sources in increasing the value of their company. For the control variable Size, according to research conducted by Pratiwi (2020) that there is no relationship between company value and company size. This finding is because the amount of assets owned by a company does not directly indicate that the company's management has effectively managed the company so that investors do not see the value of a company through its size.

Conclusions

This study aims to examine advertising costs on sales and advertising costs and sales on firm value. The test results show that there is an influence between advertising costs and sales. These results show support for research conducted by Anwar and Rinna (2015) that along with an increase in advertising costs, company sales will also increase. There is an influence between advertising costs and company value, the results of this study provide support for research conducted by Chemmanur and Yan (2019) and Shah, et al. (2019) that corporate expenses related to advertising can significantly affect company value. The results of the study also show the effect of advertising costs and sales on company value, these results are in accordance with research conducted by Anggita and Kusumawati (2021), Mousa, et al. (2021), and Shah, et al. (2019). The findings of this study imply that spending on advertising costs by companies can increase public awareness of a product and along with that will increase company sales. So that the

higher the advertising intensity carried out by the company, it can boost profits and increase company value in the eyes of investors or potential investors. The limitations of this study are related to the relatively short research period, namely from 2018 to 2021, so it still cannot show the long-term impact of the relationship between advertising costs, sales, and company value. In addition, the use of companies that are only engaged in the food and beverage sector also limits the results of this study so that cannot be generalized to other fields.

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