

How Advertising Intensity and Promotion Costs Effect Operating Profit in Four Type Indonesian Banking Industry

Krisnanto U*

Perbanas Institute, South Jakarta, Indonesia

Abstract

Kotler research found that there are four strategy in placing advertising i.e., uniform pulsing, maintenance pulsing, and impulse pulsing. There is relationship between sales and intensity advertising. This research is to find relationship intensity bank advertising and bank promotion cost to bank operational profit. Intensity advertising obtained from a national daily newspaper, promotion cost and operating profit obtained from bank quarterly report publicly. Research object divided to four kind of bank i.e. state enterprise bank, private bank, regional bank, and Sharia bank. Research found that advertising behavior of the four banks same with Kotler theory, but promotion costs and operating profit not followed the theory. Quantitative analysis found that regional bank advertising did not effect the operational profit. Sharia banks did not determinate behavior advertising and promotion costs as an important thing to made operating profit. Recommendation as one shot research, it must be done in longitudinal research. It is better find another kind of promotion bank that could be analyzed.

Keywords: Banking; Profit; Advertising

Introduction

Launching banking products requires strategy. The marketing strategy of banking products requires an appropriate time. Banks that want to market their products need to schedule the right time to market its products and services both directly and indirectly.

The growth of digital advertising requires further research how the development of advertising in a particular industry. To market the banking products and services required costs. Costs related to promotion known from the banking performance report. While the sales of banking products and services result of a marketing plan or difference with the actual sales that is carried out at a certain time. Sales in the food industry have a stable relationship in the long run with the role of advertising, but not in the beverage industry as well as in the opposite direction with advertising issued by competitors Elliot [1]. This research supported by Andrasetal [2] that advertising and research effect earnings. Even advertising is closely related to the declining cost of capital [3]. Pulse advertising more recommended by Dube et al. [4] to optimalize profit in certain period. Cost for advertising will be drained cash flow are considerably higher than the company that utilizes only for the sake of advertising necessary. Marketing of banking products can be done in various promotional mixes. Promotion mix will be effective if it can determine business type and targets to be achieved. For service businesses, word of mouth (personal selling) would be a very effective medium to reach consumers. Other promotional mix is also important to be used as a medium of communication from producer to consumer. Competitiontheory said the company that controls the advertising in two media ads will provide profit greater than companies that only monopolize the advertising media. Ads will be served by banks depends on the most appropriate schedule. Problem formulation divided into the following. When the appropriate time does the banking advertisements? How large is the promotional costs incurred? How large is the operating profit earned? What correlation incurred in advertising intensity and promotion cost to operational profit? The study only focused on the banking advertising during certain year in national newspaper daily and publish bank quarterly report. Based on the problem formulation and problem limitation stated above, the purpose of the study as follows. To study the behavior of the banking advertisements, to determine relevance number of banking ads and

banking operating profit, to determine correlation promotion costs and banking profit operations, to determine the behavior banking ads effect and banking promotional costs to banking operating profit, to know the behavior of four kind of bank.

Material and Methods

Advertising intensity

Advertising has a very important function for the company. According Saftiana [5] the higher the level of intensity of the ad, which can be measured with a high ratio of advertising costs to total sales will increase market share acquired. Instead the high intensity advertising of a product depends on the level of market concentration that can be measured concentration ratio. Advertising intensity is how much the strength of a company advertises its products so that ads can be seen by the public and the company will benefit.

Promotion costs

Carrying out promotional activities certainly require costs incurred by the company, therefore the cost of sale is the one used to finance sales promotion activities. Promotion cost is determined by aggregating all costs incurred by the company to carry out the promotion of goods. Some companies had different promotional tool, it relates to the company situation. Companies spend in promotion with a variety of promotional tools such as, advertising in mass media, electronic media, holding exhibitions, and others Rustami et al. [6]. Efforts to introduce the product to the consumer are the beginning of the promotional activities. Promotion is not just limited to introduce the product to consumers alone, but must be followed by influencing

*Corresponding author: Krisnanto U, Perbanas Institute, South Jakarta, Indonesia, Tel: 525 2533,522 2501-4; E-mail: umbas@perbanas.id

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it so that consumers can know the products offered by the company and then they are interested in and then buy the product or service offered. Promotion cost is the value that was sacrificed or incurred by a company for promotional purposes in connection with the marketing of products produced by the company. This promotion costs can directly affect the company profits. The higher promotional costs incurred by the company, the higher the profits to be obtained by the company. Bank's financial statements are published by Bank Indonesia or submitting their financial statements publicly.

Previous research

Saftiana [5] found that the ratio of the concentration ratio had linear positive effect on profitability, but ad intensity had not positive effect on profitability. Rustami et al. [6] found that production costs, promotional costs, and sales volumes simultaneously affect profit. Production, promotion, sales volume costs partially influence on earnings. Sales volume as a dominant influence on earnings. Andras et al. [2] found that advertising intensity effect on corporate earnings and R&D intensity effect on corporate profits. Widnyana et al. [7] found that promotion cost had positive effect on earnings and distribution costs positive effect on earnings.

Research framework

Today's competition is very tight. Companies use many ways to win competition. Every new strategy undertaken by a company is always followed by others in order to win. Companies need coordination between marketing and finance departments for internal optimization to face competition. Always balancing marketing target and equity issues [8]. From now on technology changed marketing approaches. Internet facilities driving an increase in sales of motor vehicles Peng et al. [6]. The other way is to utilize marketing using natural disasters. Disaster made businesses contribute along with advertising. Research Zhang et al. [9] states that the more competitors, the more often companies make donations to natural disasters. On the other hand non promotional advertising is a new way to introduce a product to the consumer, for example through a proof of the originality of a product Vlachvei et al. [10]. Competition within an industry is also being studied by Willis and Rogers [11], the policy of the company to determine the frequency of ad placements, invite some comments from Mahajan [12], and Muller Mesak [13], and Park and Hahn [14]. Ad placement policies tend to be stable over time, at other times there are different frequencies. Ad placements of different frequency bands adapted to the purpose of the ad placement as has been proposed by Kotler and Keller [15], for example at the time of going to launch a product required a fairly intensive advertising. Horsky [16], suggested that an ad placement hinge on the company's market share. All researchers agree that the placement of advertising depends on the sales strategy of the company. There are four types of advertising policies Kotler and Keller [15], namely Uniform Advertisement policy of the company who advertise all the time. Pulsing Maintenance Advertisement, company's policy that advertisements based on different times tailored to the needs at that time. Pulsing Advertisement, company's policy that advertise with them within a certain time where no advertising because at that time waiting for a response if the consumer without ads. Impulse Advertisement, company's policy in advertisements only at one time and then not place ads on a longer time. The influence of sales to advertisement cycle Mesak [13]. It is assumed that the level of advertising and sales is in a state of constant and linear. Has not found evidence that advertising affects sales at the same time (Simon [17]), the framework is a synthesis of the relationship between variables is

compiled from a variety of theories that have been described. Based on the theories that have been described, analyzed critically and systematically, so aimlessly synthesis of the relationships between the variables studied (Sugiyono [18]). The framework below describes the influence of the intensity of advertising and promotion costs to operating profit bank (Figure 1).

Hypothesis formulation

The hypothesis is a temporary answer to the formula research problem, therefore the formulation of research problems are usually arranged in the form of a question sentence. Tesis to be temporary, because new answers given are based on relevant theory, not based on empirical facts obtained through data collection. So the hypothesis can also be expressed as a theoretical answer to the formula research problem, not the answer empirically Sugiyono [18].

Effect intensity Ad to bank operating profit: According Saftiana [5], the higher the level of intensity of the ad, which can be measured with a high ratio of advertising costs to total sales will drive the higher market share acquired. Instead the high intensity needed advertising of a product depends on the level of market concentration product that can be measured concentration ratio. Results of research conducted by Andras et al. [2] showed that the intensity of the ad significant positive effect on corporate profits. While Saftiana [5] shows the intensity of descriptive ads had no effect on operating profit. Based on the above, can be formulated hypotheses:

H_0_1 : The intensity of the ad had no significant impact on bank operating profit.

H_a_1 : Intensity ads had significant effect on bank operating profit.

Influence promotion cost to operating profit bank: Cost of sale is determined company by aggregating all costs incurred by the company to carry out the sale of goods or products. Some companies put a promotional tool that differs from one another, it relates to the promotion of what is suitable for the company. Companies spend in promotion with a variety of promotional tools such as, advertising in mass media, electronic media, holding exhibitions, and others (Rustami et al. [6] results of research conducted by Rustami et al. Saftiana [6] showed that the cost of the promotion had partial effect on operating profit and Firdaus Saftiana [19] promotion cost had positive effect on sales volume. While Shoffiyana study Saftiana [6] showed that the cost of sale does not affect the volume of sales. Based on the above, can be formulated hypotheses:

H_0_2 : Promoton Cost had no significant impact on bank operating profit.

H_a_2 : Promotion Cost had significant effect on bank operating profit.

Research methods

In general, the research method is a scientific way to get data with

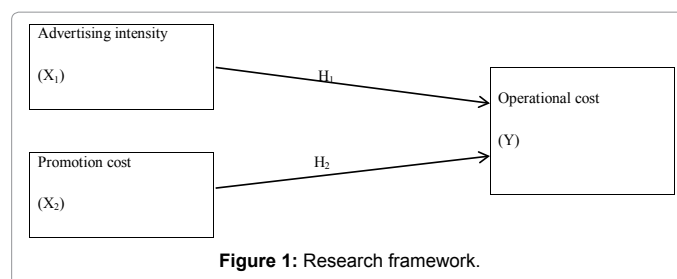


Figure 1: Research framework.

a specific purpose and usefulness (Sugiyono Saftiana [18]. This type of research used in this research is quantitative. Quantitative research is the analysis of quantitative data/statistics that aim to test the hypothesis that has been established with the population or a particular sample taken by random and data that can be used in the study of quantitative and qualitative data, quantitative data is the data that shaped figure, while the qualitative data is data that is not shaped figure (Sugiyono, Saftiana [18]. This research is a survey that takes secondary data derived from the newspaper for advertising and the bank's financial statements were published. Operational definitions of variables can be based on one or more source or reference to the reasons underlying the use of that definition. Once defined, the variables must be measured according to the rules or the size scale commonly accepted academically. To be examined and measured quantitatively, the variables in this study need to be operationally defined as follows: In this study, the dependent variable is the Operating profit on all banks in Indonesia which is obtained from the publication of financial statements of Central Bank. Operating profit in question in this research is the size of the profit earned by the company which has taken into account all the costs associated with the operations that cost of sales, cost of sales, general costs and administrative and depreciation expenses. In this study, using two independent variables, namely: Intensity ad in this research is how big and strength banks to advertise its products so that ads can be seen by the public and the company will benefit. The intensity is obtained from national newspaper ads. Promotion costs in this study are all costs incurred by the bank for promotional activities, including advertising, sales promotion costs, direct sales costs, and the cost of publication. This promotion expenses derived from the Bank Financial Statements. Population is the generalization region consisting of: the object or subject that has certain qualities and characteristics yan set by researchers to learn and then drawn conclusions (Sugiyono, Saftiana [18]. The population in this study is all Banks. The sample is part of the number and characteristics possessed by this population (Sugiyono [18]. Sampling technique used in this study using purposive sampling, the sampling technique with consideration or criteria Sugiyono [18]. The sampling method by using purposive sampling method of making the goal that researchers get a sample corresponding to the desired researchers, making it easy to do research. Sampling based on banks ad at the national newspaper. Based on the above explanation of samples in this study are as follows: State enterprise Bank (All Population: 4 banks), Private Banks (13 from 65 banks), Regional Banks (15 from 26 banks), and Sharia Bank (7 from 11 banks). The data used in this research is secondary data. Secondary data is data that has been collected by the data collecting agency and published to the user community of data Kuncoro [20]. Secondary data for advertising intensity acquired from national newspaper ad in a year and the financial statements of the promotion costs and bank operating profit from bank's financial statements of each bank's website. There are some banks that did not follow the provisions of Central Bank which requires financial reports are published quarterly, making it difficult to sort out its quarterly report. For banks that do not advertise financial statements in accordance with the provisions, it had not taken the data. Advertising is done on an assumed quarter will increase consumption of banking products in the same quarter that may affect bank profits in the same quarter. Ads drawn from national newspapers, ads that are the object of the research is the ad placed by the bank concerned including advertising by bank coworkers (partner or sponsor). The data collection study was conducted from January 2 to December 31, except public holidays. There digit difference between profit, promotion, and advertising intensity, in order to be comparable is necessary to use ratio. The ratio is obtained from the average of each

variable. To prove the influence and relationships used regression and correlation calculation. Meanwhile, to prove whether the intensity of advertising and promotion costs really beneficial profitable use ratio of each variable.

Data analysis method

This data is analyzed to see the behavior of advertising done by various banks daily and weekly. Behavioral promotion costs and profitability of each bank is also done. Then compared with the theory that has been put forward. These data were analyzed using statistical analysis using multiple linear regression analysis.

Testing Assumptions Regression Model

Normality test is done to see if the independent variables and the dependent variable has a normal distribution. To test it can be used a graphical method Normal P-P Plot of standardized residual cumulative probability, with identification when spreading are at about the normal, then the assumption of normality can be met. Additionally Test Kolmogorov-Smirnof also be used to see the normality of the identification if the p-value is greater than alpha, then the assumption of normality can be accepted. This test is performed to determine whether there is a correlation between confounding one another (non autocorrelation). To test there is no usable test autocorrelation Durbin Watson. To test whether there is a similarity variance of residuals from one observation to another observation. To test this used Scatterplot, where the X axis are the values of the prediction $ZPRED = \text{Predicted Value Regression Standardized}$ with the Y-axis is the value that is $ZRESID = \text{Regression Standardized Predicted Value}$. When the graphs obtained showed a pattern generated by points are then said to have occurred Heteroscedasticity, but if they do not form a particular pattern then it is said does not happen heteroscedasticity. Multicollinearity that there is a linear relationship between changes definitely free. To determine whether there is a problem multicollinearity can use VIF (Variance Inflation Factory). If the value of VIF is still less than the 10 it was concluded not happen multicollinearity. The fulfillment of all the assumptions in the above linear regression, the model produced is considered good to use the influence of the independent variables on the dependent variable independent which further models can be used as a forecast tool. The next step is testing the reliability of the overall model (simultaneous test) and testing of the reliability of the variable portion (partial test). Analysis of the data used to determine the influence of each independent variable (advertising intensity and promotion costs) to bank operating profit is a multiple linear regression analysis aimed to determine the relationship between independent variables and the dependent variable whether each variable independently associated positive or negative and make predictions estimate the value of the dependent variable on the independent variable. This study used quantitative method with multiple regression analysis. In a multiple regression analysis to test the hypotheses that have been proposed, and to process and discuss the data obtained. Multiple regression analysis used by researchers intend to predict how the situation (up and down) the dependent variable, when two or more independent variables as predictors factors manipulated. Sample regression function permanence in assessing the actual value can be measured from the Goodness of Fit. Statistically, at least, this can be measured from the partial test, the value of coefficient of determination and the statistical F value. According Kuncoro [20] test statistic t basically shows how far the influence of the independent variable (the intensity of advertising and promotion costs) individually in explaining the variation of the dependent variable (operating profit). If a significant level of less than 0.05, then H_0 is rejected and H_a accepted. Means the independent

variables can explain the dependent variable. Conversely, if a significant level of more than 0.05 then Ho is accepted and Ha rejected. Means that the independent variable can not explain the dependent variable individually. The test measures can be explained as follows: 1. Determine the hypothesis, 2. Determining the level of significance (alpha) is used, $\alpha=5\%$, 3. Make a decision, 4. Make conclusions.

The statistical F test basically indicates whether all the independent variables included in the model have jointly influence the dependent variable (Kuncoro [20]). The null hypothesis (Ho) is tested all parameters in the model is equal to zero, or Ho: $b_1=b_2=B_k=0$. This means that if all the independent variables is not a significant explanatory on the dependent variable. The alternative hypothesis (Ha), not all parameters simultaneously equal to zero, or Ha: $b_1 \neq b_2 \neq b_k \neq 0$. This means that all independent variables simultaneously is a significant explanatory on the dependent variable. And to test this hypothesis with the F statistic used criteria decision making is when the F value is greater then Ho can be rejected at 5% confidence level. In other words we accept Ha (alternative hypothesis), that all independent variables simultaneously and significantly affect the dependent variable. Step-by-step test as follows: 1. Determining Hypothesis, 2. Determining the level of significance (α) is used, $\alpha=5\%$, 3. Make a decision, 4. Make conclusions.

In the coefficient of determination (R^2) was used to measure how far the ability of the model to explain variations in the dependent variable (Kuncoro [20]). The value of coefficient of determination (R^2) reflects between zero and one. Small coefficient value determination means the ability of the independent variables in explaining the variation of the dependent variable are very limited. Likewise approximate value of the means of independent variables provide almost all the information needed to predict the variation of the dependent variable.

Results

Descriptive analysis

Based on the results of advertising intensity research quarterly on regional banks showed two peaks, first, in the second quarter and the last peak in the fourth quarter. Based on the results of the study advertising intensity every day for a week, there are two peaks, on Monday and the highest on Saturday, while the lowest on Tuesdays and Thursdays. In both areas reflects the bank's behavior as proposed by Kotler and Keller's theory Pulsing maintenance [15].

Based on the research results quarterly behavioral advertising on state-owned banks showed two peaks, the first and the highest, in the second quarter and the last in the fourth quarter. Based on the results

of the study behavioral advertising every day for a week at a state bank there is a peak t on Friday, while the lowest on Tuesday. In both behaviors reflect a state bank as proposed by Kotler and Keller's theory Pulsing maintenance [15].

Based on the results of behavioral advertising research quarterly on Islamic banks and private banks showed two peaks, the first, the second quarter and last, in the fourth quarter. Based on the results of the study behavioral advertising every day for a week on private and sharia banks there is a peak that on Friday, while the lowest on Tuesday. The two bank behaviors reflects Kotler and Keller Pulsing maintenance theory [15].

Quantitative analysis

Statistical analysis summarized in Table 1:

Discussion

Based on the research results on behavioral advertising quarterly and behavioral advertising daily in a week by regional, state enterprises, sharia, and private bank shows similarity theory as proposed by Kotler and Keller [15] i.e. Pulsing maintenance [16].

Based on the statistical analysis, the four banks had similarities concerning the promotional costs and profits. Research related to advertising and profits similar to. Regional banks advertising intensity had not positive influence on earnings as research conducted by Yulia [17-20].

Conclusion

1. The advertisement behavior of the four types of banks had not followed the theory. But the behavior of the promotion costs and operating profit did not follow behavioral advertising.
2. Correlation of regional bank advertising to operating income it very low, but the other three types of banks is high.
3. Correlation of regional bank promotion cost to operating income it very low, but the other three types of banks is high.
4. Correlation of sharia bank promotion cost to operational profit lower than the other three type of bank.
5. Advertising intensity and promotion cost to operational profit had the same effect to the four type of bank but in the difference in number.

Analysis	Regional Bank	Private Bank	Sharia Bank	State enterprise Bank
Normality test	Normal distribution			
Autocorrelation test	No autocorrelation			
Homo scedastisity test	No heteroscedastisity			
Multi collinearity	No multicollinearity			
Multiple regression analysis	$Y = 0,008 + 0,030X_1 + 0,460X_2$	$Y = -0,012 + 0,674X_1 + 0,941X_2$	$Y = 0,011 + 0,302X_1 + 0,386X_2$	$Y = -0,017 + 0,432X_1 + 0,884X_2$
T test	<ul style="list-style-type: none"> No significant effect on advertising intensity to operational profit (H_0 accepted and H_a not accepted) No significant effect on promotion cost to operational profit (H_0 accepted and H_a not accepted) 		Significant effect on advertising intensity to operational profit and promotion cost to operational profit (H_0 not accepted and H_a accepted)	
F test	Honot accepted and Ha accepted			
Determination analysis	0.594	0.855	0.303	0.530

Table 1: Statistical analysis. Source: statistical data.

Research Limitations

1. The study was only for one year.
2. Advertising intensity comes from one national newspaper

Manajerial Implication

1. Yearly research study to know long-term behavior.
2. Data sources from all kind of promotion.
3. Need another research why regional and sharia bank have different behavior than the two other bank.

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