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Joint Effect of Brand Value and Advertising on Operating Cash Flows in the Automotive and Components Manufacturing Companies

Samane Ghasemi^{*1}, Mohammad Hamed Khanmohammadi², Hamid Reza Mostafaei³

1. Graduated from M.A, Department of Accounting, Islamic Azad University Branch of Damavand Research Science, Damavand, Iran.

2. Assistant Professor of Accounting, Islamic Azad University, Damavand Branch, Damavand, Iran.

3. Associate of Statistics Department, Islamic Azad University North Tehran Branch Faculty of Basic Sciences, Tehran, Iran.

ABSTRACT

According to the fact that most advertising and marketing costs are not measurable through financial performance, for this reason, understanding dedicated brand value and the consequences of advertisement are so important to focus on investing in branding and marketing. This quantitative research sought to understand the common effect of brand value and cost of advertising on financial performance (Operating cash flows) companies in the automotive and components construction. The theoretical framework of the resource considers resource-based view and expresses intangible assets of a company has a positive relationship with keeping the company competitive advantage. The key research question includes the joint effect of brand value and cost of advertising on operating cash flows. Information about the research project is including the cost of advertising and brand value of 5 companies listed in Tehran Stock Exchange from 2006 to 2015, as well as information related to operating cash flows has been extracted from the financial statements. The results of this study indicated that the dependent variable (Operating cash flows) and the joint effect of brand and advertising are related.

Keywords: Brand Value, Operating Cash Flows, Resource-Based View.

INTRODUCTION

One of the most important corporate assets is intangible assets. Although difficulty to measure the impact of intangible assets is appeared usually after investment and usually their value is not displayed in the balance sheets and financial statements of the company (Aaker, 2009; K. Keller, 2013; K. L. Keller, 2016; Myers, 2003; Wood, 2000). Over the past decade, more and more companies were aware of the importance of strengthening the intangible asset. In the past, the structure and strength of the company focus on the company's tangible assets such as land, buildings or capital funds and investments (Dani & Sterner, 2017). Today, the prevailing thinking and more success are not due to old playing to achieve success (how many customers see ideas?)

* . Corresponding Author: ghasemi.samane@gmail.com

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and that (when they meet these ideas?), but mostly, companies have found ways to get customers to try to persuade the corporate brand throughout their lives(Dixon, Freeman, & Toman, 2010; Hatch & Schultz, 2001).

In this study, the concept of brand management is considered synonymous with brand value. Thus to understand importance of intangible assets, companies are more and more investing on advertising, marketing and development activities in other words, creating special brand value is not only because of the value of products, but the total value of the company(Herremans, Ryans Jr, & Aggarwal, 2000; Leone et al., 2006). In this study, researchers examined the relationship between advertising and intangible assets of the company, especially a brand value and used represented formulation to do research by Seethamraju to measure brand value .

This study measures the actual value of assigned brand and considers the financial results of advertising and brand value. Business managers can participate in the financial and operational performance of the company. Marketing costs are recognized as a significant part of the costs. However, there are not substantial evidences to prove the efficiency and effectiveness of these costs as well as the company's financial results. This study is based on the Joint effects of advertising and brand value on the company's financial performance and operating cash flows and evaluated jointly whether advertising and brand value effect on the company's financial performance?

THE RESEARCH LITERATURE

Company's value is the value created by measuring the value and organization price in the future, not what it was worth in the past and Schultz (2002) argues that estimating future cash flows and earnings is the best way to determine the value of the company. Approach based on performance analysis value helps to determine the future value. Approach based on corporate structure value is usually with a linear analysis that is called organization EVA and In fact, that is the point will be determined as future value of the company by customers and consumers by revenue trend and brand market share and return company.

Intangible assets, as one of the largest groups, lead the company sale through marketing, branding and sales strategies and lead to induction that how the company will be worth in the future. For example, in this regard, Schultz raises the following fundamental questions:

How an organization can be has a valuable brand?

How an organization determines customer value?

How could a company estimate revenue trend through customer or consumer?

Therefore, marketing, branding and sales strategies for organizations bring large profits through the adoption of a value-based approach focuses on the relationship between brand value and efficiency, so determining the relation between brand value and brand output is important in the organization future.

Barth, Clement, Foster, and Kasznik (1998) studied the relationship between brand value by Financial World magazine and the price and also stock returns of owner companies of this brand, the results indicate that there is a significant relationship between brand estimated in the financial world and shareholders. Seethamraju (2003) provided a model for the evaluation of internal and external brand (acquired) and this test showed that whether estimating derived from brand value has a role in market value or not? The results of this study indicate that the estimated value of the brands have a strong and consistent relationship with stock market value, so value of the brand is useful to investors.

Kallapur and Kwan (2000) evaluated the relevance and reliability of brand value in 33 companies engaged in the London Stock Exchange. The researchers found a positive relationship

between stock prices and the company's brand value. Chin, Tsao, and Chi (2005) studied on the brand value of companies engaged in the company's life cycle, they used Seethamraju (2003) model to estimate brand value for the company. Researchers in this study found that brand value of the company is steadily declining from growth until the recession .

Lin, Belo, and Vitorino (2012) examined the relationship between brand value (as an intangible asset) and its relation to firm value through assessing risk values of French companies, research indicates that companies that have invested more in their brand than other companies have better performance and the standard value of shareholders' equity is higher than other companies.

METHODOLOGY

The research method is inductive method using cross-correlation method to describe the relationship between the brand and the cost of advertising and deals with accounting performance measures; also, according to the outline data gathered from historical data, the study of the events is considered. In this study, to investigate the relationship between brand value and cost of advertising, two groups of performance indicators have been used to model. First model was used to determine the value of the brand and model of the second group in the study of the relationship between brand value and cost of advertising with performance indicators. In this regard, to value the brand, a financial model based on revenue, was used, this model was designed by Seethamraju (2003) in 2000 in three stages .

Brand Valuation models

The main structure of Seethamraju (2003) model is based on the economic function of Cobb-Douglas, who is attempting to modify the discretion brand valuation. Economic production function used is a function that describes the relationship between inputs and outputs of production, based only on the standard Cobb-Douglas function with two inputs, labor and capital to produce. However, to determine the relevance of other product inputs and production volume, logarithmic form of Cobb-Douglas is used, Seethamraju⁴ has used the same model.

Step (1)

Seethamraju adjusted Cobb-Douglas function in two ways: brands that affect the amount of sales and advertising costs, both of which are defined as a control variable in the model.

The first step studies brand in order to connect brands with sales and brand numbers. 3α in the model shows percentage of sales changes associated with changes in the number of brands.

$$\text{Log}(\text{SALE}_t) = \alpha_0 + \alpha_1 \text{Log}(Ct) + \alpha_2 \text{Log}(Lt) + \alpha_3 \text{Log}(TMt) + \alpha_4 \text{Log}(ADVt) + \epsilon$$

Sale_t: total sales in year t

C_t: total fixed assets in year t

L_t: total labor cost in year t

TM_t: the number of brands in year t

ADV_t: advertisement expenses in year t

E_t: model error

Step (2)

An amount of sale related to the brand in selection period is calculated by 3α . Multiplying this number by changing the number of brands is calculated as cash flows from the new brand.

$$\text{IncSALE}_t = (\alpha * \text{SALE}_t) * \text{PCHTM}_t$$

IncSALE_t: representing the amount of sales related to brand,

SALE_t: the amount of sales,

PCHTM_t: changes in the number of brands,

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Step (3)

Seethamraju believes that cash flows derived from firm brands stable in nature. It can be used in the case of the Gordon model and brand value can be calculated.

Weighted average cost of capital of firms in a given period is calculated by the discount rate.

$$TMV_t = IncSALE_t * (Tmlevel_t / \Delta TM_t) / WACC_t$$

TMV_t: brands market value,

IncSALE_t: the amount of sales related to brand,

TmLevel_t: the number of brands at the end of period,

ΔTM_t: the number of brands developed in desired period,

WACC_t: weighted average of cost of capital

To answer the research hypotheses, linear regression models are used to evaluate the financial performance of the reaction carried out with a brand value and cost of advertising. The following model was used to test the research hypotheses and the only variable that has changed with respect to each hypothesis.

$$OCF_{it} = \alpha + \beta_1 BV_{it} + \beta_2 AER_i(t-j) + \beta_3 (BV_{it} * AER_i(t-j)) + \epsilon_t$$

Where:

OCF_{it} = Operating cash flows

BV_{f(t-i)} = brand value in year t - i;

i = 0, 1, 2, 3.....to 7

AER_{f(t-j)} is advertising expenditure at time t-j

Where

j = 1, 2, 3.....to 7.

Because the length of time effects on performance and company's brand, brand is calculated by advertising in previous years. To test the hypothesis, the study population should be chosen so that information can be collected with more confidence. The populations of the research are manufacture of automotive components, accepted in Tehran Stock Exchange. The research sample is taken equal to the statistical community. Thus, the statistical populations of all member companies who have the following conditions have been included in the sample:

From 2006 to 2015 activities in Tehran stock exchange and having financial activities in the period 2006 to 2015 Tehran stock exchange, hence the research population consist of automotive and components manufacturing firms production industry listed in Tehran Stock Exchange between 2006 to 2015, In this study, therefore, according to Seethamraju (2003) model, the company must record at least one new brand. The number of companies in the automotive and parts manufacturing company that meets these requirements were 5 that their financial data was analyzed for 10 years. Statistics are important in this study referring to the number of observations. In other words, the value of each brand in the advertisement is measured in previous years, during the period of 10 years happening, there had been 55 observations and because 5 companies are studied, in result, 275 View will be examined.

The data needed to compile the research literature from a library of methods to collect information about the variables, The basic financial statements of listed companies in Tehran Stock Exchange, the field method, and the annual reports published by the Tehran Stock Exchange, which will be available to interested Tehran Stock Exchange has used the Internet .

In this analysis, regression analysis is a method. Measuring instruments, financial statements, financial ratios, that information is obtained, because these data are typical of secondary data, the benefit of reliability and validity. Regression analysis variables are divided into two groups of different nature: First group of independent variables, the nature of these

variables can be quantitative, qualitative or a combination of qualitative and quantitative requirements.

Group II: the dependent variable, these variables can be quantitative or qualitative. The independent variables in this study, the cost of advertising and the brand value is slightly different but the quality and the dependent variable (Operating cash flows) are too small.

After determining variables in the first model, the data, the brand value through software Visual PLS and regression testing with respect to the estimation of partial squares (PLS) were calculated using Excel software, and also after the second model, a statistical method for testing hypotheses, regression and EViews software is used in the industry. The independent variables in this study, the cost of advertising and the brand value is slightly different but the quality and the dependent variable (Operating cash flows) are too small.

After determining variables in the first model, the data, the brand value through software Visual PLS and regression testing with respect to the estimation of partial squares (PLS) were calculated using Excel software process model as well as the second, to test assumptions of regression and EViews software is used across the industry.

RESULT

Table 1. Statistics

Variable	Prob.	t-Statistic	Std. Error	Coefficient
C(1)	0.0023	3.08	4.11	1.27
C(2)	0.0351	0.88	0.00041	0.000367
C(3)	0.0000	-4.593195	5.327149	-24.46863
C(4)	0.0336	-0.910026	1.70	-1.55

The Cobb-Douglas production function of the coefficient of variation of sales, due to the number of brand has been calculated for each company, and then identifying the desired ratio using Seethamraju model brand value was estimated for each companies.

Table 1 represents the data fit the regression model, research hypotheses are :

$$ROA = C(1) + C(2) * BRAND_t + C(3) * AER(t-j) + C(4) * (BV * AER(t-j))$$

Table 2. Results of hypothesis testing research

Included observations	275
Adjusted R-squared	0.73
F_Statistic	156.06
Prob (F_Statistic)	0.00
ean dependent var	8.86
S.D. dependent var	1.01
Dorbin_ Watson stat	1.70

Dorbin_ Watson statistic indicates that the residuals autocorrelation there, so no need to run tests to eliminate autocorrelation, and the interpretation of results in the table indicate that Total observations of the automobile industry, and the construction of 275 pieces, Prob. shown in the table indicates that the rejection of the assumption H_0 and the assumption H_1 is accepted that indicate significant regressions are used. Results indicate that Brand value on operating cash flows have positive effect, advertising and joint effects of advertising and brand value, also has a Negative effect on operating cash flows , As a result, the second and third sub-hypothesis is rejected and the original hypothesis is partially confirmed. Adjusted coefficient of determination,

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which is equivalent to 73 percent of the 73 percent significance level zero, indicates the validity of the model.

CONCLUSION

In this study, the growth of corporate knowledge, and resources to strengthen intangible assets and the assets of the company, has been noted. Brand value, the company is regarded as one of the most important intangible assets (Barth et al., 1998) In other words, necessarily lead to the strengthening and creation of marketing or advertising expense for the return of assets or investments company, but this does not mean that the company's growth as yields on short-term, is not supported(Egan, 2007).

This study examined the joint effects of advertising and brand value on operating cash flows to be targeted. By the same token, the name and business valuation using financial models based on revenues has been driven, the main building on the discounted cash flows resulting from these models is a brand.

Rate the brand is trying to brand and advertising costs associated with accounting performance indicators (operating cash flows) are measured, linear regression models were used for this purpose. Hypothesis is based on findings of a significant relationship between the joint effect of brand value and cost of advertising with approved asset returns relative was away. Hence, according to research findings and the relationship between brand value and cost of advertising a company's performance criteria, is proposed to quantify brand value as the value of the ads will be shown in the financial statements.

But Standard No. 17 (Accounting for intangible assets) cannot take value (domestic) in the financial statements be identified and placed it in the group of intangible assets unless the brand of the company separately education may have.

Hence, the key recommendations of the Accounting Standards Board is to provide a scientific mechanism for the reporting of intangible assets in the financial statements of the companies pay, This will reduce the book value and the market value of firms at the beginning and then it will improve financial reporting, The Stock Exchange member firms and financial statements more transparent and closer to reality, thereby ensuring more financial information to investors and the capital markets will increase performance.

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