

Financing of adverts and its impact on the brand value

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Abstract

The brand represents an important role not only for managers of companies of different sizes in strategic decisions, but also for consumers in their daily lives. It expresses the certain relationship between the product and the customer, and its value has both the ability and the power to influence the purchasing decision-making process of customers. Building brand value is a very important and fundamental step for every company. If a company wants to have a strong market position and also own a strong brand, it must make every effort and cost to implement the planned strategies.

The aim of this article is to define the theoretical basis of the brand as well as brand value and its relation with financing of adverts from the viewpoint of Slovak and foreign authors. This includes a regression and correlation analyses focused on investigate the dependence between the advertising costs and brand value in technology industry. The basic sources of research were secondary data obtained from worldwide surveys in the form of rankings published by Interbrand, Forbes magazine, annual reports of companies and published professional publications. General scientific methods were applied for the processing of the data, as well as mathematical-statistical methods to evaluate the data collated from the results of regression and correlation analyses and test the linear independence. The results of an analyses show that the advertising costs and brand value are linearly dependent, specifically it is medium-strong direct linear dependence. Therefore, the financing of adverts has a direct effect on brand value in technology industry.

Keywords: brand value, financing of adverts, advertising costs, technology brands, technology industry.

Introduction

A brand that is associated with a product or service plays a critical role in developing customer relationships and business success. Through the right concept and efficient brand management, the company has the prospect of building a high-quality reputation that will help to increase the trust of its employees and, above all, its customers. Consumers can choose from a wide variety of product alternatives on the market, making them more difficult to make choices. The brand, therefore, plays an important role in the decision-making process.

Nowadays, brands have become a phenomenon whose importance goes far beyond the manufacturer's desire to differentiate itself from competing products or services. In recent years, brands have been a symbol of the quality and values they represent in their design. Also, the current global competitive market is pushing the company to a quick choice among the products offered (Siekelova and Podhorska, 2016; Salaga et al. 2015). Thus, the strong brand represents one of the most valuable assets of the company and also a very effective tool in a competitive battle.

The brand value for the consumer lies in the trust in the unmatched quality of the product at a stable price, advantageous purchase, product satisfaction, brand communications with consumers, traditions, customer's associations with a particular brand, the prestige given by using the product and so on (Lizbetinova 2017; Gajanova and Podhorska 2019). Associations that a consumer deals with in connection with the brand are such an abstract aspect that contributes to the brand value creation and can be both positive and negative.

The aim of this article is to define the theoretical basis of the brand as well as brand value and its relation with financing of adverts from the viewpoint of Slovak and foreign authors. This includes a regression and correlation analyses focused on investigate the dependence between the advertising costs and brand value in technology industry. The basic sources of research were secondary data obtained from worldwide surveys in the form of rankings published by Interbrand, Forbes magazine, annual reports of companies and published professional publications. General scientific methods were applied for the processing of the data, as well as mathematical-statistical methods to evaluate the data collated from the results of regression and correlation analyses and test the linear independence. The results of an analyses show that the advertising costs and brand value are linearly dependent, specifically it is medium-strong direct linear dependence. Therefore, the financing of adverts has a direct effect on brand value in technology industry.

The issue of the brand value has been researched and analysed by many foreign and domestic authors, and remains actual.

The brand value gives the product sufficient credibility. Borden (1942) called it "hidden value", which is not available or is not possible for consumers to check at the point of purchase. In other words, it is a kind of power that a brand has over its competitors or generic brands and that has evolved over time. Brand value refers to the added value that a particular brand can influence a customer's decision making and motivation to buy

(Management Mania 2016). According to Aaker (2003), the brand value is a set of assets or liabilities linked to a brand's name and symbol that adds to or subtracts from the value provided by a product or service. However, in addition to these standard items, the value of the brand and the company is also made up of extensive intellectual property, goodwill and last but not least, the price of brands that they have in their portfolio. On the other hand, Keller (1993) perceived the brand consistently from a consumer perspective. While the previous definition dealt with brand value as a corporate value, it focuses both on consumer response to target brand marketing through positive associations and on a different image compared to similar products. Keller also argued that brand value consists of only two dimensions: brand awareness and brand image. Leek and Christodoulides (2012) define brand value as the value of goods and services, as well as added value (functional and emotional) from the brand. The brand value is often monetizable because companies invest substantial funding in the creation and management of a brand (Rodrigues and Martines 2016; Trinh et al. 2016). As a result, this effort leads to increased sales of branded production. Mostly, this element is referred to as the added value of products or services, which is based on how consumers perceive a brand in its price, market share, or the profit rate that the brand produces (Wang and Tzeng 2012).

We generally determine brand value in terms of marketing efficiency, but it is unique for each brand. Thus, according to several characteristics, it is possible to say that each market operator has, in his own subjective opinion rather than on the basis of facts and characteristics, a certain definition of brand value.

Over the years, many authors have dealt with the issue how financing of marketing communication including advertising affects brand value.

Villarejo-Ramos and Sanchez-Franco (2005) in their research indicate the positive effect of marketing communication on brand equity, and offer strong support for the measures of perceived quality, brand loyalty, brand awareness and brand image as antecedents of brand equity. Yang and Bai (2017) deals with the issue how promotion affects the brand value and highlighted the fact that brand value evaluation helps companies understand their own brands, so that they can take reasonable and effective measures of brand management to enhance their competitiveness, to create greater benefits. Peterson and Jeong (2010) empirically investigated and proposed the framework linking advertising expenditures and research and development expenditures to brand value, and brand value in turn to firm-level financial performance. Eng and Keh (2007) found out that spending on advertising results in better brand sales and brand profitability. Brand value is also a good predictor of brand performance. Thus, they concluded that advertising and brand value benefit the brand and the firm through improved accounting performance. Majerova and Krizanova (2014) deals with the impact of advertising on the brand value in Slovak Republic. Liu et al. (2018) compared the differential effects of event-marketing and advertising expenditures on brand value and company revenue. The authors found that both event-marketing and advertising expenditures had positive impacts on company revenue and brand value. As a brand aged, advertising expenditure continued

to yield positive returns on brand value and company revenue, whereas event marketing had diminishing marginal returns on brand value and company revenue.

As follows from the above, combination of a brand's strategic emotional image, appropriate financing of adverts and thus effective marketing campaign is likely to lead to a stronger perception of the brand from a consumer perspective, and thus to an increase in brand value. Within a business entity, we can identify brand value as a relevant part of the value of the entire business. It can be stated that a truly valuable brand is able to generate certain planned benefits as one of the essential activities in building and managing brand value as a specific tool of the international corporate strategy. With the positive outcome of a successful brand value, a company can make more profits, improve brand awareness, as well as the overall reputation of the business. Increasing the value of a brand can create a strong relationship between sellers and customers, which has the effect of strengthening the competitive advantage over other companies.

Methods and Data

As part of the science project APVV - Slovak abbreviation of Slovak Research and Development Agency, our study "Integrated model of management support for building and managing the brand value in the specific conditions of the Slovak Republic" we investigated the factors affecting brand value. We focused on the world's most valuable brands, based on Best Global Brands 2019 Rankings published by Interbrand and The World's Most Valuable Brands 2019 Rankings published by Forbes magazine.

As mentioned, many different factors impact the brand value, such as total costs, market value, incomes, customer attitudes as well as financing of adverts, and so on. Advertising includes the means by which companies remind consumers, inform them or try to convince them of the brands they offer. It is a paid form of impersonal mass communication, presentation of products and ideas through various kinds of media (Nica and Taylor 2017). We can say, it represents the brand's voice. Its advantage is that it can reach a large number of people dispersed over a large area in a relatively short time. The main drawback is that advertising takes the form of a monologue, that is, only one-way communication to a high cost consumer. Institutional advertising, which focuses on improving the brand image, raising its awareness, promoting consumer loyalty, etc. has a greater impact on building the brand value. On the other hand, product advertising emphasizes the characteristics and qualities of the products that are its object.

Our survey focused on investigation the dependence between a company's advertising costs and the brand value in the rapidly developing technology field. Companies are constantly coming into the market with new innovative products, to which competitors immediately react by offering substitute products with comparable characteristics. Therefore, it is necessary for a company to strengthen its brand value, which should result in a competitive advantage. Every year, many brands spend huge amounts of money just on financing of adverts. However, advertising is useless if it does not bring the desired effect (i.e., it does not meet the target that was set at the start of the advertising process).

The cause of failure may be an incorrect advertising strategy or ineffective communication (Hitka et al. 2017). The impact of financing of adverts and advertising costs incurred in brand value is very difficult to quantify because brand value is affected by many other factors in addition to advertising.

Our sample included 20 of the most valuable global technology brands based on the previously mentioned worldwide surveys published in Forbes magazine. We assessed the impact of the advertising costs on the brand value set for the year 2019. In our study, the consistency of input data played a key role in the methodical approach for quantifying brand value.

From the group of 20 ranked brands, we eliminated brands without information on the amount of advertising costs in 2019. This sample was thus reduced to 16 brands. Table 1 shows the world's most valuable brands in the technology industry with information about their rank, brand value, brand value change, brand revenue, and company advertising costs (Forbes 2019; Interbrand 2019).

Tab. 1: The world's most valuable technology brands 2019

Rank	Brand	Brand Value (\$M)	Brand value change (%)	Brand revenue (\$M)	Company advertising (\$M)
1	Apple	205,500	12	265,800	-
2	Google	167,700	27	136,200	6,400
3	Microsoft	125,300	20	110,200	1,600
4	Amazon	97,000	37	211,400	8,200
5	Facebook	88,900	-6	48,800	1,100
7	Samsung	53,100	11	221,600	3,600
13	Intel	38,800	14	70,800	1,200
15	Cisco	34,500	7	49,300	166
18	Oracle	32,200	4	40	138
20	IBM	31,500	-2	79,600	1,500
22	SAP	28,700	10	29,100	-
38	Netflix	15,500	34	15,800	1,800
52	HP	12,500	1	52,100	-
60	SONY	11,300	10	66,900	3,700
66	Adobe	10,500	27	9,000	174
67	Ebay	10,500	2	9,700	1,400
77	PayPal	9,100	22	15,500	484
90	Dell	8,200	10	79,200	1,100
95	Hewlett-Packard Enterprise	8,100	-	30,900	568
97	Huawei	8,000	-4	108,900	-

Source: Forbes 2019; Interbrand 2019

Statistical hypothesis testing is one of the most important statistical inference procedures. The role of statistical inference is to decide on the basis of information from the available choice whether we accept or reject certain hypotheses regarding the basic set. In verifying the correctness or incorrectness, we proceeded in accordance with the methodology of statistical hypothesis testing, which consists of the following steps (Rimarcik 2007):

1. Formulation of the null hypothesis (H_0).
2. Formulation of the alternative hypothesis (H_1).
3. Determining the level of significance (α).
4. Calculation of test statistics and probability.
5. Decision.

Hypothesis 1

Hypothesis H_0 : Between the advertising costs and the brand value in technology industry there is no statistically significant relationship.

Hypothesis H_1 : Between the advertising costs and the brand value in technology industry there is statistically significant relationship.

Significance level α was determined at 0.05. To calculate the test statistic, we used Microsoft Excel software.

We evaluated the relationship between brand value and the amount of advertising costs using the Pearson correlation coefficient (PCC), which is a measure of the linear dependence (correlation) between two variables, x and y :

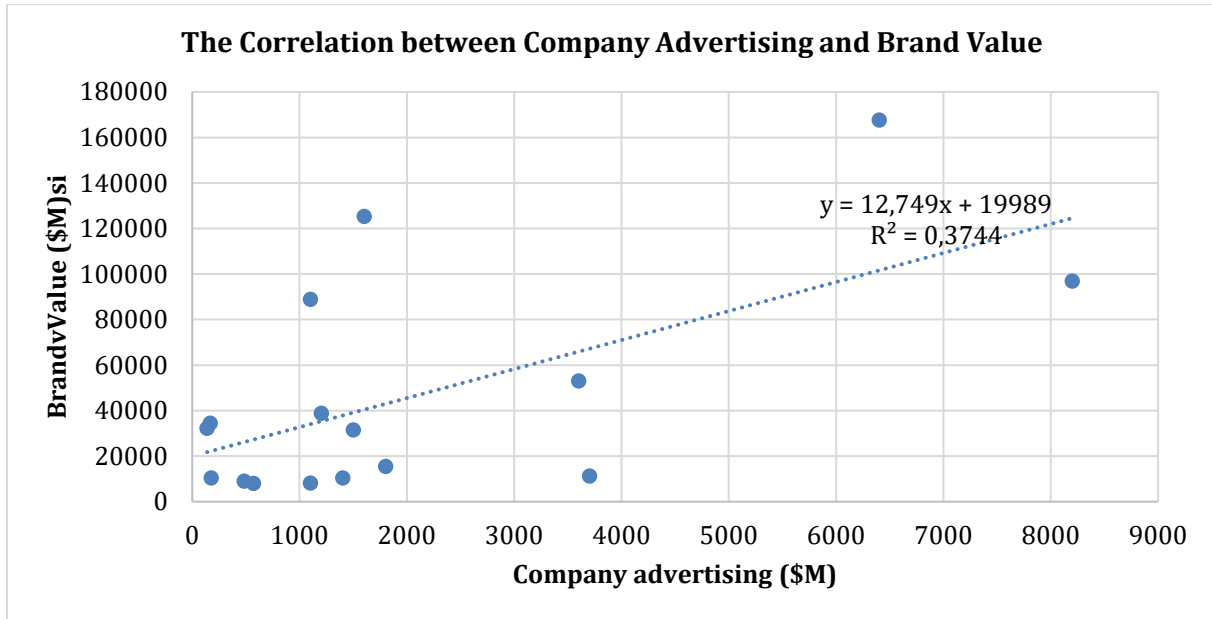
$$R = \frac{cov(x,y)}{s_x * s_y} = \frac{\overline{xy} - \bar{x} * \bar{y}}{\sqrt{\overline{x^2} - \bar{x}^2} * \sqrt{\overline{y^2} - \bar{y}^2}} \quad (1)$$

Results

Figure 1 shows a graphical representation (scatter plot) of the relationship between a company's advertising cost and brand value, which we tried to express by means of a linear function.

Table 2 shows the results of our regression and correlation analysis, which we performed using Data Analysis in Excel. The PCC value is 0.6119, which means that the advertising costs and brand value are linearly dependent, specifically it is medium-strong direct linear dependence. However, it is necessary to verify whether examined parameters are indeed linear dependent or not. For verification, we use the test of linear independence.

Figure 1: The correlation between company advertising and brand value



Source: authors

Tab. 2: Summary output of regression statistics

Regression Statistics	
Multiple R	0,6119
R Square	0,3744
Adjusted R Square	0,3297
Standard Error	39577,8625
Observations	16

ANOVA					
	df	SS	MS	F	Significance F
Regression	1	1,31E+10	1,31E+10	8,3794	0,0118
Residual	14	2,19E+10	1,57E+09		
Total	15	3,51E+10			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95,0%	Upper 95,0%
Intercept	19989,0296	13456,0791	1,4855	0,1596	8871,3898	48849,4489	8871,3898	48849,4489
Company advertising (\$M)	12,7490	4,4042	2,8947	0,0118	3,3029	22,1952	3,3029	22,1952

Source: authors

We evaluated the degree of causal dependence between the brand value and amount of advertising costs by applying a coefficient of determination, which is defined as the square of the correlation coefficient R . The value of the coefficient of determination in this case is $R^2 = 0.3744$, which means that 37.44% of the variance brand value is explained by a linear

relationship with advertising costs (regression line). Up to 62.56% of the variability values of brands can be explained by other causes, such as a linear relationship between the advertising costs and brand value.

The test of linear independence includes the following steps:

1. Determination of the null hypothesis:

$$H_0: R=0 \quad (2)$$

The correlation coefficient is considered to be null, so the variables are linearly independent.

2. Determination of the alternative hypothesis:

$$H_1: R \neq 0 \dots \quad (3)$$

The correlation coefficient is significantly different from zero. Thus, the variables are linearly dependent.

3. Selection of the significance level

$$\alpha=0,1 \quad (4)$$

4. Application of the test criteria:

$$T = R \cdot \sqrt{\frac{n-2}{1-R^2}} \quad (5)$$

The test criteria in the case of causal dependence between the advertising costs and brand value is 2.8947.

5. Critical field of the test:

$$|T| \geq t_{\alpha}(n-2) \quad (6)$$

where $t_{\alpha}(n-2)$ is the critical value of the t -distribution at the significance level α with $n-2$ degrees of freedom, to be 2.1448.

6. Decision:

In the case of causal dependence verification between the brand value and amount of advertising costs, the inequality applies, so we do not accept the hypothesis H_0 , we accept the hypothesis H_1 . Therefore, the correlation coefficient is significantly different from zero, and the variables are linearly dependent. It means, that the correlation between the brand value and amount of advertising costs exists.

Discussion

In practice, the brand value can be positive or negative. Positive is created by effective and efficient promotion and satisfaction of customers' wishes, expectations and needs. On the other hand, negative brand value is often created by gambling and improper brand management.

A high value brand is an important business asset that can have a longer lifespan than the products themselves. The high brand value gives the company a range of competitive advantages and has a prominent place in consumer awareness, making it easier for them to gain loyalty. High-value brands also give companies a degree of protection in price competition.

Having a strong brand recognition can help sell products or services. But certain brands have become much more than that – they have become so ubiquitous that they are an integral part of the lives of millions worldwide. It can be hard to precisely measure the full value of a high-quality brand, but it goes far beyond just a familiar logo and the product or service. Companies spend enormous amounts of money, time, and energy to ensure their brands are not just well known, but also well liked, and therefore more profitable.

To maintain a strong brand, companies must offer high-quality products and good customer service while also supporting by appropriate financing of adverts focused on increasing the brand value and brand loyalty (Gajanova and Kramarova 2016).

The most valuable brands represent a wide array of different products and services. However, technology companies have emerged as the dominant sector, representing each of the top five brands, as well as six of the top 10 most valuable brands in the world. Technology companies are racing to make the next big breakthroughs in technology, particularly AI or artificial intelligence.

Conclusion

Our results indicate that the brand values included in our analysis were directly determined by the amount of advertising costs. The brand value of technology brands is therefore significantly dependent on financing of adverts.

Innovation in IT technologies, evolving consumer tastes and preferences are creating a competitive landscape for technology brands. Thus, building and managing the brand value represents an important process. Due to the growing competition, this process requires its efficient operation and use well targeted financing of adverts. It is the brand value that gives the consumer a perception of the brand.

Effective brand value management allows to create a brand that is different from others. Based on its value, the brand improves customer loyalty and also helps to determine positioning, as it is essential for the brand to reach consumer awareness.

The issue of financing of adverts and its impact on the brand value has the potential for deeper research in the future - both qualitatively and quantitatively. To obtain statistical relevance, it would be appropriate to investigate the findings of qualitative research quantitatively. A further qualitative investigation would be appropriate for expanding knowledge and comparing the impact of advertising on brand value in other industries,

possibly exploring the impact of other communication tools on brand value and their comparison.

Acknowledgement

This paper is the outcome of the science project ***APVV-15-0505: Integrated model of management support for building and managing brand value under the specific conditions of the Slovak Republic.***

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