

Effective advertising as a tool for building a sustainable brand

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Abstract. An analysis of the successful financial activities of most enterprises, in particular well-known brands, gives grounds to assert that advertising has a significant impact on sales growth. Advertising generates demand and stimulates sales, which means it performs an economic function in the market. The effect of using advertising as a tool for building a sustainable brand is measured in the monetary equivalent of revenue growth after advertising exposure. However, excessive, intrusive, untimely and unprofessional advertising can lead to the opposite result and distract potential buyers. Therefore, it is important to study the possibilities of using modern economic and mathematical tools to assess the effectiveness of advertising tools and technologies as a tool for building a sustainable brand, in particular the technology of subconscious advertising influence on the consumer and the consequences of such an impact. To determine the effectiveness of the impact of advertising as a tool for building a sustainable brand on financial stability, companies traditionally use analytical methods. Analysis of existing scientific approaches has shown that they require further improvement. The purpose of the work is to develop a methodology for a comprehensive analysis of the effectiveness of the impact of advertising as a tool for building a sustainable brand on the financial stability of the company. It has been established that advertising costs are reasonable to the extent that it does not become hypertrophied, and the economy on the scale of production compensates for advertising costs. In the conditions of a modern market economy, it is almost impossible to create a mass market for products without advertising. Therefore, every company striving to remain competitive in the global market should already use only effective, usually innovative, advertising technologies to promote its products or services. Further research is planned to be carried out in the direction of identifying patterns and positive associations in the texts of advertising appeals that have a subconscious psychological effect on various segments of the consumer audience.

Keywords: advertising, brand, economic efficiency, intellectual efficiency, slogan

Анотація. Зараз реклама є невід'ємною частиною повсякденного життя кожної людини та невід'ємною складовою сучасної інтегрованої маркетингової системи. Розвиток та відповідність сучасним вимогам світового ринку визначають якість та ефективність рекламно-інформаційної діяльності компаній. Безсумнівно, маркетинг став невід'ємним конкурентним фактором для бізнесу, а ефективна реклама є найбільш ефективним інструментом для впливу на ринок.

Дослідження успішної фінансової діяльності більшості підприємств, зокрема відомих брендів, дає всі підстави стверджувати, що реклама має значний вплив на

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зростання продажів. Реклама генерує попит та стимулює продажі, тому виконує економічну функцію на ринку. Ефект від застосування реклами як інструменту для будівництва стійкого бренду вимірюється у грошових термінах приросту доходів після рекламної кампанії.

Однак варто зазначити, що надмірна, нав'язлива, несвоєчасна та непрофесійна реклама може відбитись на покупцях негативно та відволікти їх від покупок. Тому важливо досліджувати можливості використання сучасних економічних та математичних інструментів для оцінки ефективності рекламних технологій як рушійного механізму для будівництва стійкого бренду.

Реклама формує попит та стимулює продажі, отже, виконує економічну функцію на ринку. Ефект від застосування реклами як інструменту побудови стійкого бренду вимірюють у грошовому еквіваленті приросту доходів після рекламного впливу. Метою роботи є розробка методики комплексного аналізу ефективності впливу реклами як інструменту побудови стійкого бренду на фінансову стабільність компанії. Встановлено, що витрати на рекламу є доцільними до того ступеня, поки вона не набуває гіпертрофованого характеру, а економія на масштабах виробництва компенсує витрати на рекламу. Визначено, що кожна компанія, яка прагне залишатися конкурентоспроможною на глобальному ринку, повинна вже сьогодні застосовувати лише ефективні, зазвичай інноваційні, рекламні технології для просування своїх товарів або послуг. Далі дослідження планується проводити в напрямку виявлення шаблонів та позитивних асоціацій в текстах рекламних звернень, що здійснюють підсвідоме психологічне вплив на різні сегменти споживацької аудиторії.

Ключові слова: реклама, бренд, економічна ефективність, інтелектуальна ефективність, слоган.

Introduction

Currently, advertising is an integral part in the daily life of every individual and an indispensable component of the contemporary integrated marketing system. The development profile and compliance with modern requirements of the world market determine the quality and efficiency of companies' advertising and information activities. Undisputably, marketing has become an essential competitive factor for business, and effective advertising is overwhelmingly seen as the most effective tool for impacting the market.

The research into successful financial activities of most enterprises, in particular well-known brands, gives every reason to claim that advertising has a significant impact on sales growth. Advertising generates demand and stimulates sales, and therefore performs an economic function in the market. The effect of advertising as a tool for building a sustainable brand is measured in monetary terms as income gain following product advertising.

However, it should be pointed out that excessive, intrusive, untimely and unprofessional advertising can backfire and distract potential buyers. Therefore, it is relevant to study the possibilities of using modern economic and mathematical tools to evaluate the effectiveness of advertising technologies as a lever for building a sustainable brand. To this end, the technology of the subconscious influence of advertising on the consumer can be used particularly well, entailing the promising consequences of such an impact.

Probing into the study of effectively using advertising technologies in different periods of economic development was given sufficient attention on the part of scholars, both domestic and foreign. Among the outstanding Western scholars are M. D. Anis-Ur-Rehman, S. Saraniemi, P. Ulkuniemi, P. Hurmelinna-Laukkanen [1], H. Yu. Wong and M. Hossein [2], P. Sultan and B. Merrilies [3], A. Chiunova-Shuleska, N. Palamidovskaya-Steryadovskaya, K. N. Osakwe and

J. Omotoso [4, 5], E. Lupton [6], L. M. K. B. Sepulcri, E. V. Mainardes and D. M. Marchiori [7] and many others.

To determine the impact effectiveness of advertising as a tool for building a sustainable brand on financial stability, companies traditionally apply analytical methods. Analysis of available scientific approaches showed that they require further enhancement. The purpose of this article is to develop a methodology for a comprehensive study analyzing the effectiveness of advertising impact as a tool for building a sustainable brand on the financial stability of the company.

Results

The current stage of economic development characterizes the close relationship between business and advertising, which has nowadays become the major means of companies' marketing communications. The effective use of advertising technologies is a platform for addressing important enterprises' tasks in the market. That said, one of the pressing issues of modern business is to determine the economic and informational (communicative) effectiveness of advertising media as a tool for building a sustainable brand.

A study of the global brand market made it possible to state that it was due to advertising expenses that allowed the most famous companies in the world to create their "name" - brands (trademarks), which are currently estimated to be worth billions USD (Table 1).

Table 1

Ranking of global brands in 2022.

Place	Brand	Percentage increase / decrease in value compared to 2021, %	Brand value, bln USD	Advertising costs, bln USD
1	Apple	+19	124,2	1,2
2	Microsoft	+11	63,0	2,3
3	Google	+19	56,6	3,0
4	Coca-Cola	+2	56,1	3,5
5	IBM	-5	47,9	1,3
6	McDonald's	+1	39,9	0,808
7	General Electric	+9	37,1	—
8	Samsung	+19	35,0	3,8
9	Toyota	+22	31,3	3,8
10	Louis Vuitton	+5	29,9	—

Source: compiled by the author

Brand revenues are also measured in billions of USD: for instance, Apple yields 182.3 bln USD from its brand and Microsoft 93.3 bln USD.

The economic efficiency of advertising as a tool for building a sustainable brand measures its impact on increasing sales, which is determined by analyzing operational and accounting data. However, in addition to advertising, other factors can also influence the sale of a product, in particular, the price and quality of the product, the advantages that distinguish it from other similar goods, the reputation of the brand, the level of customer service culture, etc. [2].

A graphical representation of advertising costs broken down by global brands in 2022 is presented in Figure 1.



Figure 1. Graphical representation of advertising costs broken down by global brands in 2022.

In fact, to evaluate the effectiveness of advertising as a tool for building a sustainable brand, an experimental method is usually used. This method consists in conducting a sociological survey, and an expert method, involving the involvement of experts in the industry and their independent judgments.

Traditionally, the cost-effectiveness of advertising as a tool for building a sustainable brand determines the ratio of a company's advertising costs to the results obtained from advertising for a specific period of time. Currently, the unified methodological principles for calculating the system of indicators for evaluating the effectiveness of the company's advertising activities were elaborated [6]:

1. Increase in sales volume received under the influence of advertising during a specific period of time (in USD):

$$V_{add} = (V_{c2} - V_{c1}) * D, \quad (1)$$

where V_{c1} , V_{c2} - the average daily turnover (according to the product or the company as a whole) before and after the advertising, respectively (in USD),

D - the period (number of days) for which the increase in turnover is determined.

2. Economic effect of advertising (in USD):

$$C_{adv} = V_{add} (C_{adv} + C_{add}), \quad (2)$$

where C_{adv} advertising costs (in USD), C_{add} - additional costs associated with the sales increase (in USD).

3. Profitability of advertising (in%):

$$P_p \text{ Padv} = \frac{P}{E_{adv}} * 100, \quad (3)$$

where P is the profit received as a result of advertising the product (in USD).

4. Ratio of sales volume per 1USD of advertising costs:

$$R_{adv} = \frac{V_{adv}}{C_{adv}}, \quad (4)$$

where V_{adv} - the volume of sales after advertising or the increase in this volume (in%).

5. Ratio of advertising costs per 1 USD of sales volume:

Cr = the ratio of advertising costs per 1 dollar of sales volume:

$$Radv = \frac{Cadv}{Vadv}, \quad (5)$$

6. Cost effectiveness ratio for advertising as a tool for building a sustainable brand:

$$Rex = \frac{\frac{V1}{Cadv1} * V1}{Cexp1}, \quad (6)$$

where V1 and V2 - the volume of sales of the 1st and 2nd companies respectively, during a specific period of time,

Cadv1 and Cadv2 - advertising costs (in USD) of these companies during the same period.

However, the company does not always have sufficient operational data available to calculate each of the above indicators. In addition, to obtain more accurate results of the study, the calculation is carried out concurrently and several analytical methods and the data obtained are compared. When comparing the indicators, it is critical to take into account the influence of the previous advertising campaign, the inertia of consumer behavior, seasonal and recurrent fluctuations, consumer inflation expectations and other promotion methods. There are also restrictions on the choice of periods for accounting for the turnover before and after the advertising campaign. In particular, they are not to include public holidays and special days that affect sales. Furthermore, it was found that the optimal pre-advertising period to account for a turnover is half of the advertising and post-advertising periods [3, p. 72].

Effectiveness evaluation of advertising campaigns makes it possible to take timely measures to enhance their effectiveness. The advertising campaign budget is calculated using the tools of traditional planning methods as well as analytical methods, such as the optimal budget method, the Weidel-Wolf model, the Little and Weinberg models [4].

As part of the present studies, advertising costs as a tool for building a sustainable brand and net profit for 2018-2022 were analyzed. In particular, the three world-largest advertisers were given a close study: the American transnational company Proctor & Gamble (one of the leaders in the global consumer goods market), AT&T (one of the largest American telecommunications companies and media conglomerates), and Verison (the largest American mobile operator in terms of the number of subscribers) (Table 2).

Table 2

Advertising costs and net profit of the world's major brands during the timeframe 2018-2022

Indicators	2018	2019	2020	2021	2022
Proctor & Gamble					
Advertising costs, mln USD	8.338	9.086	9.222	9.612	9.236
Net profit, mln USD	12.736	11,797	10.756	11.312	11.643
AT&T					
Advertising costs, mln USD	2.982	2.359	2.91	3.268	3.272
Net profit, mln USD	20.179	4.184	7.539	18.553	6.518
Verison					
Advertising costs, mln USD	2.451	2.523	2.381	2.438	2.526
Net profit, mln USD	2.549	2.404	875	11.497	9.625

Source: compiled by the author

According to Table 2, for none of the companies (Proctor & Gamble, AT&T, Verison) can it be concluded that the company's profit is directly related to advertising costs. Therefore, it is expedient to use economic and mathematical methods for further research.

Figure 2 shows the advertising costs of 3 global brands under analysis.

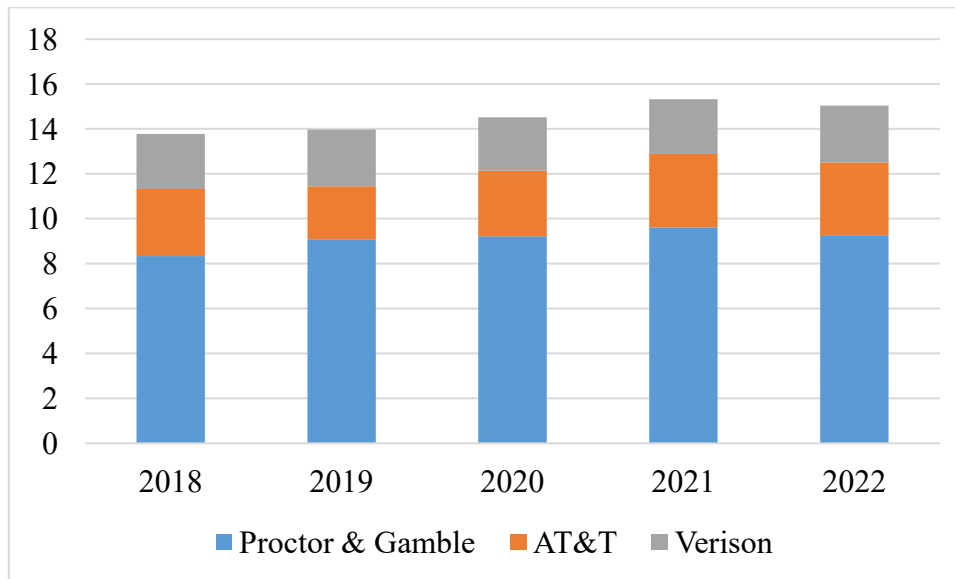


Figure 2. Advertising costs during the timeframe 2018–2022.

To probe deeper into the effect of the major brands companies' economic stability on their advertising costs, among others, methods of correlation and regression analysis were applied. The results obtained with 95% confidence do not give grounds to claim that the profits of Proctor & Gamble, AT&T and Verison are directly related to their investments in advertising.

From the present-day perspective, when it comes to conducting a thorough marketing research aimed at obtaining reliable results, several different methods of analysis are used and the data obtained are compared. Given the above, to study the influence of advertising on the construction of a sustainable brand, the authors used the method of rank estimates of the relationship density between advertising costs and the profit received, namely the Spearman rank correlation coefficient ρ , which is calculated using the difference in ranks of 6 factor and result features for each population unit (Table 3).

Table 3

Assessing the ratio of advertising costs and net profit of the world's major brands in 2022

No.	Company	Advertising costs (y)	Net profit (x)	Ranks		d=R _x -R _y	d ₂
				R _x	R _y		
1	Proctor & Gamble	9.236	11.643	1	1	0	0
2	AT&T	3.272	6.518	2	3	-1	1
3	Verison	2.526	9.625	3	2	0	0

Source: compiled by the author

The calculated $\rho = 1 - \frac{6 \sum_{i=1}^n d_i^2}{n(n^2-1)} = 0.25 < 0.5$, which indicates the absence of a direct relationship between the company's profit and its advertising costs.

Therefore, advertising costs are worthwhile to the extent that they do not become hypertrophied, and saving on the scale compensates for the advertising costs.

The information effectiveness of advertising as a tool for building a sustainable brand reflects how well the advertising message conveys the relevant information to the target audience thus shaping a positive attitude towards the brand and its product. Typically, the evaluation is carried out using consumer surveys and testing methods.

The literature review distinguishes principal methods for measuring the communicative effect of advertising as a tool for building a sustainable brand [6]:

1. The method of direct evaluation of consumer opinions study on various options for a certain advertising message (questionnaires and evaluation of the advertisement on a 10-point scale).
2. Memory test, in which the consumers are asked to read or view a series of advertisements and recall their content.
3. The method of paired comparisons, in which the respondents in pairs compare different options for advertising messages and choose the best one.
4. Arrangement by preference, in which the consumers arrange the advertising message variants ranking them according to their appeal.

The effectiveness of the psychological impact of advertising as a tool for building a sustainable brand is the degree of attracting the attention of potential buyers by the vividness and profoundness of their impressions, memorability of advertising messages. It is determined using tests for recognition, memorization, word associations, opinion polls, and the like.

For advertising to attract attention and encourage potential consumers to purchase a product or service, it must be remembered by the audience for quite a long time. This will undoubtedly result in an increase in brand loyalty. To a large extent, this depends on the information content in itself and a sheer lucidity of advertising messages, their power to evoke in customers some positive associations.

The communicative effectiveness (psychological effect) of advertising as a tool for building a sustainable brand is calculated using the indicators as follows [3]:

1. The ratio of sensual perception. i.e. the ratio of the number of respondents who sensually perceived the advertisement to the number of all persons who saw the advertisement.
2. The ratio of the existing advertising impression, i.e. the ratio of the number of respondents who were impressed by the advertisement to the number of respondents who were exposed to the advertisement.
3. Advertising recall rate, i.e. the ratio of the respondents who remembered the advertisement to the number of respondents who were impressed by it.
4. Advertising awareness ratio, i.e. the ratio of the people informed about advertising to the total number of respondents.
5. The ratio of inducing the need for services or goods, i.e. the ratio of the number of respondents in whom, as a result of advertising, a need for services (goods) arose to the number of respondents who were stricken by the advertisement.
6. Persuasiveness ratio, i.e. the ratio of the respondents who were convinced by the advertisement of the need to purchase a product (service) to the number of respondents who experienced the advertising impression.
7. The ratio of inciting interest, i.e. the ratio of the respondents in whom advertising aroused interest in the company (product, service) to the total number of respondents.

The structure of the advertising message is provisional and depends on the available conditions, the stage of advertising activities, as well as the purpose and features of the advertising impact. Traditionally, the composition of an advertisement contains the following components: slogan (slogan), plot (introduction), information block, additional information, echo phrase.

The slogan is of the utmost importance in an advertising message, briefly and accurately reflecting the features of the sales offer. A successful advertising slogan should be easy to read and remember, memorable, original, creative, engaging, promising benefits or rewards.

As part of the present study, in order to specify the influence of advertising texts on the subconscious perception of the brand by the audience, an intellectual analysis of the slogans of the world's largest brands Proctor & Gamble, AT&T and Verison was carried out in the RapidMiner environment, a comprehensive system for Data Mining and statistical analysis [7].

Text mining tasks include classification, clustering, automatic abstracting, text navigation, trend analysis, and association search. One of the important stages of texts' intellectual analysis is the documents' preliminary processing. At this step, simple but necessary transformations are performed with documents to present them in the form that Text Mining methods work with. The purpose of such transformations is to remove stoppers and give the text a more rigorous form [1].

The authors used the following methods of removing non-informative words and enhancing the texts' rigourousness:

1. Removal of stoppers, i.e. words that are auxiliary and carry little information about the text content.

2. Stemming - a morphological search, which means converting each word into its original form (excludes word conjugation, plural form, features of oral speech, etc.).

3. N-grams, i.e. a part of the string, consisting of N characters. Compared to stemming or stopword removal, N-grams are less sensitive to grammatical errors and typos, do not require linguistic representation of words, which makes this technique more independent linguistically.

The results of the intellectual analysis of Proctor & Gamble, AT & T and Verison slogans evidenced that the words with the highest criterion are "life", "health" and "happiness". Undoubtedly, the terms that axiologically are the most important for every person may subconsciously encourage potential buyers to purchase the advertised product or service whereby shaping a positive image of the brand.

A brand, in particular its slogans, always evoke relevant associations in the consumer. The clearer and more pleasant these associations are, the higher the company's sales level. If a brand's advertising defines and enhances its permanent image, that brand can create its own unique associations.

In fact, consumers tend to choose brands that have high value because it is easier for them to relate their needs to the benefits of the advertised product they trust and get more positive product experiences. Therefore, the brand calls for a higher value, stimulates trust and encourages companies to use more effective marketing programs.

Conclusions

As shown by empirical research, modern market economy makes it virtually impossible to create a mass market for the sale of products without advertising. Hence, every company seeking to remain competitive in the global market must therefore use only effective, innovative advertising technologies to promote their products or services. Further research is expedient in the direction of identifying patterns and positive associations in advertising that have a subconscious psychological impact on various segments of consumer audience.

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