

# The influence of brands on consumer behaviour in conditions of COVID-19 pandemic: Bibliometric and visualization analysis

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**Abstract.** The topic of branding is part of the marketing concept and is actively researched. This study presents a trend analysis, bibliometric overview, and visualization of the current state within the research problem of branding. A review of 1,014 publications from the Scopus database (1996–2020) was conducted. Two combinations of words with a logical operator ("brand" and "consumer behaviour, crisis") were used. VOSviewer was used to visualize the results and graphically display the material. The analysis helped to draw some valuable conclusions. As a result of the analysis, it is determined that: 1) using filters, the total number of publications in the research field of branding is 984; 2) the growth of the publication activity occurred after 2009. 3) the largest number of studies is conducted by scientists from Europe, North America, Asia and Australia; 4) until 2014, scientists focused on researching the essence of the brand and branding, its benefits, features, etc., then scientists were more focused on the issues of sustainable development, the role and significance of crisis factors, including the impact of the pandemic; 5) the relationships among keywords within the research topic form the following clusters: marketing, corporate social responsibility, brand equity, consumer behaviour, and consumption behaviour. The obtained results are applicable and can be a guidance for further research in the field of branding.

## 1 Introduction

All consumers can be divided into brand lovers and those who avoid brands. But the latter inevitably fall under the influence of other less visible brands. Most people think that brands are something modern, with a famous name and premium goods, financially not available to everyone. But this is not the case any longer.

It is important to remember that brand is not just a complex of logos, colours, and icons. It is a promise, a message to consumers. Therefore, the influence of a brand on consumers and their behaviour is huge. When speaking about the influence of a brand on a consumer, it

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is worth remembering that in today's economic situation, branding plays a huge role, since it is a long-term investment. Even the world's most famous brands constantly test new products, improve quality, and in other ways strengthen audience loyalty. To maintain competitiveness, a brand must constantly fight for its audience and overcome all difficulties, including the COVID-19 pandemic.

The topic of branding has become quite relevant for scientists over the past 10 years. The scientists in the papers [1; 2] proved the importance of advertising as a part of branding and the role of digital marketing tools in the globalization context.

The problems of a country's and company's image are discussed in the following studies [3-5]. Moreover, the impact of an increasing interest to sustainable development and sustainable entrepreneurship on the green brand formation is shown in the papers [6-10]. Research of economic and social processes as an element of the country's brand are discussed in the following studies [13-17]. The COVID-19 pandemic has made great adjustments in all areas of business and people's lives, including branding and consumers' behaviour [18-21]. The impact of Covid-19 pandemic is discussed in [22-29].

Thus, this article aims to investigate the problem of brand influence on consumer behaviour under various factors, including such a factor as Covid-19 pandemic in-depth based on visualized and bibliometric analysis.

## 2 Method

To achieve the purpose of the research, a bibliometric analysis has been carried out [30-31]. Moreover, there was conducted a visualized analysis [32-106]. The bibliometric analysis in this paper includes six steps and aims to collect data in the area of branding. The logical sequence of the research is the following:

1. Research area: "branding".
2. Information source: Scopus database.
3. Search field: "title, abstract, keywords".
4. Keyword's search: "brand" AND "consumer behaviour, crisis".
5. Language of publications: English.
6. Research years: from 1996 till 2020 (before 1996 there was only one work in 1989).

Thus, for further research 1,014 publications were chosen. Additionally, the importance of branding was confirmed by trend analysis made using Google Trends.

## 3. Results and Discussions

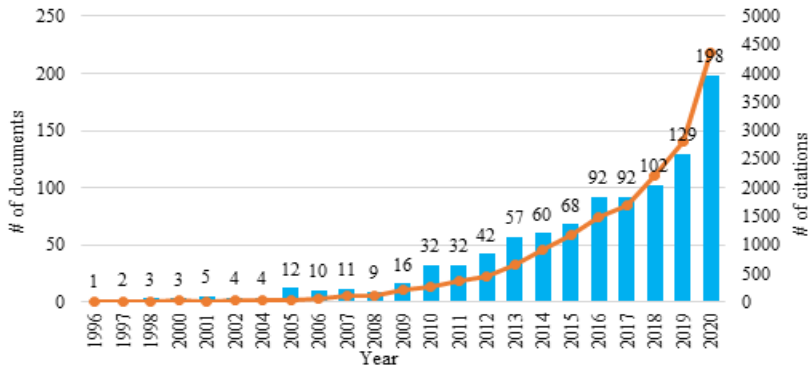
The scientists have begun investigating the problem of branding development, its influence on consumer behaviour relatively recently. The conducted research shows that the topic of branding, its influence on consumer behaviour, and other related aspects have been developing since 1996. The distribution of scientific papers over the years is illustrated in Figure 1.

According to Figure 1, the growth of the publication activity started in 2010. Since then, there has been a steady trend for increasing the number of publications.

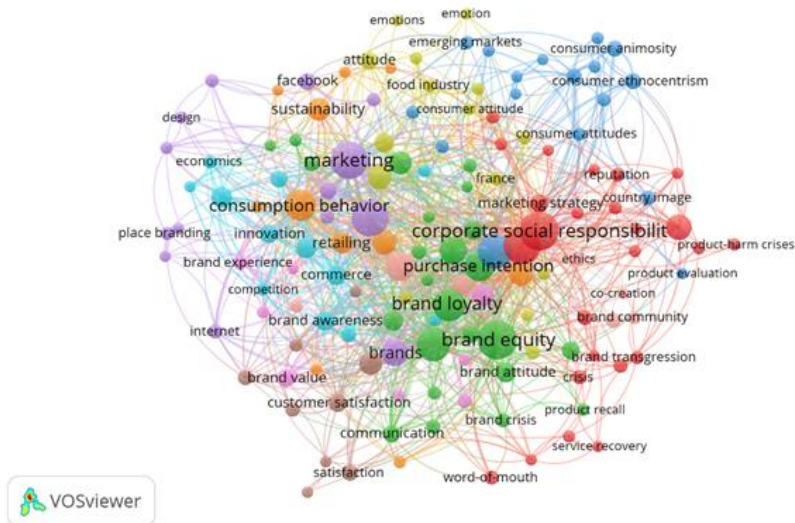
All these publications contain research related to branding, but they are multidirectional and relate to different components of this concept. For better understanding of the essence and interconnectedness of the analysed issues, research clusters have been formed. They help to identify, visualize, and understand the most frequent keywords relevant to the research area (Fig. 2).

Thus, the network visualization between 142 keywords includes 10 clusters. The most powerful cluster (purple) is formed around the concept of "marketing" (the concept

establishes 72 links, the total link strength is 147), this cluster includes the following main keywords: “social media”, “brands”, “consumer engagement”.



**Fig. 1.** Dynamics of the publications and citations number in the research field in 1996-2020 (based on the Scopus Database)



**Fig. 2.** A visualization map of the relationship among keywords (based on the Scopus Database), generated using VOSviewer

The second (red) cluster is based on the concept of “corporate social responsibility” (59 links, the total link strength is 104), and includes the keywords: “consumer behaviour”, “marketing strategy”, “country of origin”, “reputation”. The third (green) cluster covers such keywords as “brand loyalty”, “brand image”, “purchase intention”, “brand management”, and others, and forms around the concept of “brand equity” (establishes 45 links, the total link strength is 88). The fourth (blue) cluster is tied to the concept of “consumer behaviour” (establishes 52 links, the total link strength is 79) and covers the keywords “consumer attitudes”, “consumer ethnocentrism”, “consumer animosity”, “international marketing”, “country image”. The fifth (orange) cluster is formed around the concept of “consumption behaviour” (establishes 55 links, the total link strength is 114). This cluster includes the keywords “perception”, “trust”, “sustainability”, “retailing”.

Table 1 shows the main publishing countries in the research area.



consumers' evaluation of brands and goods along with economic or "rational" motives (for example, product attributes).

The article by Andreasen, A.R. "Marketing Social Marketing in the Social Change Marketplace" [108] goes second. It has been cited 453 times. The article shows that social marketing faces significant barriers to growth because there is no clear understanding of what the field is and what its role should be in relation to other approaches to social change. The author proposes a specific social marketing branding campaign to advance the field, with roles for academics and the American Marketing Association.

**Table 2.** The 10 most cited studies in the research area in the period from 1996 to 2020 (based on Scopus Database)

Total citations	Author	Article title	Journal/Year of publication
659	Klein, J., Dawar, N. [107]	Corporate social responsibility and consumers' attributions and brand evaluations in a product-harm crisis	International Journal of Research in Marketing, 2004
453	Andreasen, A.R. [108]	Marketing social marketing in the social change marketplace	Journal of Public Policy and Marketing, 2002
271	Geuens, M., Weijters, B., De Wulf, K. [109]	A new measure of brand personality	International Journal of Research in Marketing, 2009
231	Greenberg, M. [110]	Branding New York: How a city in crisis was sold to the world	Branding New York: How a City in Crisis Was Sold to the World, 2008
224	Sharma, P. [111]	Country of origin effects in developed and emerging markets: Exploring the contrasting roles of materialism and value consciousness	Journal of International Business Studies, 2011
219	He, H., Li, Y. [112]	CSR and Service Brand: The Mediating Effect of Brand Identification and Moderating Effect of Service Quality	Journal of Business Ethics, 2011
216	Williams, A. [113]	Tourism and hospitality marketing: Fantasy, feeling and fun	International Journal of Contemporary Hospitality Management, 2006
201	van Noort, G., Willemsen, L.M. [114]	Online Damage Control: The Effects of Proactive Versus Reactive Webcare Interventions in Consumer-generated and Brand-generated Platforms	Journal of Interactive Marketing, 2012
201	Kayaman, R., Arasli, H. [115]	Customer based brand equity: Evidence from the hotel industry	Managing Service Quality, 2007
192	Pollay, R.W., Siddarth, S., Siegel, M., (...), Giovino, G.A., Eriksen, M.P. [116]	The last straw? Cigarette advertising and realized market shares among youths and adults, 1979-1993	Journal of Marketing, 1996

And the third place is taken by the study by Geuens, M., Weijters, B., De Wulf, K. "A New Measure of Brand Personality" [109] with 271 citations. In this study, the authors developed a new brand personality measure consisting of personality items only. 12,789 Belgian respondents participated in a study on 193 brands. The new scale consisted of five





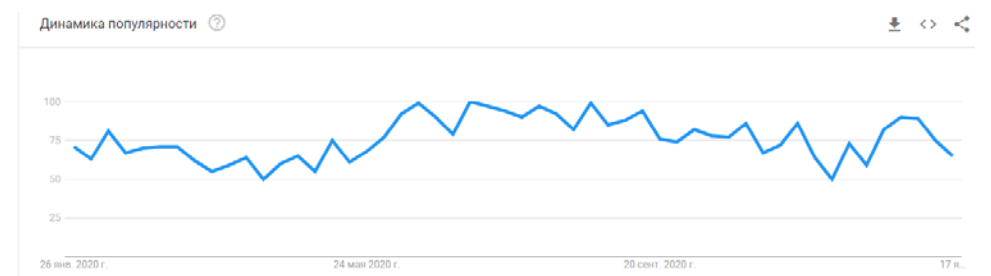
**Fig. 5.** The dynamics of the popularity of Starbucks request around the world



**Fig. 6.** Dynamics of the popularity of the Starbucks request in Ukraine



**Fig. 7.** The dynamics of the popularity of McDonald's request around the world



**Fig. 8.** Dynamics of the popularity of the McDonald's request in Ukraine



**Fig. 9.** Dynamics of the popularity of the Aroma Kava request in Ukraine region

According to the Google Trends indicators, there is confirmed the argument that brands need to be within consumers' reach to have a quality impact on them. Thus, the number of Starbucks requests around the world in 2020 is stable and at a higher level than the same request in Ukraine. On the contrary, for McDonald's network in Ukraine and around the world the requests are almost the same. In the case of Aroma Kava, there are no inquiries “all over the world”, because the consumers simply do not know about the brand.

Also, the popularity of brands during the pandemic remains an exciting issue. During the COVID-19 pandemic, to stay afloat manufacturers had to react quickly. One of the best options was switching to e-commerce. Another similar option was the development of mobile applications. For the food business, the introduction of a courier delivery service was good salvation. This has become a benefit. Figures 10-11 show how the query statistics for «delivery» request and «buy online» request have changed over the past 5 years in Ukraine.



**Fig. 10.** Dynamics of the popularity of the «delivery» request in Ukraine

Delivery request in Ukraine became popular at the end of 2019. The peak of the delivery request was at the end of March 2020 (during the lockdown period). However, the graph tends to increase. The reason is that brands with a delivery service and the delivery companies themselves become more popular, at least until the end of the pandemic.



**Fig. 11.** Dynamics of the popularity of the «buy online» request in Ukraine



The request “buy online” was popular even before the Covid-19 pandemic. Moreover, since the quarantine began, the requests for online buys increased. Consumers actively searched for goods and services online at the end of March 2020, and in January 2021. The explanation is that the consumers could not buy certain groups of goods in physical stores. So, brands must monitor their sites, keep up with the life rhythm not to lose potential consumers.

Besides, according to the Serpstat results (Fig. 12), the number of visitors of Rozetka.ua site per day was quite stable until mid-2018 (for about 6 million people). At the end of 2019, there were 8 million visitors per day. In 2020 there were 15-30 million visitors and in mid-January 2021 – 31.5 million visitors per day.



**Fig. 12.** Site traffic data Rozetka.ua from Serpstat free version

The “customer journey” shows the path from the need manifestation to its satisfaction (Fig. 13). Normally, the average consumer can easily switch between branded products and those they see for the first time. Brands reach their audience usually with distinctive qualities: a sign of luxury, good quality, trust in the manufacturer, service, and other characteristics.



**Fig. 13.** Customer journey (made with mindmeisret.com)

But during a pandemic, the issues escalate. The financial situation becomes difficult. The cost of branded items can be higher than the cost of non-branded ones. Additionally, during the quarantine 2020, many small entrepreneurs appeared on the market. Mainly they sell products through various sites on the Internet. Therefore, if the brand representatives in marketing and sales departments do not deal with this issue in time, there is a risk of losing customers in the future.

## 4. Conclusions

Several conclusions can be made from this study. First, brands have an impact on consumer behaviour. They build loyalty, trust, and long-term market relationships with consumers. Although the research topic has not been investigated enough in recent years, attention to

branding and consumer attitudes is growing. Scientists from the USA and Great Britain show the highest publication activity in the research topic. Their works are actively cited and scientists rely on them to write new research. Mostly, the concept of “brand” is considered together with “marketing”, “corporate social responsibility”, “brand equity”, and “consumer behaviour”.

Second, brands need to be in the same location as the consumers for larger audience coverage. Otherwise, it can cause the decreasing interest of potential consumers. Thus, brands limit themselves in reach, profit, distribution, and other performance indicators.

Third, brands must stay on top, especially during the COVID-19 pandemic. Quarantine in all countries of the world takes its toll of all spheres of people's lives. Due to periodic lockdowns, bans on mass events, restrictions in public places, and innovations to maintain sanitary conditions, some brands can simply disappear due to unprofitability.

Therefore, all brands are looking for the ways to be competitive. Some brands add a delivery function of goods. Others brands start online stores. All these can help brands to preserve their popularity.

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