

## BIG DATA AS A SUCCESS FACTOR OF ALIEXPRESS IN THE RUSSIAN MARKET: ADVANTAGES AND OPPORTUNITIES AS SEEN BY THE EYES OF CONSUMERS

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### Abstract

The purpose of this article is to identify opportunities of utilizing Big Data to retain and strengthen the market position of an online-retailer operating in the Russian market. AliExpress is used as an example. Key success factors appealing to Russian consumers of AliExpress are determined. Consumer feedback analysis is conducted, evaluating Russian consumers' satisfaction with goods and services provided by AliExpress. Consumers' consent to AliExpress using Big Data to enhance their customer experience is analyzed. The effectiveness and relevance of individual (targeted) advertising by the online retailer is evaluated from consumer perspective. Consumer general attitude towards collection and usage of their personal data for advertising purposes is evaluated and extrapolated on to methodology of Big Data collection and analysis. Statistical correlation between relevance of goods and services offered and consumer attitude towards personal data collection. Opportunities to further grow the online retailer's market share and retain its' customer base are determined. Recommendations offered on how AliExpress can utilize Big Data to further its operations.

**Keywords:** Big Data, e-commerce, online marketing, consumer behavior.

**JEL code:** M15, M310

### Introduction

Currently, Big Data is an important development driver for any company regardless of its type or size. The role of Big Data is growing, it is important for progress in all branches of knowledge: physics, economics, mathematics, political science, sociology and other sciences. In the era of Big Data, marketing is also undergoing significant changes.

There is no generally accepted definition of Big Data. The plurality of definitions, the analysis of the general and the specifics, their constant update make it possible to fill in all the components of this rapidly developing phenomenon, though they do not always provide a clear direction in prospects and trends of its evolution (see Ylijoki & Porras, 2016).

A lot of Big Data researchers attribute key importance to its size, but this is incorrect for understanding the essence and significance of Big Data, because it implies "that the previously existing data is somehow small (it is not), or that size is the only problem (size is just one of them, but more problems often emerge). "Zikopoulos, Eaton, deRoos, Detusch, & Lapis, (2012) suggests that concept of "big data" refers to information that cannot be processed or analyzed using traditional processes or tools." The most complete scientific definition, in our opinion, is the one proposed by Boyd and Crawford (2012), where Big Data is understood "as a cultural, technological and scholarly phenomenon that rests on the interplay of the three factors: technology, analysis and mythology.

**Technology:** maximizing computation power and algorithmic accuracy to gather, analyze, link, and compare large data sets.

**Analysis:** drawing on large data sets to identify patterns in order to make economic, social, technical, and legal claims.

Mythology: the widespread belief that large data sets offer a higher form of intelligence and knowledge that can generate insights that were previously impossible, with the aura of truth, objectivity, and accuracy. Thus, we can conclude that Big Data encompasses the following main attributes: large amounts of unstructured data, processes of accumulation of such data, development of innovative methods of data analysis and interpretation.

The problem with Big Data from businesses' point of view is that classic marketing and analytical instruments are not suitable for working with it because these instruments only apply to structured data {removed – you can have a big volume of structured data}. This encourages organizations to find new solutions in this area. Experts define this current direction as Web 2.0, which allows increasing the efficiency of marketing activities by 10-30% (see Jobs, Aukers, Gilfoil, 2015). Businesses recognize the ability of Big Data to generate additional traffic and a stream of orders, and are ready to invest in them. According to the researchers, the interest from companies is influenced by the growth of trust in Big Data solutions, the maturity of products and services, growing number of partners representing services and selling equipment for analyzing big data. The problem points here usually are: lack of best practices for integrating the analysis of large data into existing business processes; ambiguity in the security and safety of personal data; lack of well-functioning and tried-and-tested applications that solve specific business tasks (see Baburin, Yanenko, 2014).

There are industries, however, with a particularly large marketing interest in Big Data; online trading stands out among them. The volume of the global e-commerce market has increased almost 2.5 times from 2010 to 2016. China is the leader with \$1 trillion in market volume; 33% of the total number of online purchases is done using mobile devices (tablets and smartphones), 67% - desktop computers. For comparison, Russian Federation occupies the 9th place in this rating. The volume of online purchases is \$ 15.7 billion, where 12% is attributed to purchases using mobile devices (tablets, etc.), 8% using phones (and smartphones), 80% - via desktop computers (Remarkety: Global ecommerce sales, 2016).

The volume of the online trade market in Russia doubled in 2016 as compared to 2010 (Remarkety: Global ecommerce sales, 2016). Among the main drivers of the Internet market are: growing number of Internet users; decline in cost of mobile Internet access; increase of Internet users' "online" literacy.

The potential of the Russian e-commerce market is huge, but, unfortunately, currently the online trade segment takes a back seat with 4% of domestic retail. At the same time in the UK, for example, Internet sales account for 12% of total retail sales (Remarkety: Global ecommerce sales, 2016). Generally, in the world the growth dynamics of FMCG online sales already surpasses sales in offline stores, and, according to Nielsen, the global market research company, this gap will become even greater in the next few years. The entire global online trade industry will be equal to the global offline FMCG market in five years. While the dynamics of FMCG retail sales in the world is on average + 4% annually, growth in online sales is forecast to be 20% per annum, or in absolute terms, an additional \$ 2.1 trillion by 2020 (Worldwide Retail Ecommerce Sales, 2016 ).

There is no denying the impact of Big Data technology adoption on the rapid growth of this market. Due to its efficiency and huge potential, big data changes the entire business model of e-commerce as well as its separate components: marketing, pricing, supply chain, management (see Ghandour, 2015). This is realized in marketing by personalizing consumer targeting, applying dynamic pricing models, improving the quality of customer service, analytical forecasting (identifying needs, actions and events before they occur), transparency of supply chain (see Akter1 & Fosso Wamba, 2016). Along with this, the greatest effect is achieved through a fundamentally different customer interaction (see Ilieva, Yankova, Klisarova, 2015). Gathering enormous amounts of user data allows online shopping to fine-tune their services to each user's specific needs, and even predict their behavior based on

previous data. For instance, in Internet commerce big data makes it possible to form realistic and detailed profiles of customers: gender, age, address, interests, activity on other resources. It also helps to determine their interests and preferences: products they researched, what they liked, what they wanted or did not want to buy and, above all, which goods they bought. As a result, personalized offers and discounts are made, offering a selection of products and services that may interest the consumer. All this provides a transition to a fundamentally new and more effective level of e-commerce marketing – so called “one-to-one” marketing. The basic concept of this process is the one of “360 degree view of the customer” based on the premise that companies provide the necessary service or product to the “right” buyer and at the “right” time (Ward, 2006). Thus, Big Data opens new horizons for increasing business efficiency.

### **The success model of AliExpress in Russia**

The most popular online retailer in Russia is AliExpress online platform owned by Alibaba Group. Since 2015 the Chinese site is the leader of the Russian e-commerce market in terms of audience reach, for the first half of 2017 it accounted for 90% of all goods shipments from abroad, far outstripping the international giants eBay and Amazon (RBK, 2017). This distribution of competitors is especially interesting taking into account that the business model of AliExpress is actually a copy of the eBay business model: AliExpress is a merchant itself and at the same time, it offers a trading platform for small businesses<sup>1</sup>.

It is reasonable to assume that such a thin representation of eBay and Amazon in the Russian market is caused by the presence of known institutional barriers to business: interaction with customs, tax and postal services, and so on. This represents risks for the established standards of customer service and, accordingly, reputational risks for these giants of e-commerce industry.

AliExpress intensively uses the opportunities of Big Data to increase the efficiency of its processes and to find new ideas for development. The collection of big data starts when the customer is registered. Customer is asked to provide personal information, to specify areas of interests, and to consent to the collection of cookies - residual data from the websites they visit. This data is loaded into the Big Data-profile of the client and analyzed. The consumption data is combined with “online behavior” metadata of the user. Then the algorithms launch targeted advertising through social networks, search engines, active banners and so on. In addition, the buyer is provided with personalized offers in “You might also like” section. Big Data is also used to notify customers about the status of their order (shipment time, location, time of arrival), to collect information on the most suitable prices for customers, etc.

As well as collecting online data, Alibaba Group<sup>2</sup> also utilizes methods of collecting offline data on a large scale. It identified more than 20 000 consumer models based on different behaviors of buyers, as well as demographic variables. This was achieved by analyzing the company's own data, as well as data collected from third parties. Information obtained from mobile applications of Alibaba Group<sup>3</sup> completes the analysis chain. As a result, the range of goods offered is so vast that it enables to satisfy the needs of every customer, and, due to a convenient website based on individual settings, to suit their tastes. Product search takes minimal time due to personalization of product suggestions. At the same time, this allows for a rapid response to the slightest fluctuations in demand, fashion tendencies and consumer trends of almost every subcultural community.

Despite all important business activities AliExpress conducts to continuously improve addressing customer demand through a variety of methods of collecting, analyzing and using

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<sup>1</sup> It is worth mentioning that AliExpress, being a platform from China, managed to achieve online success despite the heavily regulated Internet space in the region.

<sup>2</sup> Methods for collecting offline data are common to all Alibaba Group divisions

<sup>3</sup> Alibaba Group has developed a number of mobile applications, the most popular is AliPay, but also popular with AliExpress, Taobao, T-Mall and some others.

Big Data, it should be noted that a very attractive price point offer is a significant success factor of the Internet retailer in the Russian market. Guarantee to find what interests the client, and at a low price at that - that is the "success formula" of AliExpress in today's Russia. Another component of this formula is a clear target audience. Aliexpress does not make big claims on quality, but affordable price, variety and rapid change of assortment, minimal time for purchasing decision making, ability to quickly navigate in the settings and options on the site are all characteristics of the generation of young buyers in online trading.

In summary, AliExpress managed to achieve success by focusing on all four key factors that influence decision making when buying online: convenience, good value for money, range of goods and positive consumer experience. This advantageous online strategy of the company aims to exceed the consumer expectations on all four indicators. In addition, AliExpress operates in accordance with the world trends in retail, making maximum use of the favorable opportunities for the current "revolutionary changes" in trade. As Prashant Singh, head of the retail vertical for "Emerging Markets" region at Nielsen (2016) emphasizes, "The retail industry is undergoing a turning point. Redistribution of the balance between a high-margin offline basket and currently low-margin online basket requires courage, confidence and insight. In the years ahead, the reward will not be long in coming to those who want to take this deliberate risk, as in the future the source of growth will come more from online channels."

### **Articulation of the problem**

Today the e-commerce market share of AliExpress in Russia speaks for itself. However, we must not forget that demand in this market is growing. This market is high-tech and innovative, and, therefore, very competitive. Despite the importance of unification and globalization of e-commerce, priority for satisfying consumer expectations today is in understanding local characteristics. Hence, *the evaluation and accounting of consumer experience of of AliExpress' Russian audience are fundamentally important for further development of Big Data technologies.* In addition, the authors believe that such user feedback analysis allows authors *to identify the reserves of strengthening consumer loyalty based on Big Data, and, therefore, to determine the direction of increasing competitiveness of this company in the Russian market.* Furthermore, this methodology could be used in activities of other participants. This is the *purpose* of our research. Its object is the Russian users of AliExpress services.

The purpose of this study allowed us to formulate the corresponding hypothesis:

- There is a direct link between the degree of importance of the offered goods and services to consumers and their attitude to the collection and analysis of personal data.

The purpose and hypotheses of the study determined the methodology for its conduct.

### **Methodology and phases of research**

The study consists of two phases. *The first phase* is mostly preliminary: feedback analysis from consumers was conducted on the basis of reviews on the most visited sites and swap communities on social networks.

In particular, the following tasks were set:

- to identify the key success factors of the online retailer AliExpress in the opinion of Russian consumers;

- assess the degree of satisfaction of Russian consumers with the work of this online retailer;

- systematize the advantages and disadvantages of products, services, etc. offered by AliExpress.

The choice of sources of information is justified by the fact that the studied consumers are active users of the Internet, and that they are more likely to express their opinion about the

quality of products, the convenience of its search engine, speed of delivery and receipt of orders, and other equally important information.

The second phase of the study is the main one. The *purpose* of this phase is to evaluate the loyalty of consumers to using the Big Data methods by the online retailer AliExpress to identify and further use their personal preferences.

Accordingly, the following tasks were formulated:

- identify the main characteristics of the studied consumers and make up a “portrait of a typical consumer” of this online retailer;
- evaluate the relevance and effectiveness of the individual (targeted) advertising of the online retailer from the perspective of consumers;
- analyze the attitude of consumers to the collection and use of personal data for advertising purposes, thereby evaluating the degree of loyalty to the methods of processing big data (Big Data);
- Test the presence of a statistically significant connection between the relevance degrees of goods offered by AliExpress in “You will like it” section and the attitude of consumers towards collection and analysis of their personal data;
- determine the opportunities for further growth of this online retailer in the Russian market and the ability to retain its customers.

The methods of data collection and processing that were used in the first phase of the study included the following: content analysis, feedback analysis, including customer feedback analysis and poll (questioning with open and closed questions). Methods of conducting the survey included placing a questionnaire on Google Product Forums and sending out questionnaires via social networks. When processing and analyzing the information obtained in the second phase, the correlation-regression analysis was applied.

### **Analysis**

In the preliminary stage, having studied the data from the most visited feedback sites<sup>1</sup>, as well as in social networking groups, based on more than 3 thousand<sup>2</sup> reviews and comments, we made a summary analysis of all the reviews about AliExpress as a trading platform.

*Chart 1 - AliExpress’: advantages and disadvantages from consumer’s perspective*

<b>Advantages</b>	<b>Disadvantages</b>
<ul style="list-style-type: none"> <li>– Wide choice of diverse products</li> <li>– Lower prices than in traditional retail outlets</li> <li>– Possibility to filter options on the site to find the necessary products</li> <li>– Saving time</li> <li>– Convenient methods of payment</li> <li>– System of discounts and coupons</li> <li>– Intuitive and pleasant website interface</li> <li>– Guaranteed refunds</li> </ul>	<ul style="list-style-type: none"> <li>– Defective goods</li> <li>– Inconsistency with the declared characteristics of the goods</li> <li>– Low quality of goods</li> <li>– Non-receipt of goods</li> <li>– Long wait</li> <li>– Impossibility to evaluate the goods live</li> </ul>

Following the monitoring of feedback from AliExpress website (the audience of the Russian market), it was concluded that in 80% of cases people who regularly use the site are satisfied with the entire organization of the store.

When evaluating the trading platform AliExpress, it was found that most users do not have concerns about the vendor collecting and analyzing their personal data (preferences, requests, etc.), moreover, they offer recommendations for improving and promoting big data.

During the main phase of the research, a survey was conducted which started on April 10, 2017 and lasted 30 days. The survey involved 259 people aged from 14 to 67 years. The

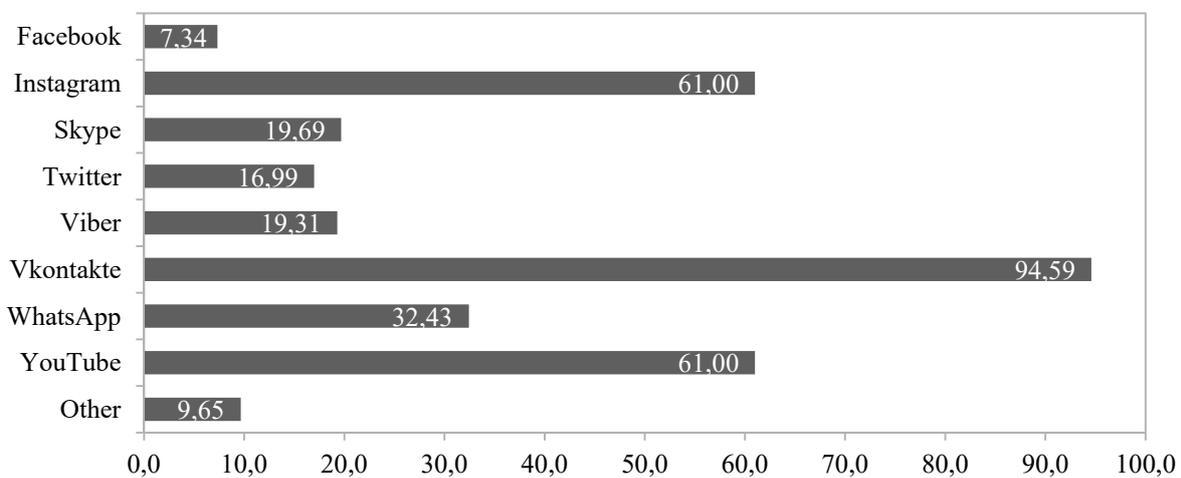
<sup>1</sup> Irecommend, Otvovik.com, Yell.py, Gsconto.com

<sup>2</sup> The actual number of reviews is much greater, but we limited them to a time period - the last two years.

main conclusions and recommendations were made based on a survey of 189 people, the age group from 18-22 years, residents of 14 regions<sup>1</sup> of the Russian Federation; each federal district is represented by at least one region. The sample is justified by the fact that these respondents are: active Internet users, consumers of the online retailer AliExpress. The age criterion is of interest in view of the prospects of growth in purchasing power among these respondents, therefore this segment of consumers becomes extremely attractive to the company and it is interested in strengthening its loyalty.

The focus on researching the attitude of the buyers of AliExpress online store to collecting and analyzing their personal data is due, first of all, to an attempt to reveal how the advantages that are revealed through the use of Big Data are evaluated by the direct clients of AliExpress.

In order to determine effective channels for promoting and advertising AliExpress in social networks to attract new customers, we identified those Internet resources that are visited by respondents most often. According to the results of the survey, the following social networks are among the most popular ones: VKontakte (94.6% of respondents), Instagram (61%) and YouTube (61%) (Picture 1).



Picture 1. Internet resources most visited by respondents

As a result of the survey, it was found out that half of the respondents (49.8%) use AliExpress services rarely, and almost a quarter of respondents (23.2%) repeatedly resort to buying goods through the studied trading platform.

The follow-up questions of the questionnaire were sent to the direct buyers of AliExpress (189 respondents, age category 18-22 years) in order to identify and analyze their attitude to collecting and analyzing personal data by the company.

During the survey it was revealed that only 6.9% of respondents had a negative attitude to collecting data on their personal preferences, while the dominant attitude of respondents to the identifying their specific interests during registration on the website of the AliExpress online store is neutral (60.3%) and positive (32.8%).

The attitude of buyers to individual advertising of AliExpress products, the degree of its usefulness and relevance to customers is divided in the estimates. Almost 35% of respondents think AliExpress advertising on the Internet is obtrusive, while more than half of those polled, 53.4%, refer to it neutrally and only 12.2% consider this advertisement useful and relevant, as it helps to draw attention to the necessary goods.

<sup>1</sup> St. Petersburg, Leningrad Region, Moscow, Moscow Region, Irkutsk Region, Novosibirsk Region, Tyumen Region, Samara Region, Ulyanovsk Region, Stavropol Territory, Khabarovsk Territory, Krasnodar Territory, Rostov Region, Smolensk Region

Respondents' reaction to the “You will like it” tab, the relevance of its browsing and use when planning future purchases on AliExpress has also proved to be ambiguous. More than half of the respondents (51.3%) either do not know about the existence of this section, or consider it irrelevant for forecasting their possible purchases, 14.3% of the respondents find this tab useful, and more than 34% of respondents simply review the proposed section “You will like it” out of curiosity.

To determine the interest in the products offered in the section “You will like it” or in advertisement on the Internet, the respondents were asked to rank the relevance of these proposals on a scale of 1 to 5. According to the survey, 42.3% of all respondents chose an average rating and only slightly more than 20% find the offered goods relevant.

Similar methods were used to rank the attitude of buyers to the fact that their data is collected and used by AliExpress to recommend suitable products and services and to forecast consumer preferences. Almost one third of respondents (30.7%) are positive, almost 40% of respondents have a neutral attitude (estimated on a scale of 3 out of 5) and less than 30% tend to assess negatively the activities conducted by AliExpress in order to predict further purchases of customers and offer them possible current goods.

On the basis of the data obtained, an empirically formulated **hypothesis** was tested and investigated using correlation-regression analysis that there is a direct and sufficiently strong connection between the degree of relevance of the goods offered to consumers in the section “You will like it” and their attitude to the collection and analysis of their personal data.

A correlation coefficient of **0.93** was calculated. Having estimated the importance of the correlation coefficient obtained with the help of the Student's t-test and calculated that the observable  $t$  is  $>$  than the theoretical  $t$ , one can come to the conclusion that the correlation coefficient is significant. That is, there is a close statistical relationship between the degree of relevance of the products offered in the “You will like it” section or advertising on the Internet and the attitude of respondents to collecting, analyzing and further using AliExpress data to recommend suitable products and services. Also, the calculated parameters of the investigated factors in accordance with the regression analysis and the calculated determination coefficient of **85.77%** reveal a sufficiently high interrelation between the factors listed above.

Thus, the hypothesis of a close positive correlation between the relevance degrees of goods offered in the section “You will like it” and their attitude to the collection and analysis of their personal data has been confirmed.

### **Recommendations on the use of Big Data for the online retailer AliExpress, the online branch of Alibaba Group**

1. When analyzing AliExpress consumer feedback and comments during the first phase of the research, we often met suggestions on adding a number of functions on the website. The most interesting practical recommendations for *improving the service* of the online retailer AliExpress based on Big Data, in our opinion, are the following.

- *Create a search by picture*. If the user does not have enough information about the object and has only its picture, the image search function will be extremely useful.

- *When sorting reviews*, an option of sorting them by language and by having a photo should be added to the already existing “by product” option.

- *Search for similar products*. It is necessary to provide this function of selecting goods in order to compare their quality and delivery conditions.

- *Modernization of the feedback system*. To enhance the feedback and quality of interaction between users, it is advised to integrate the additional function “response or comment on consumer feedback”;

- *Notification function* when geolocation of the purchased item changes. To ensure that the buyer is always aware of the location of their purchase, an appropriate notification could be provided.

2. AliExpress offers low-quality goods, often without proper certification and this is a serious challenge identified by Russian consumers. This implies a lot of risks for the company aimed at increasing sales. For example, the development of legislation and requirements for the quality standards of products sold in online trading (this is a serious responsibility not only for the manufacturer, but also for the online retailer) will lead to the seller being threatened by multimillion liability claims as well serious damage to the reputation. The usage of Big Data can solve this issue and make the process faster and with greater efficiency for the company. Big Data allows to conduct detailed analysis of the shortcomings and suggestions for improvement, to speed up the search for reliable producers of goods and, thus, to reduce such risks. It is worth mentioning, however, that in majority of cases AliExpress acts as an online market platform connecting small businesses and individual sellers with buyers, so liability issue becomes a legal grey area. Perhaps, the platform could use the approach demonstrated by eBay, where the company directs its marketing efforts to create an image of safe, buyer-biased online marketplace offering ease refunds and returns, clear channels for dispute resolution and other “buyer protection” tools.

3. It is crucial that the consumers understand the benefits that they can reap from the collection and analysis of Big Data. They should be informed of the benefits that they will get after entering personal data; they also need to be encouraged to this activity with additional bonuses. For example, with receiving a unique newsletter, free interesting content, a gift or a surprise, discounts. At the same time, the emphasis on confidentiality of the information provided is important in communication.

In turn, this entails the expansion of opportunities to improve the quality of big data (reliability, detail, completeness). As a result, additional positive effects are created for the company and its customers. For example, advertising costs are reduced and efficiency increases, the negative attitude towards advertising as being too intrusive reduces. Thus, it is necessary to raise the awareness of consumers about the nature, purpose and significance of Big Data, as well as to increase the use of social networking capabilities to collect Big Data and further target advertising.

4. Taking into account the rather low level of development of technology in this area today, it is necessary to invest in the development of Big Data technologies. It's reasonable to assume that the leaders in the development of new Big Data technologies will have an advantage in other positions over the rest of the market. Among the directions for using the possibilities of “big data” the following ones can be identified: satisfaction with goods and services; their timely improvement in accordance with the needs of consumers; development of the most convenient logistics solutions for reducing the delivery time.

### **Conclusion**

The conducted research confirmed the importance, the significant role of Big Data in the success of the company in a particular market. Its use is directly related to the achievement of key advantages in all factors affecting decision making when buying in e-commerce: convenience, good value for money, assortment and positive consumer experience. In the conditions of rapid development of technologies, it is important not only to retain, but also to constantly develop these advantages for each of these factors, also via studying the feedback from consumers in each local market. Analysis of the work of AliExpress with metadata in terms of creating additional value for Russian users of the online platform showed that the company has a reserve for improving the quality of service, and thus for attracting new and retaining existing consumers which is reflected in the suggested practical recommendations for the use of Big Data.

Speaking of the relevance of Big Data in the development of marketing in general, the fact which is getting increasingly obvious is that, despite some “coldness” or even negative

attitude of the audience to the collection of personal data today, its use makes it possible to move to a qualitatively new and more effective level of marketing in the near future.

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