

E-commerce in BRICS Countries

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Abstract. In an effort to cope with the problems that arose as a result of the pandemic and led to a decrease in the volume of the economies, the BRICS countries are helping each other by expanding Intra-group economic cooperation. One of the innovative forms of their interaction is the development of e-commerce of the five countries. The relevance of the study is due to the fact that e-commerce is a driver of economic growth in developing countries, including the BRICS countries. The study concluded that China is the world's largest e-commerce market. It was revealed that the Internet of things, cloud computing, etc. contribute to the growth of this sector of the economy. It is noted that despite the fact that Russia has the largest number of Internet users in Europe, the volume of e-commerce in the country is small. The conclusion is made about the prospects for further development of e-commerce in the BRICS countries, about the importance of stimulating this process. As a result of the study, the advantages and bottlenecks of e-commerce, as well as the main directions of its development in the BRICS countries, were identified.

Keywords: E-commerce · BRICS cooperation · China.

1 Introduction

An important place in solving the economic problems of the BRICS countries, in transforming the industry and creating jobs is assigned to the e-commerce (BRICS E-commerce Cooperation Initiative, 2017).

United Nations Educational, Scientific and Cultural Organization defined digital literacy as «the ability to access, manage, understand, integrate, communicate, evaluate and create information safely and appropriately through digital technologies for employment, decent jobs and entrepreneurship. It includes competences that are variously referred to as computer literacy, ICT literacy, information literacy and media literacy» (UNESCO, 2018). The involvement of citizens in digital society leads to the growth of social and material wellbeing, including through the availability of e-commerce.

The highest rate of Internet penetration among the BRICS countries was in Russia - 74%, and the lowest - in India - 40%. In China, the rate was 56%, lower than in the US, where Internet penetration was 68% (Our World in Data, 2020). But China has the highest share of online shoppers among the BRICS countries (74%). In Brazil, Russia and India, less than half of Internet users are engaged in e-commerce. In 2020, the share of e-commerce to GDP in China was 16.82%, in Russia and India it was 2.86% and 2.47%, respectively. In Brazil and South Africa, this indicator was 1.47% and 1.44%, respectively.

During the study, the authors hypothesized that e-commerce affects the economic development of the BRICS countries. As a result of the analysis, the role of e-commerce in the development of the

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economies of the BRICS countries was determined. Finally, the positive impact of e-commerce on GDP growth in China, India and Russia was confirmed.

Section 2 of the manuscript presents the materials and methods used in the study. Section 3 discusses the main directions of the formation and the results of the development of e-commerce in BRICS countries. Section 4 presents discussion. Finally, section 5 provides recommendations for the further development of e-commerce in the BRICS countries and proposals for future research.

2 Materials and Methods

In research work to solve the hypothesis that the expansion of the e-trade will help solve economic problems, we used the following scientific methods. In determining the importance of the development of e-commerce, an integrated and systematic approach was used. The method of statistical analysis was used to determine the development of trade cooperation of the BRICS countries. The analytical grouping method and abstract-logical assessment method were used in the analysis of the economic development of BRICS countries. When identifying the volume of e-commerce in BRICS countries, a comparative analysis method was used. To confirm the hypothesis about the positive impact of e-commerce on the development of the economies of the BRICS countries, authors conducted correlation and regression analysis.

The development and implementation of e-commerce in BRICS countries are still at an early stage. We also analyzed not only the scientific literature, but also from personal experience. For example, by participating in international conference in China (in Beijing, Nanjing, Shanghai, Shenzhen).

3 Results

China ranked first in the world e-commerce. Its online sales are estimated at US\$ 1.934 trillion, 3 times that of the United States. The Chinese e-commerce market is one of the fastest growing (average 35% per year over the last 4 years - from 2015 to 2020) (Business.com, 2020).

The growth of e-commerce has been influenced by such innovative technologies as the Internet of Things, cloud computing, artificial intelligence, etc., as well as the implementation of deferred demand, which was formed among buyers during the first month of quarantine.

If in 2018, the share of e-commerce in total retail sales in China was 28.6%, but in 2020, it increased to 29.9%. For comparison, the US e-commerce share was 7.5% (Business.com, 2020). The largest Chinese online sales companies are Alibaba Group and JD.com. The number of e-commerce users in China exceeds 100 million (Alibaba Group, 2020).

The Russian e-commerce market, ranked tenth among the Top world's leading markets, is at a development stage. In 2019, its volume amounted to US\$ 26.9 billion. Although the country has the largest number of Internet users in Europe, the volume of e-commerce in 2018 was only about 2 %, in 2019 - 4% of the total retail sales. In the first half of 2020, this indicator for the first time amounted to 10.9% or 1.654 trillion rubles (approximately US\$ 23.6 billion), which is almost 2 times more.

A pool of the most popular marketplaces is gradually being formed in Russia. Now it includes AliExpress (China), from domestic marketplaces - Wildberries, Ozon, Lamoda are in the lead in terms of attendance. Marketplace products are delivered across Russia, Belarus, Kazakhstan.

To identify the positive and negative aspects of the activity of the Russian e-commerce market, we conducted a marketing research, which was attended by 3881 people from 10 countries of the world making purchases on Russian marketplaces. The bulk of the respondents (80%) noted that they choose Internet trading due to: a) a wide range of products offered; b) fast delivery; c) a convenient interface of marketplaces; d) a convenient return policy; e) the ability to compare and select the price of one and the same product from different sellers, and also; e) due to lower prices on marketplaces than in real shopping centers; g) the possibility of saving personal time and freeing it up for self-development; h) during a pandemic - the ability to avoid contacts with a large number of people in supermarkets and shopping centers.

At the same time, more than 60% of Russian online shoppers state that they believe that the cost of delivery of goods is high. Russian Internet consumers still prefer to pay for goods with cash on

delivery, i.e. make payment for the goods after receiving them (40% of the respondents), as they do not trust to the end sales via the Internet. It was noted that when making purchases through PayPal, Yu-money or other platforms, they have to pay an additional commission for the transfer of funds.

Brazil is a leading South American country in the development of e-commerce. Over the past three years - from 2016 to 2019, the volume of e-commerce in Brazil increased 1.4 times and amounted to US\$ 12.24 billion in 2019. The share of e-commerce in total retail sales was 2.8%. In the first five months of 2020, Brazil's e-commerce volume grew 56.8% from a year earlier, reaching R\$ 105.6 billion (US\$ 20.50 billion) (Pagbrasil, 2020). B2W Digital is the leader in e-commerce in the country. It accounts for about half of the total online sales market in Brazil (B2W Digital, 2020).

Leading categories of goods bought on international sites: electronics, software, fashion and accessories, mobile phones, toys and games, cosmetics and products personal hygiene, car accessories, books, interior items and jewelry, goods for sports and recreation. Brazilian Internet users buy not only Brazilian goods, but also goods from the USA, China, and Germany.

In 2020, *India's* e-commerce business had 330 million online shoppers. The development of the digital economy, the provision of cheap Internet to the population, the growth in the use of smartphones contributed to the development of Internet commerce in the country. In terms of e-commerce, India was ranked ninth in the world in 2019. India's e-commerce volume was US\$ 64 billion in 2020 (1.8 times more than in 2018). India's online trading volume was increase to US\$ 84 billion in 2021 (IBEF, 2020). By 2027, the country plans to increase its volume to US\$ 200 billion (Morgan Stanley, 2020).

Indian e-commerce participants, like Russian ones, prefer to pay for goods mainly in cash after delivery (57%), only a quarter of purchases are paid by credit cards (26%). The main reason for Indian consumers to shop online is convenience, discounts and lower prices, as well as a convenient return policy and on-time delivery. The main countries from which goods were imported are the United States, the UAE, Hong Kong, China, UK.

South Africa is the 37th largest e-commerce market in the world (US\$ 3billion revenue in 2019, up to US\$ 4.062 billion in 2020, and expected to grow in 2025 up to US\$ 6.305 billion US dollars). The average cost per customer in e-commerce doubled over 2015-2018 to US\$ 157. The main payment methods are credit card (67%) and bank transfer (20%). Mostly food is bought on the Internet.

To confirm the hypothesis about the positive impact of e-commerce on the development of the economies of the BRICS countries, authors conducted correlation and regression analysis. As a result, real and positive prospects were identified in China, India and Russia. Linear regression model revealed that in India, a US\$1 increase in the volume of e-commerce will, on average, lead to a US\$5.7 increase in India's GDP, in China - to US\$ 2,3 increase in China's GDP, in Russia - to US\$ 2,1 increase in Russia's GDP. On the other hand, regression analysis showed that the increase in e-commerce has not yet had any impact on the development of the economies of Brazil and South Africa. They need to pay more attention to the development of e-commerce in their countries.

4 Discussion

To substantiate the recommendations on expanding the influence of e-commerce in the BRICS countries on their economic growth, we reviewed a number of economic studies by scientists from around the world. Japanese researchers concluded that the share of e-commerce use differs by product type. If grocery products showed significant growth during the pandemic, on the contrary, machinery and software showed only a small increase (Kawasaki T., Wakashima H., Shibasaki R., 2022). Spanish economists note that the determining factor in e-commerce is the development of trust, which encourages the use of all digital resources (Fernandez-Bonilla F., et al, 2022). Chinese economists note that e-commerce is becoming increasingly important in life. They proposed a study that will help e-commerce platforms and retailers develop effective strategies to increase consumer interest in real-time online shopping. (Zou M., et al., 2021). Some scholars (Shirazi F., et al., 2022) concluded that the growth of e-commerce is greatly facilitated by the exchange of information between consumers on electronic social commerce platforms. Jordanian researchers (Al-Adwan A.S., et al.,

2022) analyzed e-commerce using Structural Equation Modeling (PLS-SEM) and concluded that online customer satisfaction is affected by service quality, payment options, return policies, and electronic logistics services (LSQ). All this helps to increase customer confidence, their repeated online purchases. A special place is given by researchers to the need to promote the coordinated development of rural e-commerce and the revival of rural areas. Chinese researchers (Wang H., et al., 2022) noted that e-commerce can significantly reduced agricultural pollution from non-point sources, which are an important factor in systemic environmental pollution and directly threatens the sustainable development of agriculture, the health and safety of the population. The development of e-commerce is especially important for the development of remote and depressed rural areas.

5 Conclusion

The analysis made it possible to determine recommendations for the development of electronic commerce in the BRICS countries: a) Creation of a unified concept of e-commerce; b) integration of e-commerce markets of the BRICS group of countries; c) implementation of innovative technologies to improve the quality of customer service, increase the speed of data collection; the use of cloud computing; the use of artificial intelligence; d) development of joint technologies for the authentication of cross-border electronic transactions; e) standardization of electronic commerce methods (informational, operational, postoperative, personalization of the service); simplification of the ordering procedure; helping small businesses organize an e-commerce business); f) organization of a unified database of electronic commerce between the BRICS countries.

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