Analysis of the World and Russian E-Commerce Market: Development Trends and Challenges

Elena Vladimirovna Pavlova1, Anna Aleksandrovna Silayeva1, Oksana Nikolaevna Borisova1, Irina Gennadiyevna Doronkina1, Antonina Pavlovna Sokolova1

1Russian State University of Tourism and Service, Glavnaya St., 99, village Cherkizovo, Pushkin district, Moscow region, 141221, Russia

*Corresponding author E-mail: pavlova_e_v@mail.ru

Abstract

The informational support of the society and its constituent parts from individuals to organizations and states leads to speeding up the decision-making process, and, consequently, to speeding up the process of movement of goods and services which are now being carried out via the Internet. There is no doubt that electronic commerce (e-commerce) will become one of the dominant types of trade and one of the promising components of the "new economy" in the foreseeable future.

The popularity of e-commerce is growing rapidly under the influence of various factors and now we cannot imagine the modern world without online stores and all kinds of mobile applications that help to make purchases at all levels. It goes without saying that e-commerce (online trade) will develop most rapidly in the most technologically advanced countries, such as the states of Europe, North America, Japan and China, having their own characteristics depending on national, demographic and other factors. The Russian government that tried to modernize the country has been shown a high rate of development of information technology and e-commerce over the past 15 years, but just in the European part of the country to a greater extent; it is related to the demographic state of the country. But the expansion of industry in the East (construction of new roads, ports, factories, agro-industrial and military-industrial complexes) creates a favorable environment for business in general and for e-commerce, in particular. The investment attractiveness of the Far East region also plays an important role. The changing way of life of the population and the technological breakthrough create new information and technological nation-wide economic environment that develops in close connection with the world economic development trends experiencing their influence, and in turn influencing them.

Keywords: E-commerce; Economy.

1. Introduction

In economic and educational literature, as well as in political journalism, the concepts of "electronic business", "electronic commerce" and "e-commerce" are in fact recognized as synonyms. The terms such as "e-commerce" and "e-business" were first used at the end of the 20th century by leading corporations in the sphere of production of computer equipment and software (IM, etc.), and organizations engaged in researching the dynamics of the development of IT technologies (Gartner Gr., etc.). They considered these terms as rationalization of industrial and economic activities of enterprises through digital technologies [1]. Such experts as K. Fellenstein and R. Wood note that the peculiarity of e-business is the "use of electronic communication networks that allow commercial enterprises to transmit and receive information" [2] while emphasizing the specifics and importance of information exchange between commercial enterprises.

In the Middle Ages, a buyer went to a seller with silver in his wallet during the completion the trade agreement. He negotiated, and then took the goods having paid cash. Later, a telephone has appeared with the help of which negotiations were conducted, information was received about the market in other regions, and then, at the meeting, a buyer and a seller both came to a final agreement in detail and a contract was concluded face to face or by proxy [3].

We have the twenty-first century now. By pressing one button, you can find out about a lot of goods and services all over the world (the level of education of people becomes important here), you can determine their approximate list and, based on the market situation and other factors, make an order, and then pay for all this keeping seat.

That is, IT-technologies allow you to analyze the market and make appropriate decisions quickly and efficiently. Now with their help and because of the overall computerization of the population in the world's leading countries, a large amount of economically active population is involved in business and commerce [4].

2. Methods

The issues of organizing e-commerce using innovations are very relevant. The importance of the research is reinforced by the fact that the application of the experience of the developed Western countries is limited by peculiarities of the modern Russian economy. The rapid development of the Internet, the annual increase in the number of its users makes it necessary for entrepreneurs to look for new methods and ways of developing their business and applying the latest Internet technologies.

When conducting the study of the e-commerce market, such methods of cognition as analysis and synthesis, comparative analysis, generalization, systematization and others were used.

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The information base of the study is some legislative and regulatory acts of the Russian Federation, the All-Russian Public Opinion Research Center (VCIOM), the National Association of Electronic Commerce Participants (NAUET), the Russian Association of Electronic Communications, the EU Network of Excellence Knowledge Web European organization, world advisory companies Kommersant, Morgan Stanley, News, Data InSight, analytical companies Gartner Group, IDC, Forrest Research, domestic and foreign monographs and periodicals concerning the research topic.

3. Results

Currently, there is an active development of the e-commerce market despite any factors and phenomena that affect it negatively. The average world rates of growth of the e-commerce market according to eMarketer, an economic research agency, fluctuate in the range of 18-20%. This is about 3-4% of the total retail in Russia and 10-12% in the US and other highly developed countries. The average level of the e-commerce market is about 6% globally. This trend is graphically shown below (Figure 1) [5].

![SHARE OF E-COMMERCE SEGMENT](image1)

**Fig. 1:** The e-commerce market in the world in 2012 - 2017, the Y-axis shows the sales of world-wide online stores in billions of dollars [4]

Now the share of relocatable purchases is about 10% in the developed countries like Russia, and it can reach 25% in some highly developed countries such as US and Canada. This segment of the market is growing faster than others. This means that if a store does not have the appropriate software for electronic transactions, it loses about a quarter of consumers (Figure 2).

![SHARE OF E-COMMERCE SEGMENT](image2)

**Fig. 2:** The share of e-commerce for retail sales in 2016, % [4]

According to the data for 2016, the average percentage of e-commerce in Western countries is 6.5%. As for indicators of Internet trading in the BRIC states, the mark is about 5% here [6]. At the end of 2016, the report about the state of e-commerce in Europe was published by Ecommerce Europe, the European association that consolidates similar associations in many countries. This report contains the facts, trends and indicators of the e-commerce market in the countries of the European Union, as well as other European countries including Russia, Turkey, etc. We can draw the following conclusion based on the report data: Europe is the largest market for electronic transactions in the world. According to the data for 2016, the e-commerce market has increased by 16.3% (496 billion); if we take the EU only the data are as follows: 14.7% and 434 billion dollars. The European index exceeds the American one ($430.8 billion according to the estimates of the same association) and the PRC (People’s Republic of China) indicator ($337.8 billion). As broadly understood, about 645,000 online businesses operate in Europe including the Russian Federation and Turkey. The number of parcels and post packages sent by them is more than 3.7 billion for 264 million consumers from Lisbon to Kamchatka.

The size of the market is of no small importance. 10 largest e-commerce markets account for about 85% of the entire European market. For all that, more than 60% of the total market in Europe are markets of the UK, Germany and France. The reason is that investors prefer to invest in markets that are already developed, when Internet purchases are familiar to consumers. It should be noted that the volume of the national economy is not always related to the size of the e-commerce sector. For example, in 2015 Britain took the first place in Europe keeping ahead of Germany with its large population and prosperity. The British are the most active Internet consumers in Europe. The average cost per person was $3.6 thousand in 2016. This figure may increase by 14% this year to the mark of 4.1 thousand dollars [7].

The reason for such indicators is that e-commerce in Britain began to develop in the mid-1990s. It was this market that the first large Internet corporations entered in. The Royal Mail postal service was established that was efficient enough to deliver parcels. According to the data for 2016, the e-commerce market of Russia took the fourth place in Europe after Britain, France, Germany, Spain and italy. It should be noted that European agencies and associations give a higher estimate of this market ($21 billion) than Russian associations such as AKIT ($17.1 billion). The size and prospects of the market make it quite attractive for Russian and foreign Internet sellers. The size of the Russian e-commerce market exceeds almost all European markets (Figure 3) [8].

![SHARE OF E-COMMERCE SEGMENT](image3)

**Fig. 3:** The e-commerce market abroad, billion dollars [4]

The state of the e-commerce market according to the PayOnline research center in 2016. The distribution of the places of the leaders of the e-commerce market is as follows (Table 1) [9]:

<table>
<thead>
<tr>
<th>Leading countries in the e-commerce market</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. China</td>
</tr>
<tr>
<td>2. USA</td>
</tr>
<tr>
<td>3. Great Britain</td>
</tr>
<tr>
<td>4. Japan</td>
</tr>
<tr>
<td>5. Germany</td>
</tr>
<tr>
<td>6. France</td>
</tr>
<tr>
<td>7. South Korea</td>
</tr>
<tr>
<td>8. Canada</td>
</tr>
<tr>
<td>9. Russia</td>
</tr>
<tr>
<td>10. Brazil</td>
</tr>
</tbody>
</table>

The PRC has the first place. The total e-commerce market amounted to 562.66 billion dollars in 2016. About 33% of purchases are made using mobile devices, 67% – from stationary PCs. The average age of a consumer of Internet goods/services is 25 years. Online shopping is a high developing sector in the PRC. The United States has the second place. The volume of the US e-commerce market amounted to 349.06 billion dollars. About 13% of transactions are performed from tablets, 15% – from smartphones, 72% – from PCs. Consequently, Americans prefer to do their shopping via PCs. More than 70% of small and medium-sized companies do not trade online.

Great Britain has the third place. The volume of the e-commerce market was $ 3.9 billion in 2016. 12% of purchases are made from tablets, 16.5% – from smart-phones, and 71.4% - from PCs. One
Market will also grow. The increase in the number of users involved, the e-commerce level of 90% of the population of each of these states. Along with reaches the same level, then it will add about 26 million new online consumers is 77% for the European Union. If Russia has increased by 30%. Books and electronic goods take the first place in the world among Internet sales.

Finally, Brazil ranks 3rd. The volume of the e-commerce market is $42.6 billion. 8.1% of purchases are made from tablets, 11% – from smart-phones, 80.8% – from PCs. The share of population of France involved in the "World Wide Web" is 68%. Almost 20% of French purchases are made in foreign websites.

South Korea has the seventh place. The volume of the e-commerce market is $36.7 billion. 1% of purchases are made from tablets, 50% – from smart-phones, 49% – from PCs.

Canada has the eighth place. The volume of the e-commerce market is $28.7 billion. 7.5% of purchases are made from tablets, 8.7% – from smart-phones, 83.8% – from PCs. 45% of purchases are made in foreign websites.

Russia has the ninth place. The volume of the e-commerce market is $20.3 billion. 12% of purchases are made from tablets, 8% – from smart-phones, 80% – from PCs. Only about 13% of Russians order online. The most popular way of payment is cash on delivery.

Finally, Brazil ranks 3rd. The volume of the e-commerce market is $18.8 billion. 4% of purchases are made from tablets, 8% – from smart-phones, 88% – from PCs.

The US e-commerce market has grown by 25% over the past 2 years. During the same period, the e-commerce market in the EU has increased by 30%. Books and electronic goods take the first place in the world among Internet sales.

The e-commerce market in the Russian Federation is still the market with a great potential for growth. Currently, only 59% of Russians or about 84 million people use it. The average level of online consumers is 77% for the European Union. If Russia reaches the same level, then it will add about 26 million new Internet users. Scandinavian countries have an indicator at the level of 90% of the population of each of these states. Along with the increase in the number of users involved, the e-commerce market will also grow.

Economic problems can cripple the growth of the e-commerce market. It means, the fall in the level of own production generates an increase in imports.

For example, in 2015, there was a decline in production in Spain that was caused by economic crisis (GDP reduction was slightly more than 1.2%). This gave rise to unemployment – 26%. However, the positive dynamics of e-commerce remains unchanged. The rate of its growth has decreased from 18.8% to 11.1%, but more than a third of all electronic turnover in Southern Europe has been in Spain [11].

M-Commerce (mobile commerce) has increased by 22.7% or to $ 4.2 billion. This was due to the fact that Spanish consumers have become more preferable to purchases via the Internet where prices are lower, as a rule. Even in Portugal and Greece, despite all economic problems, e-commerce continued to grow.

Approximately 72% of all European Internet users are users of social networks as well. This means that the distribution of content and social marketing are very important for Internet sellers since social networks give them new opportunities to attract new customers and increase incomes [12].

4. Discussion

Thus, it should be noted that the largest turnover of e-commerce according to 2016 data falls on the PRC. The fall of the e-commerce market abroad is not expected, since most major market players in developed countries rely on e-commerce. Currently, all companies have a developed plan for getting an access to sales via the Internet. Over time, more and more Western companies will open representative offices, warehouses and delivery systems in Russia similar to such companies as eBay, PayPal, etc.

If we consider the situation in the e-commerce market in Russia for 2016, it reached the level of $650 billion or increased by 10.5% compared to the previous year. Totally, Russians committed transactions for about 160 million in the domestic e-commerce market. That is 10% more than in previous year. The average cost of the order in 2016 was 4050 rubles, and 3750 rubles in 2015 [6]. The dynamics of the market growth are shown in Figure 4.

Essential goods, such as clothing, footwear, food products and goods for children showed the highest growth rates. As for sales of electronics, household appliances, cosmetics and perfumes, their share has decreased.

The total volume of cross-border trade in Russia as of 2016 in the e-commerce market amounted to $3.4 billion. The sales grew by 55% compared to the previous year. As a result, the volume of the cross-border trade amounted to about 24.5% of the total Russian e-commerce market at the end of 2016 [5].

The volume of the domestic e-commerce market in Russia is shown in Figure 5.

The total number of cross-border sales in 2016 is 135 million purchases. Despite transportation costs, most of the goods are also profitable to buy in foreign online stores. In terms of economic crisis, it is much more profitable for Russians to buy goods in Chinese online stores than in Russian ones. The reason for this is price of goods. There is another reason why Russians prefer foreign online stores – poor choice of goods and commodity deficit.

Another reason for the popularity of foreign online stores is the current customs duties. Goods that cost more than 1000 euros with the weight over 31 kg fall under the customs duty.

Only Chinese electronic stores accounted for more than 80% of all purchases made by Russians in 2016. This indicator was at the level of 70% in 2015. The most popular categories maintain their original positions compared to 2015, that is, they did not change a lot (see Figure 6).
Fig. 6: The volume of the market and the forecast for the next 2 years, in billion rubles [10]

Five most popular categories of goods as of 2016 are the following ones [13]:
- Electronics and household appliances (147 billion rubles)
- Clothing, footwear (93 billion rubles)
- Computers, laptops and components (68 billion rubles)
- Spare car parts (38 billion rubles)
- Mobile phones (32 billion rubles)

According to the total number of orders, the fastest growing products in 2016 were the following categories: clothes and shoes (great number of cheap orders in foreign online stores), building materials, equipment and goods for sports and tourism (Figure 7).

St. Petersburg has shown the largest growth. It has increased its share from 9% to 11.5%. The stable growth was shown by the North Caucasian and Southern Federal Districts. The weakest growth was in the Ural and Volga Districts (Table 2) [6].

<table>
<thead>
<tr>
<th>District</th>
<th>Million people</th>
<th>Percentage, %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moscow</td>
<td>5.9</td>
<td>19</td>
</tr>
<tr>
<td>Northwestern Federal District</td>
<td>3.4</td>
<td>11</td>
</tr>
<tr>
<td>Central Federal District</td>
<td>9.1</td>
<td>29</td>
</tr>
<tr>
<td>Southern Federal District</td>
<td>4.1</td>
<td>13</td>
</tr>
<tr>
<td>Urals Federal District</td>
<td>3.5</td>
<td>11</td>
</tr>
<tr>
<td>Volga Federal District</td>
<td>6.0</td>
<td>19</td>
</tr>
<tr>
<td>Siberian Federal District</td>
<td>4.0</td>
<td>13</td>
</tr>
<tr>
<td>Far Eastern Federal District</td>
<td>1.0</td>
<td>3</td>
</tr>
</tbody>
</table>

It is surprising that Moscow’s share proved to be quite stable in the total volume of the market; it managed to remain at the level of 19%, as it was a year earlier.

Table 3 shows the statistics of buying activity in the cities of the Russian Federation. This so-called Top-20 has not changed. However, some cities still changed their position [6].

<table>
<thead>
<tr>
<th>City</th>
<th>Share of purchases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moscow</td>
<td>40.1%</td>
</tr>
<tr>
<td>Saint Petersburg</td>
<td>11.5%</td>
</tr>
<tr>
<td>Yekaterinburg</td>
<td>4.6%</td>
</tr>
<tr>
<td>Novosibirsk</td>
<td>3.1%</td>
</tr>
<tr>
<td>Krasnodar</td>
<td>2.3%</td>
</tr>
<tr>
<td>Samara</td>
<td>2.0%</td>
</tr>
<tr>
<td>Nizhny Novgorod</td>
<td>2.0%</td>
</tr>
</tbody>
</table>

The largest increase in the total number of online stores in 2016 occurred in product categories such as home goods, construction materials, equipment, and gifts. In these categories, the increase in the number of stores was 15-25% compared to 2016. The reason is simple, the demand for these categories of goods has increased (the same categories were leaders a year earlier).

As a result of new entrants, the situation is as follows: high rollers become giants with a huge choice of goods. Shops of medium grade try to grow and adapt to new conditions. As for small shops, they try to survive. In addition, new entrants from off-line sales come to the market.

As we already mentioned, the biggest change was in St. Petersburg. Yekaterinburg has changed this indicator from 5.8% to 4.6%, Chelyabinsk – from 2.5% to 2%. It should be noted that the share of the Ural Federal District is not related to the decline in the number of orders or the market turnover. This is due to low rates of growth because of the fact that the market is quite "old", and also because of the small increase in the number of new customers.

Those people who have never used any online services are concentrated in small towns and villages, and this is about 78% of users from that kind of settlements. In the case of Moscow and St. Petersburg, the situation is completely different – about 57% of users.

Table 4: Number of online stores [14]

<table>
<thead>
<tr>
<th>Number of stores</th>
<th>Average annual turnover of a store (rub.)</th>
<th>Total turnover (rub.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large</td>
<td>50</td>
<td>4,000,000,000</td>
</tr>
<tr>
<td>Average</td>
<td>950</td>
<td>200,000,000</td>
</tr>
<tr>
<td>Small</td>
<td>6,500</td>
<td>20,000,000</td>
</tr>
<tr>
<td>Micro</td>
<td>35,400</td>
<td>2,600,000</td>
</tr>
</tbody>
</table>

The study revealed the following results [6]:

- Large (from 1,000 orders per day);
- Medium (50 orders per day);
- Small (10 orders per day);
- Micro (less than 10 orders per day).

Onlive, an IT development company, conducted the survey where participants were asked to identify the items they had purchased for the first two months of 2017. This study revealed the following results [6]:
The category "Clothing and footwear"; 41 per cent, became a popular product category among the participants. "Cosmetics, perfumery" has the second place – 28%. "Phones, tablets and other electronics" has the 3d place – 25%. "Goods for children" category has the 4th place – 20%. It is interesting that this category was first found among five leaders. "Books, music, software" has the 5th place – 18.9% (Figure 8).

As a result of the crisis in the Russian economy, consumers began buying cheaper goods, although the number of average purchases was almost unchanged [15]. This feature is noticeable in the study of the purchasing power of the well-off section of the society. In the case of high-income clients, most of them have not changed their choice of goods despite price changes. Even before the crisis, the quality of the product was the most important thing for most consumers. Then price goes. Now, in the context of Western economic sanctions against the Russian Federation, the main criterion for the choice of goods became price [16]. A huge achievement for online retailers became an increase in the level of credibility for e-shops. The Synovate Comcon studies confirm trends in this process [8]. Half of the interviewed participants noted that the level of credibility for online shops was high. The number of consumers who prefer to choose online and then go to a regular store to buy this item has been reduced from 25% to 20%. And the number of those who choose offline but buy online has grown by 3%.

5. Conclusion

Thus, it should be noted that the share of e-commerce in the Russian Federation in the total volume of retail sales was about 2.5% in 2015 and increased to almost 3% in 2016. The first places according to this indicator have Great Britain and China: 13.5% and 15.2%, respectively. The Russian Internet has about 72 million users. Only about 31 million of them order in electronic stores (27% of the adult population of the Russian Federation). In 2015, the share of consumers buying goods via the Internet was 38%, and 43% - in 2016. The most commonly ordered items are electronics (43%), clothing and accessories (17%) and spare parts (10%). The average cost of a consumer in online stores is $701 per year.

In addition, there are also some trends in e-commerce in Russia:

- Legislation concerning cross-border trade becomes more stringent;
- The steady growth of mobile purchases, the fall in demand for electronics;
- Luxury goods segment "gives ground" against the backdrop of growing demand for clothing and footwear;
- Sports goods, gifts, and groceries are the most promising products.

The audience of the Russian Internet community is the leader in Europe and it has the greatest potential for growth [17]. The number of buyers via the Internet grows steadily by 20-25% per year.

Forrester, which is engaged in research and forecasting including the area of Internet consumption, has published the data up to 2020 for e-commerce in the Russian Federation, the USA, Poland and the Asia-Pacific region: “Forrester Research Online Retail Forecast, 2015 to 2020” [12]:

- Russian and Polish markets are ones of the fastest growing markets in Europe. The number of online users will constantly grow in the next 5 years.
- The most popular products in Russia and Poland are clothes, shoes and household appliances.
- The main features of e-commerce in the Russian Federation are quite high transportation costs; the most popular type of payment is cash on delivery, the popularity of orders in foreign online stores.

- Based on the report data, the share of online sales in countries such as Australia, India, China, Japan and South Korea will increase to 1.4 trillion dollars in 2020, with a rate about 15% per year.
- China is the largest e-commerce market that accounts for about 80% of sales in its region. According to forecasts, the mark should increase to 1 trillion dollars by 2019.
- The main factors contributing to e-commerce growth are the increasing number of mobile users as well as investments.
- By 2020, the share of purchases through smart-phones will increase to almost 70%. The indicator is 46% in 2015.
- The most popular products in online stores are clothes and shoes (20%).
- More than half of US online sales will increase to about 520 billion dollars by 2020; the growth rate is about 9% per annum. Mobile devices will give a strong impetus to the development of online sales. In 2020, the number of users who make purchases using gadgets should grow at times [13].

Proceeding from the above-mentioned information, we can draw the following conclusion. The share of e-commerce in the country's economy is steadily growing in Russia. Against this background, all the necessary infrastructure is being created, the legislative base is being improved, new electronic services are being created. However, it should be noted that there are still problems that impede the development of e-commerce in our country. This is mainly a low level of involvement of the population and organizations online. Therefore, the growth rates of commercial organizations and their number are insignificant for the Russian economy.

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