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CRISIS PHENOMENA AS AN INCENTIVE TO INTENSIFY E-COMMERCE OF THE ENTERPRISE

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ABSTRACT

The latest global crisis has negatively affected the global economy as a whole, but it has had a stimulating effect on e-commerce. Electronic commerce around the world has intensified with a breakthrough in sales and transactions. While virtually the entire world has imposed restrictions to contain the spread of the pandemic, Internet technology and e-commerce have helped many enterprises stay afloat and the impetus for a massive transition to online. Today, global digitalization allows you to make purchases without leaving your home. At the same time, customers get a complete picture of the product using modern IT technologies, such as AR & Video Consultations, Voice robots and Assistants, make payments using new payment systems, and receive the goods as soon as possible. At the same time, e-commerce faced several challenges.

The article examines the trends in the development of e-commerce in the world and the correction of the share of e-commerce in total retail sales in connection with the crisis. Changes in the structure of the e-commerce market of enterprises under the influence of the crisis phenomena are noted. The article identifies the main problems that e-commerce enterprises faced during the last global crisis and the ways to solve them.

Technological trends in the global e-commerce market are noted, such as chatbots, blockchain, artificial intelligence, mobile commerce, etc. The article also indicates the main trends in the development of e-commerce under the influence of the crisis. These tendencies are aimed at creating conditions that will quickly or even automatically close the questions and doubts of the user regarding the purchase of goods in the online store and at attracting the most "hot" visitors.

The surge in e-commerce due to the crisis has led to increased online businesses and increased competition. Each salesperson fights for a customer, and searching for solutions to win customers generates new trends in online sales.

The article highlights the following trends that are necessary to maintain positions in e-commerce: process automation; focus on m-commerce; the use of voice assistants and robots; the use of new different payment methods, including new ones; organization of fast delivery, etc.

Keywords: Chatbots, Crisis, Customer Data Platform, E-Commerce, Online Scam.

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1. INTRODUCTION

Since the creation of the first Amazon online store by Jeff Bezos in 1994, a new form of trade has emerged that actively uses the capabilities of the electronic Internet network, which quickly became a phenomenon of the global economy as a whole.

At the beginning of 2021, 59.5% of the world's 7.83 billion people use the Internet, 66.6% – mobile communications, and about 53.6% – social networks, with the majority using e-commerce platforms [1].

The widespread use of e-commerce is facilitated by the development of new technologies that provide simplicity and ease of any online shopping, the constant growth of the number of online store sites available at any time of the day, the provision of complete information about the product and an increase in the level of protection of the rights of the buyer. B2C trade (from business to consumer) without intermediaries in the form of retail chains provides lower prices for goods and saves customers time and money. The rapid growth of online shopping has led to a structural change in global trade, changing the online and traditional (offline) trade ratio. Manufacturers sell products directly to customers, bypassing a long chain of distributors, wholesalers and retailers.

E-commerce is the process of buying, selling, transferring or exchanging products, services and information using electronic means of communication [2; 3].

Goods and services are ordered over computer networks, and payment and delivery can be made online or offline. This represents a complex and ever-expanding range of economic activities. It includes, for example:

- transactions between businesses (B2B), between businesses and individual consumers (B2C), as well as between governments, businesses and citizens (G2B, G2C);

- direct provision of services that can be digitally traded, as well as facilitation of ongoing and additional trade in goods;

 international trade between continents and across land borders, as well as domestic operations, both wholesale and retail;

- transactions made through global platforms such as Amazon and Alibaba, through regional intermediaries such as Jumia in Africa, Lazada in Southeast Asia and Mercado Libre in Latin America, through wholesalers and retailers' own online domains, and through small transactions between business entities and individuals [4; 5; 6].

The share of people worldwide with an Internet connection is estimated to have grown from 29.3 per cent in 2010 to 53.6 per cent in 2019. Global Internet Protocol traffic, which is a proxy for data streams, has grown from about 100 gigabytes per second in 2002 to nearly 88,000 gigabytes per second in early 2020. As the pandemic spreads throughout the year, with increased traffic generated by teleworking, video conferencing, digital entertainment and other applications, the figure is now estimated to exceed 100,000 gigabytes per second.

E-commerce is an ever-growing field. With the increasing purchasing power of consumers worldwide, the proliferation of social media, and the ever-evolving infrastructure and technology, the future of e-commerce will become even more dynamic.

2. LITERATURE REVIEW

Many scholars have studied the rise of ecommerce. The following studies are worth highlighting: S. Arora describes the transformation of e-commerce into green e-commerce [7], H.D. Tran - a transformation of E-Commerce to M-Commerce [8]. H.T. Nguyen et al. introduced the current situation of competitiveness of e-commerce businesses in Vietnam besides the opportunities and challenges in this business field [9]. Khmara & Samotuga studied the modelling of e-business development, namely, the creation of adaptive economic and mathematical models to form an effective program for the development of Internet companies [10]. S. Nivas was engaged in identifying the role of e-commerce in modern business [11]. S. Hrytsenko considered the factors and directions of e-commerce activation and proposed the mechanism of economic modernization of Internet business processes [12]. E. Tereshchenko studied e-commerce as a means of increasing the competitiveness of companies because it allows you to use the achievements of scientific and technological progress in the field of information and communication technologies, thus enabling businesses to quickly and without intermediaries find a commercial partner with minimal transaction costs [13]. However, despite the depth of research, the works have not analyzed the impact of the crisis on the electronic commerce of an enterprise. It is the study of the effect of crisis phenomena, such as, for example, Covid-19, on the

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electronic commerce of an enterprise that is the purpose of the study.

3. IMPACT OF THE CRISIS ON E-COMMERCE

The international crisis caused by COVID-19 has negatively affected the global economy as a whole, but it has had a stimulating effect on e-commerce. The growth in demand caused the prices of many goods to rise; some even disappeared from warehouses for a short time.

Electronic commerce in the days of self-isolation around the world received a powerful impetus and incentive to revitalize. Many shops, almost all service enterprises, cafes and restaurants were closed, and e-commerce services became the only way to stay afloat, save at least part of their staff and keep their business. Perhaps, such several ecommerce services that appeared on the market during several months of early 2020 did not appear in the entire year before the corona crisis.

Earlier, for enterprises, e-commerce was, as a rule, just another channel for promoting goods and attracting a customer audience, primarily young and active, who spend a long time in their phones, now everyone, including retirees, had to get used to and learn to use digital services.

New research shows that international ecommerce retail sales will reach \$ 4.9 trillion by 2021. Ecommerce companies could grow 265%, from \$ 1.3 trillion in 2014 to \$ 4.9 trillion in 2021. This indicates a future sustained upward trend with no visible signs of decline, and the pandemic is only accelerating this process. This can be seen from the difference in forecasts before the crisis and after it (Fig. 1).

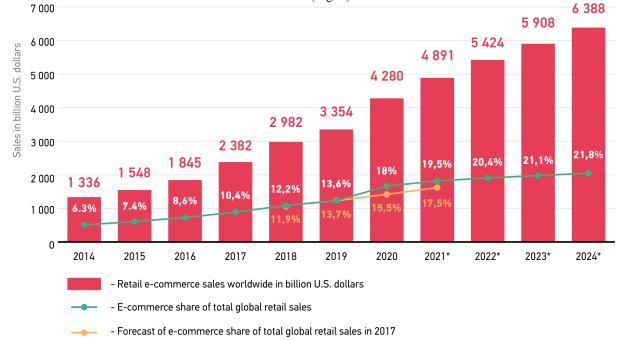


Figure 1: Retail e-commerce sales worldwide from 2014 to 2021 (in billion U.S. dollars) and e-commerce share of total global retail sales (developed by the authors based on data [14; 15;16])

E-commerce sales are steadily consuming the global retail market. In fact, e-commerce will account for 20% of the world's total retail sales by 2022.

This share is still a tiny fraction of global retail sales, but at the same time, it opens up more opportunities for future growth. To capitalize on this trend, physical stores need to build infrastructure on moving their businesses from offline to online. Businesses already on the Internet need to look for new ways to grow their brands further.

Online shopping is one of the most popular online activities worldwide [17]. The growth of digital retail in the Asia-Pacific region is closely linked to ever-improving online access, especially 15th October 2021. Vol.99. No 19 © 2021 Little Lion Scientific



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sharp change in demand structure and revealed other essential problems.

In addition to the problems caused by increased competition and the growing number of ecommerce participants, the intensification of ecommerce has led to other significant problems:

- an increase in online fraud;

- digital divide and problems with access to the Internet;

- limited analytics tools on online trading platforms;

- personal data protection, cybersecurity along with personalization and collection of maximum information about customers;

- increasing trust and transparency in e-commerce.

For example, if you take food, the overwhelming majority of retailers find it challenging to collect the necessary online basket of goods for delivery. For many items in the catalogues, the waiting times turned out to be very significant.

The excitement of the first few months of lockdown prompted businesses to radically improve their attitudes towards logistics, supply management, forecasting demand, and restocking.

Another change in business models under the influence of the crisis and rapidly growing e-commerce was the transition from B2B and B2C to a fundamentally new path - D2C - Direct-to-Consumer sales.

E-commerce has given businesses a unique opportunity to connect with customers around the world at any time. This means that they also have much more choice over who to sell to. For wholesalers and suppliers, this means they can sell directly to their end consumers to maximize efficiency and increase profits.

The trend towards the D2C model has been observed for a long time in the B2C field, but now it can be observed in the B2B market as well (Fig. 2).

work, introduced to combat the spread of the virus, have led to a sharp increase in demand for many goods and services. In China, Germany, Great Britain and the United States, e-commerce grew by 4-7% in 2020 [20]. Subsequently, sales growth decreased slightly in China and the United States but remained above the pre-pandemic level. Even in Latin America, the region with the lowest ecommerce rates, consumers on the Mercado Libre platform made as many purchases as they usually did in a year in just two months of quarantine.

on mobile devices, which have long struggled with

traditional fixed broadband connections due to

financial or infrastructure constraints but are taking

The e-commerce industry is in constant flux.

This, of course, introduces a particular fear and

uncertainty; the old classical model of work,

including the chain "warehouse – call centre – delivery", is gradually becoming a thing of the past.

Changes in the structure of the e-commerce market of enterprises under the influence of the

The COVID-19 pandemic, which led to a sharp

reduction in social contacts and the introduction of

isolation in many countries, has shown the

importance of developing e-commerce as a factor in

Restrictions on mobility, the transition to online

preventing the spread of infection [18; 19].

advantage of cheap mobile broadband.

One of the symptoms of the current crisis is the growing role of e-commerce in trade. Despite the forced nature, it reflects a new vector of retail development in general.

According to many experts, the post-crisis world will trade in a new way.

The current crisis has created an extremely mixed trading situation. On the one hand, it has stepped up e-commerce, and the role of online sales is growing even for those who previously used e-commerce as an auxiliary or image channel. On the other hand, the crisis demonstrated the unwillingness of even the most significant players to work in the face of a JATIT

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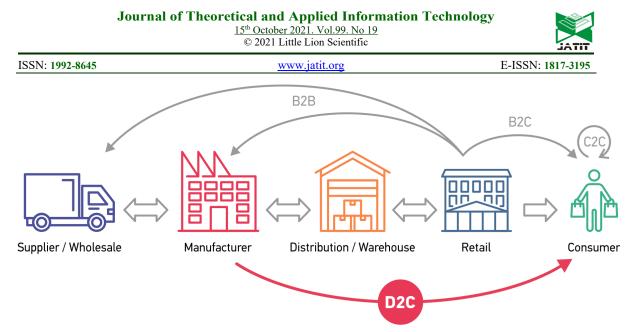


Figure 2: Changing business models towards B2B2C and D2C.

So the business can analyze and influence all communication channels with the user. Many large companies with a reputable name began to refuse even listing on marketplaces. Swedish Ikea said it did not intend to continue its pilot partnership with Amazon, which started in 2018. Previously, Nike (NKE), German footwear maker Birkenstock and smartphone mount maker PopSockets, ditched Amazon [21].

Many manufacturers still do not have their ecommerce, and if they sell products online, then on the platforms of aggregators or marketplaces specialized in product areas. Due to the increased importance of this channel, which previously occupied no more than 1-2%, many companies have to hastily start literally from scratch since they do not even have a description of the product position filled in for online sales.

However, systemic problems also exist on the side of trading floors. There is a lack of analytical tools built into the functionality of Internet sites and portals that would be available to sellers and brands and provide a clear picture of the sales funnel at the required level of detail.

Digital analytics and forecasting tools

Not all e-commerce sites today give a breakdown by how many people visited, how many met a specific product of a particular brand, how many clicks to view the product, and how many of them bought it. Not to mention, drawing an adequate portrait of buyers and who these people were is essential for clever marketing.

The crisis in this regard has become a considerable stimulus for development. Online

platforms and developers of marketplace platforms are introducing practical client analytics tools, which have become a must-have element of any online sales in post-crisis retail.

This caused a shift in demand for essential goods. People strive for cheaper consumption: low price categories, promotions, discounts. It has become much more challenging to work effectively in the new environment without digital tools.

Also characteristic of the crisis, e-commerce has become a tool that increases the accuracy of forecasting demand at a high level of targeting in shopping missions and locations. A high degree of data available for each aspect of sales and the ability to process them are required - providing appropriate IT platforms, using tools and methods of advanced analytics, artificial intelligence, etc. This, in turn, becomes an incentive for the next step - the emergence of demand for digital tools for ultimate developing user experience, а personalization and calculating discounts for a specific person.

The digital divide and Internet access problems.

The increased number of consumers turning to digital services has prompted both service providers and telecom operators to increase network capacity and offer better-priced or even free service packages. In the financial sector, several companies have independently taken steps to reduce mobile payment fees. The crisis highlighted the critical importance of the digital economy and the urgent need to bridge the digital divide both within and between countries, exacerbating existing challenges in accessing e-commerce opportunities from small 15th October 2021. Vol.99. No 19 © 2021 Little Lion Scientific

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Online scam.

countries.

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especially relevant in the face of uncertainty caused by the crisis. The lack of reliable information about the supplier becomes an obstacle in the case of a sharp restructuring of logistics flows and supply chains [22].

Blockchain platforms can act as reliable aggregators of such information, effectively reducing transaction costs in global trade.

The impact of the decisive phase of the COVID-19 pandemic could last for a long time, and ecommerce in goods and services will continue to adapt to the new environment. In the short term, the harmful effects of the pandemic for the entire segment will be more significant, and only the digital services sector and some specific categories of goods, the demand for which has increased as a result of the shock of COVID-19, will benefit from the crisis.

At the same time, the forced growth in demand for e-commerce has a rather short-term effect, and as restrictions ease, many customers begin to return to their more familiar offline purchases.

However, in the long term, this shock can provoke an acceleration of the ongoing digitalization of the shopping sector and, as a result, an increase in the popularity of e-commerce in general. This can, in particular, be expressed in more active growth of the influence of existing technological trends in e-commerce and the emergence of entirely new trends. Some of the current technology trends in the segment are shown in Fig. 3.

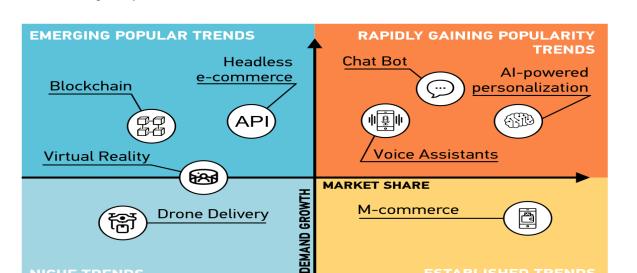


Figure 3: Technological trends in the global e-commerce market (developed by the authors)

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businesses, merchants and consumers in developing

Along with the surge in online shoppers, there have been widespread reports of fraudulent and misleading practices. Some online sellers offer counterfeit or low-quality products for sale and unreasonable price gouging practices to exploit abnormal growth in demand for certain categories of goods. Online consumer protection is one of the concerns deeply rooted in the COVID-19 pandemic.

Personalization and cybersecurity.

An essential method of attracting customers to ecommerce and retaining them as loyal customers are maintaining high account security standards. As it turns out, current approaches to personalizing web content, offers, pricing and promotions can also be used for account control and security needs, which has proven especially important in the face of widespread online fraud cases after the COVID-19 pandemic. Knowledge of user type, device characteristics, IP, geolocation and other user data can be used to determine the optimal cybersecurity strategy based on micro-segmentation.

One innovative approach to solving this problem uses artificial intelligence and machine learning algorithms to customize the experience of each ecommerce consumer by identifying and segmenting users based on common characteristics.

Blockchain solutions.

Blockchain solutions can be used to increase the level of transparency in trade, which has become

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Chatbots, voice assistants and personalization technologies based on artificial intelligence and data mining are at the peak of popularity now. In the context of accelerated digitalization, one can expect a rapid spread of trends that are still niche.

4. RESULTS AND DISCUSSION: E-COMMERCE DEVELOPMENT TRENDS INFLUENCED BY THE CRISIS.

The crisis phenomena that affected the whole world in 2020 became an unconditional incentive for the activation of e-commerce. Every week more and more businesses are launching online projects and entering the e-commerce sector.

Being among the successful salespeople and conquering the e-commerce industry is the goal of every company working in this field. Basic knowledge of e-commerce trends and the ability to attract customers in the age of advanced digital technologies will help in this.

As practice shows, sellers improve consumer comfort every year. Thus, they exaggerate the needs, desires and expectations of customers. Every seller tries to satisfy the buyer, and the search for new solutions to do so sets new trends in online sales. As a rule, it aims to dispel users' doubts about buying a particular product in the online store and create conditions that will allow users to quickly and even automatically close their questions. The future of e-commerce is the automation of processes, direct communication of the brand with customers, and the effect of visiting an offline store for online customers.

Theoretical and analytical research made it possible to reveal trends in e-commerce and identify the focus of today's attention (Fig. 4).

3.1 M-commerce

The mobile market has matured so much over the past few years that by the end of 2018, mobile traffic reached 70% of total e-commerce traffic [8; 23].

The growing ubiquitous use of mobile devices in e-commerce is since shoppers want the ability to purchase at their fingertips. With their mobile devices, shoppers can now view, analyze and buy items anytime, anywhere.



Figure 4: E-commerce trends (developed by the authors)

With \$ 175.4 billion in mobile revenue by 2020, mobile shopping will be particularly relevant in the next few years. This means that e-commerce businesses should participate in the mobile shopping revolution by optimizing their mobile site and launching their app.

3.2 Omnichannel shopping

More and more portable gadgets and voice assistants are appearing in users' arsenal; the more accessible and more efficient it is to make purchases in online stores using different channels and devices. The growth trend in the number of omnichannel customers continued in 2021. As the boundaries between physical and digital are blurring, the use of multiple channels will become more common among consumers. This is evidenced by 73% of shoppers using multiple channels to make purchases [23].

There are many examples of how multichannel shopping works. For example, people can find all the information about a product online, buy from a physical store, or buy items online and pick them up from an offline store [17]. The more channels shoppers use, the more likely the average order value will increase. For example, shoppers who used more than four trade channels spent an average of 9% more in the store than those who used only one channel.

Each customer touchpoint is important because it collects every piece of information into a whole customer story. Tracking all points of contact of

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customers with a product or service before buying will allow you to better information about how to promote products and allocate an advertising budget properly.

3.3 Customer personalization in e-commerce

Over the past few years, personalization in ecommerce has become a rapidly growing trend among companies worldwide, but in 2020 and beyond, personalization has become the standard. According to statistics, 33% of clients have terminated their relationships with companies, noting the lack of personal relationships with them [23].

In addition, personalization is already a whole marketing strategy. Modern personalization in ecommerce is carried out based on a comprehensive analysis of the client's personal information, demographic characteristics, online behaviour, purchase history and any other data related to online shopping.

There are many ways to implement personalization in e-commerce. For example, you

can recommend a specific product to a user in an online store based on what he has already added to the cart.

3.4 Replacing CRM with CDP

The e-commerce development trend is leading businesses to abandon the strategy of attracting new consumers. This is both costly and time-consuming. A new trend is the collection of data on current customers. Brands create virtual avatars of their customers. This is a portrait of a client and features of his network behaviour and communication channels with the store at different sites.

Classic CRM systems do not allow keeping records of users' virtual activity, so large brands are switching to CDP.

In Customer Relationship Management, a card with customer data is created, inside which every interaction with him is recorded. In contrast, the Customer Data Platform unites user data from different sources: online channels, offline points of sale, files from any databases (Fig. 5).

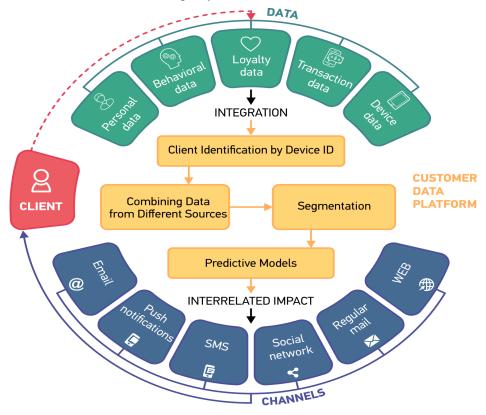


Figure 5: Customer Data Platform visualization (developed by the authors)

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Some systems analyze when it is necessary to communicate with users so that they do not cease to be the company's customers.

If a user doesn't buy anything within a certain amount of time, chances are they won't come back. You need to spend a lot of money on its reattraction. CDP platforms help to predict how long it will take to waste energy and money on reattracting a customer. It is also possible to analyze through which advertising channel you need to contact the user so that he does not go to churn.

3.5 Unified Platforms for Lifetime Value Management.

In the context of the growing online market and fierce competition, the predominant task is to retain the client and increase the profit of the enterprise received from one client during the entire period of cooperation.

Businesses need to leverage modern cloud marketing platforms that can attract new customers, increase the conversion of current visitors into valuable actions, work with customer loyalty and other goals at any stage of the sales funnel through motivating personalized shopping experience and working with Big Data.

Platforms are usually based on modules, each of which solves specific enterprise problems, such as:

- the attraction of new clients;
- increase in the number of orders;
- increased loyalty;
- increase in the average check;
- brand recognition;
- activation of buyers;
- lead generation;
- targeting by multiple parameters;
- A/B, MVT hypothesis testing

- campaign automation, triggers and much more.

The service quickly analyzes user data and offers a loyalty system from partners that suit a particular user's interests.

3.6 Video consulting and AR technologies

The main fear of users who do not dare to make an online purchase is not to guess the colour, size, shape of the product and waste money, time waiting for delivery. Due to the restrictions associated with the pandemic, a new trend has emerged in ecommerce - online video consulting from offline points of sale. Many enterprises, regardless of their size, have chosen this path. Statistics have shown that every third video consultation ends with a purchase. The user opens the product card. If the description is not enough for him, he contacts the consultants via video link. Employees take a virtual tour of the store and show the product in action.

Augmented reality is another e-commerce trend. AR technologies help buyers understand how the product will look in reality, not in a photograph. Some stores are introducing virtual fitting of clothes and shoes, which increases the conversion in the product category by 8-9% and reduces the time before buying by 10-15% [24].

3.7 Voice robots and assistants

Voice robots can replace a call centre and cut costs for its maintenance by 2-3 times. Enterprises only need to regularly analyze customer dialogue scenarios and adapt them to work with artificial intelligence.

Of course, not all tasks are within the power of a robot. Most often, voice robots effectively cope with the following areas:

- telemarketing and cross-selling;
- technical support for popular questions;
- marketing surveys;
- service quality assessment.

Recently, a new voice control technology has emerged in the e-commerce world. The introduction of voice tools like Amazon Echo and Google Home has already led to new ways people interact with brands.

Customers have widely adopted this feature, and nowadays, voice trading is also on the rise. This tool has opened up a new channel for e-commerce businesses to sell and grow their business.

3.8 Delivery in 1 day

The latest crisis has shown that enterprises are not ready to meet consumers' demand in logistics fully. It turned out that in some cases, delivery to the door (the last mile) to receive the order must wait from three to ten days.

Consumers do not want to wait long and want to receive a product or service as quickly as possible. According to research, 48% of shoppers will leave an online store if it doesn't ship in 1 day. At the 15th October 2021. Vol.99. No 19 © 2021 Little Lion Scientific



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same time, 33% will make a purchase elsewhere, and 15% will cancel it.

3.9 The emergence of new payment methods

Currently, digital wallets such as Google Pay, Paypal, Apple or Samsung Pay are widely used in e-commerce. These services allow people to make purchases using electronic transactions, which makes the ordering process more convenient. According to statistics, 70% of people expect digital payments to surpass cash and cards by 2030 [25].

The availability of different payment options is one of the main factors contributing to making purchases on sites. Without convenient payment methods, people won't buy from an online store, so you just need to pay attention to introducing new forms of payment to stay competitive.

Another payment method that revolutionized a while ago is cryptocurrency. Currently, cryptocurrencies are used by some companies to carry out large business transactions.

E-commerce is an ever-growing field. With the increasing purchasing power of consumers worldwide, the proliferation of social media and the ever-evolving infrastructure and technology, the future of e-commerce in 2021 and beyond will be even more dynamic.

5. CONCLUSIONS

Despite persisting challenges, online shopping and e-commerce have become de facto major solutions for food security and access to essential goods in light of the pandemic. However, questions remain about whether the experience of the COVID-19 pandemic will prompt consumers to change their purchasing behaviour and patterns and increasingly resort to online shopping and whether governments will continue to prioritize and invest more in e-commerce and online infrastructure.

There are different assessments of the prospects for the development of e-commerce. Still, in general, all sources note that the global pandemic crisis has shown the scale and importance of the development of IT technologies; in almost all countries of the world, the share of e-sales in total retail sales, which has been steadily growing over the past years, has increased dramatically in Feb 2020.

The development of IT technologies, the use of artificial intelligence, big data analysis tools, new solutions based on modern technologies such as blockchain allow us to solve the problems faced by the online market due to the sharp activation of ecommerce.

Companies that study user behaviour on the Internet and the changing consumer demand for ecommerce, especially with the use of mobile communications, analyze data from different angles.

But almost all of them noted that changes in consumer behaviour during a pandemic could be long-term.

The closure of physical stores has forced people, especially the older age group, who are more inert in their passions, to rethink deep-rooted shopping habits.

The main trends in e-commerce, adjusted by the crisis phenomena, remain as follows for the near future:

- brand control over all communication channels with the client;

- work with an existing customer base, customer personalization;

- maximum automation of business processes;

- creating the effect of being at an offline point for an Internet buyer.

The crisis events stimulate the activation of ecommerce and enterprises improve the conditions of consumer comfort every year. This raises the demands and expectations of buyers. Finding the best solution to please the client creates new trends. Success is not only about having a web resource [26]. In business, the winner is the one who knows how to correctly analyze the situation and adapt to it in time to keep up with the times and be in trend. At the same time, online shopping has become one of the most popular activities on the Internet.

6. LIMITATIONS

The first limitation is that neither quantitative research using expert questionnaires nor qualitative research using in-depth interviews with existing practices were used. The second limitation is that the article is based on current research but is not predictive in nature. It would be interesting to check how e-commerce will behave in 5 years, whether there will be a rollback of results. These limitations can serve as a basis for further research.

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