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## E-COMMERCE IN A STATE OF EMERGENCY – ONE YEAR LATER <sup>13</sup>

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***Abstract:** This article aims to analyze the state of e-commerce in Bulgaria over the past year and the consequences on e-commerce after the state of emergency declared in the country after March 13, 2020. Research tasks include survey into changes in e-commerce; conducting a survey among representatives of various sectors; offering guidelines for potential business growth.*

***Keywords:** E-commerce, State of emergency, Business development*

### **INTRODUCTION**

Life has undergone unexpected changes in the last year. The imposed restrictions turned out to be opportunities for development and application of modern technologies in various aspects of human activity, especially in healthcare, education, public administration and business.

The pandemic and subsequent events undoubtedly accelerated the digital transformation of business in Bulgaria. There is an extraordinary boom in online consumption not only in our country but also worldwide, and it seems that 2020 will be remembered as a turning point in the development of e-commerce. Studies show that in terms of digital perceptions by consumers and the business, the world has evolved by more than five years in just about two months (Capital, 2021).

The impact of the pandemic on online commerce is determined mainly by consumers and their changed habits in a state of emergency (Naidenova, J., 2021) and shopping steadily transferred online. Payments, albeit slowly, are becoming more digital, and online learning – massive and preferred (Capital, 2021). E-commerce of goods has seen unprecedented growth at the expense of online services such as hotel and airline reservations, which remain among the losing niches (Economic, 2021).

The report is a continuation of a paper presented at the same scientific forum held in 2020 (Todorova, A., Boneva, M., 2020). Its main goal is to discuss the development of e-commerce in Bulgaria during the epidemic. To achieve this goal, the following research tasks have been set: (1) to study the changes in e-commerce that occurred in the period April 2020 - April 2021; (2) to conduct a survey aimed at representatives of different sectors and (3) to formulate proposals for potential business development.

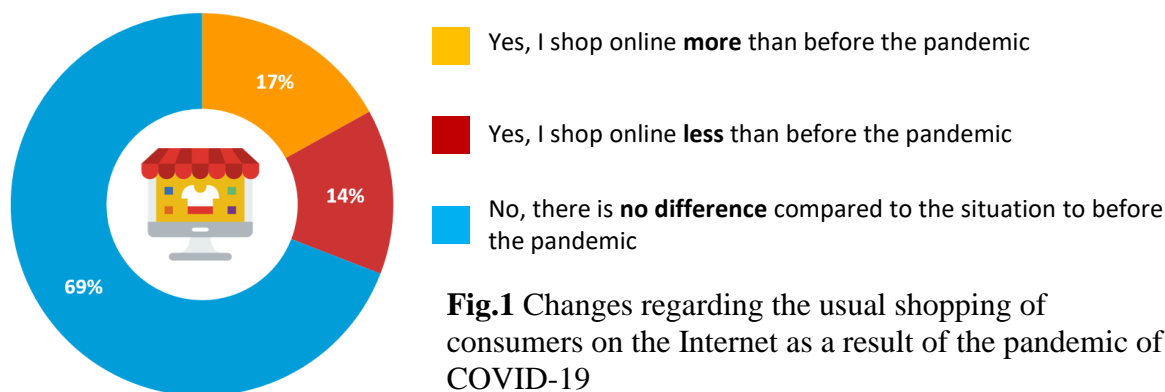
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<sup>13</sup> The report was presented at the student scientific session on 20.05.2021 in the section of the Faculty of Business and Management.

## EXPOSITION

### How have e-commerce trends changed over the last year?

Online shopping is becoming increasingly popular among active Bulgarians - no matter what products they buy. In a survey by **Nielsen Admosphere Bulgaria**, only **7%** of consumers say they never shop online, **17%** say they shop electronically more than before the pandemic, but on the other hand - **14%** say they shop less (Fig. 1). The products that come from the categories of clothes and accessories (**48%**), small appliances (**37%**), shoes (**36%**), books (**29%**), black appliances (**27%**) and those, for which customers prefer to pay upon delivery are the most ordered. (Nielsen Admosphere, 2020).



**Fig.1** Changes regarding the usual shopping of consumers on the Internet as a result of the pandemic of COVID-19  
(Source: **Nielsen Admosphere Bulgaria**)

According to Janet Naydenova of the Bulgarian E-Commerce Association, the pandemic has created new trends. More and more people are buying food online and prefer to prepare their own food instead of ordering ready meals from restaurants. The association also reports greater flexibility for small farm shops, which are able to quickly launch an e-shop and start offering their products online. There is also the emergence and development of new niches in online commerce, which may be sustainable - online studios, transformation of television programs; online training and e-sports (Economic, 2021).

The personalized interaction with the customers turns into an inseparable part of the sale. This trend is a major element in the business for e-commerce, as it improves the experience of customers and leads to attraction, retention and increased loyalty on their part. Social media is no longer just a channel for people, but it is also a powerful marketing tool that allows markets to expand their goals. Platforms such as Instagram and Facebook are equipped with "buying buttons", which allow traders to sell through it (Economic, 2021).

According to the Bulgarian Retail Association, which unites more than 100 retailers in the country, the retail sector has lost hundreds of millions of leva from the restrictive measures due to the pandemic, and between **10** and **15%** of retailers have actually gone bankrupt (Economic, 2021). At the opposite pole are the data announced by the largest online retailer in Bulgaria - Ozone.bg, which marked an increase in sales between **50** and **60%** compared to 2019. The online platform eBag reports revenue growth of over 300% and states that they have started with **120** employees, which in the midst of the state of emergency have risen to **250**, and at the end of 2020 – to over **400** (Capital, 2021).

### Study of e-commerce in various business sectors in Bulgaria - a year later

In the study of e-commerce in various business sectors in Bulgaria for the purposes of this paper, the methodology developed in (Todorova, A., Boneva, M., 2020) was applied, and the justification in Table 1 was updated.

Table 1. Research methodology

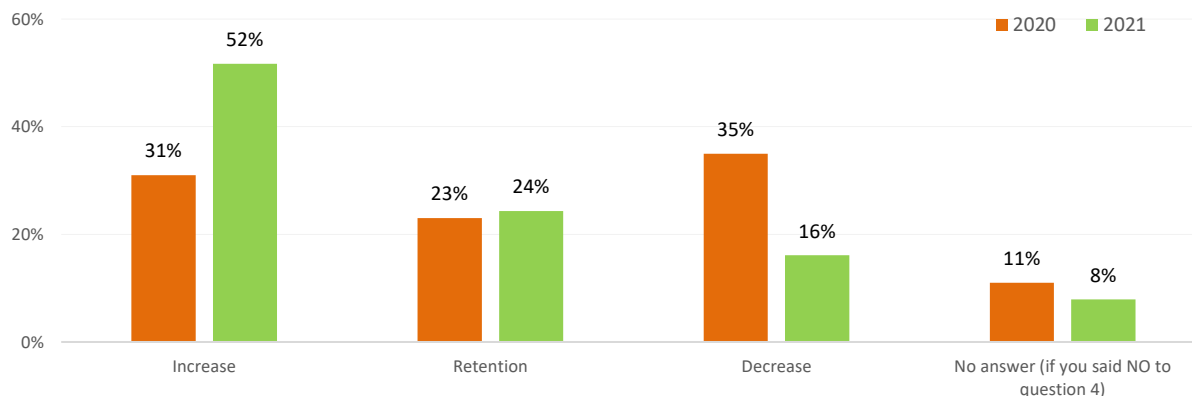
№	Elements of the study	Justification
1	General terms and conditions	The study is aimed to be representative of various business sectors in Bulgaria Study period 27.04. – 05.05.2021.
2	Aim and tasks of the research	The purpose of study is to establish how the state of emergency, introduced in Bulgaria from 13.03.2020, has affected business, in order to find: <ol style="list-style-type: none"> <li>1) Whether online sales were made before and after the introduction of the state of emergency;</li> <li>2) What changes are observed for the business during the state of emergency and one year later;</li> <li>3) Are the changes in e-commerce and traditional business comparable;</li> <li>4) What changes have occurred in the results of the two surveys conducted in 2020 and 2021.</li> </ol>
3	Object of research, general population, determination of the sample size	The object of study are Bulgarian enterprises, regardless of the sector of economic activity. The total population is 38 238 enterprises. <a href="https://www.nsi.bg/sites/default/files/files/pressreleases/ICT_ent2020_PSRP7D5.pdf">https://www.nsi.bg/sites/default/files/files/pressreleases/ICT_ent2020_PSRP7D5.pdf</a> The minimum sample size is 381 ( <a href="https://www.calculator.net/sample-size-calculator.html?type=1&amp;cl=95&amp;ci=5&amp;pp=50&amp;ps=866&amp;x=0&amp;y=0">https://www.calculator.net/sample-size-calculator.html?type=1&amp;cl=95&amp;ci=5&amp;pp=50&amp;ps=866&amp;x=0&amp;y=0</a> ) at a confidential level of 95%. A total of 391 people responded to the survey. In this case the statistical error is 4.93%.
4	Thesis and hypothesis of the study	The thesis of the study is formulated that despite the restrictive measures, enterprises selling electronically had relative stability in the past year. The first hypothesis has been raised that in the past year more companies have included e-commerce in their business models. A second hypothesis has been put forward that companies which refuse or are unable to digitize their business operations suffer more negative consequences.
5	Development of a questionnaire	The questionnaire was prepared with the tools of the web-based application OneDrive. The questionnaire contains 8 closed questions. The form is anonymous. Two demographic issues are related to the position of the respondent and the business sector of the organization. The remaining question are relevant to the purpose and objectives of the study.
6	Approbation of the questionnaire	The questionnaire was filled in by 2 merchants and 1 university lecturer as a test. A suggestion was received to add an open-ended question about the most frequently sold product.
7	Formulation of the final questionnaire	A question was added, allowing the entry of the best-selling product.
8	Determining the financial resources and potential contractors	Researchers's personal time and no other funds have been invested in conducting the study.
9	Implementation of the survey	The survey was conducted by distributing the link to the questionnaire in professional groups of traders, established in social networks and personal contacts with representatives of various business organizations, and an attempt was made to reach the same group of respondents who participated in the survey in April 2020. Due to the anonymity of the study, the last cannot be guaranteed.
10	Data processing approach	The data processing was performed using Excel tools for mathematical and statistical functions. The summaries are presented after this table.
11	Results analysis	The analysis is reduced to a graphical presentation of the results. It is possible in future developments to use correlation analysis to detect additional relationships between results in different groups of respondents.
12	Conclusions and recommendations	Summaries of the results have been made and guidelines for potential business development have been proposed.

A total of **391** representatives of various sectors of the Bulgarian economy were included in the survey, namely: *Production* – 48 people or **12%** of the respondents; *Trade* – 270 respondents, forming **69%** of the participants; *Agriculture* – 21 or **5%** of the respondents; *Hotels and restaurants* – 33 or **8%** of the participants in the study; *Others* (including administrative, information, advertising, transport, logistics and other services) – 19 people or **5%** of respondents.

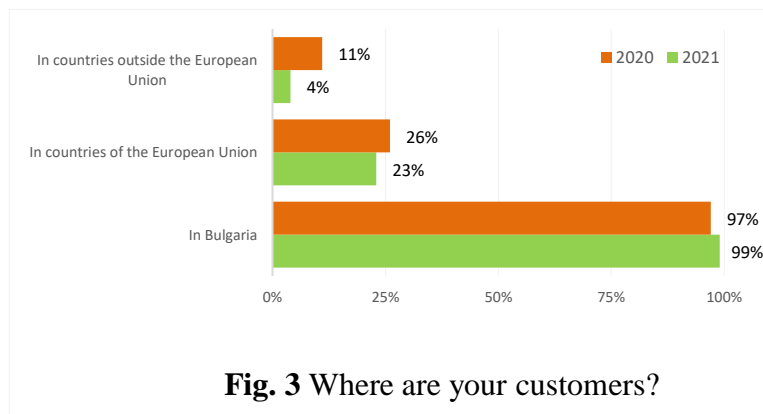
The share of online respondents operating before 13.03.2020 was as follows: **56%** of respondents indicate that *they did*, and **44%** that they *did not* make online sales before the

promulgation of the state of emergency. The percentage increase respectively to **91%** for the first and decrease to **9%** for the second group after 13.03.2020. The results of the present study show a significant **growth** of **35%** of businesses that have adapted to online commerce, which proves the first hypothesis of the study: *more companies have included e-commerce in their business models*.

To the question: *What change do you notice in the sales revenues made electronically?* **52%** of those surveyed indicate an *Increase*, **24%** - *Retention*, **16%** - a *Decrease*, and **8%** do not indicate an answer. In **Fig.2** these data are visually presented and compared with those obtained in 2020.



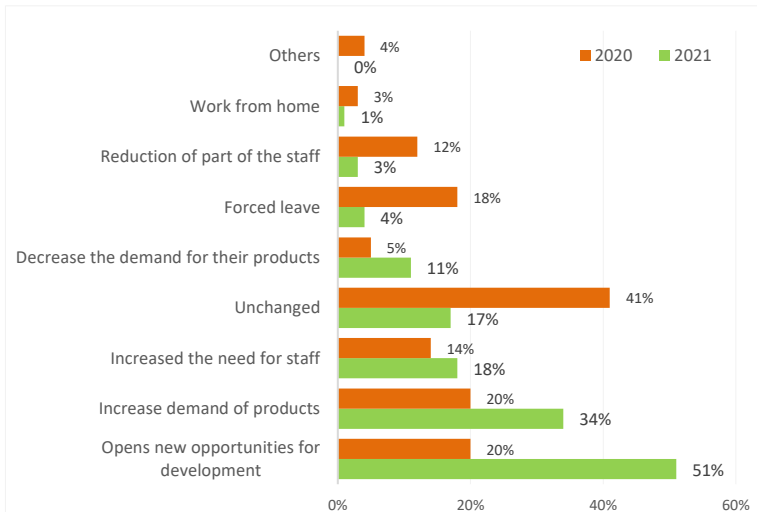
**Fig. 2** What change do you notice in the sales revenue made electronically?



**Fig. 3** Where are your customers?

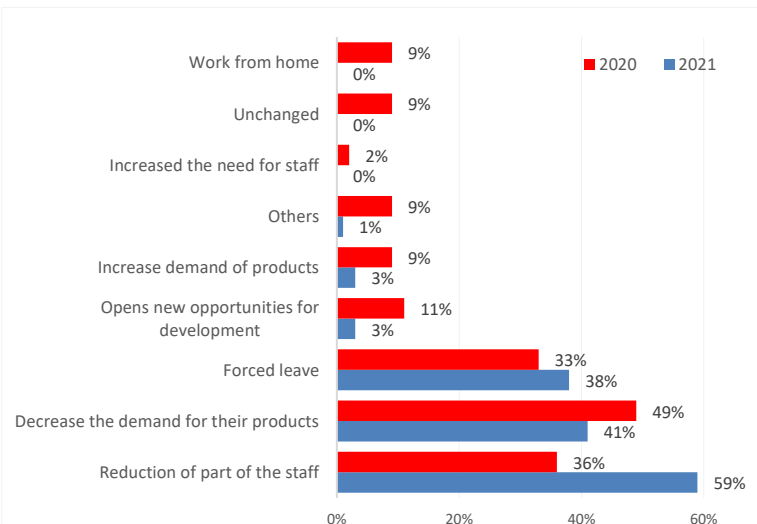
With more than one answer, almost **100%** of the respondents state that they serve clients from *Bulgaria*, **23%** - in *European Union countries*, and **4%** - in *non-EU countries*. **Fig.3** visualizes the trend of shrinking exports when comparing the results of surveys in 2020 and 2021. The contraction of sales in countries outside the European Union is particularly sensitive.

With more than one answer to the question *What are your customers?* **93%** of the respondents indicate as their main clients *Individuals / Households*, **36%** - *Business*, **8%** - *Educational institutions*, **7%** - *Hospital and health organizations*, **7%** - *Other budget organizations from the public sector*. The data confirm the result of survey conducted in 2020, identifying **B2C** and **B2B** models as the most common.



**Fig. 4** Impact of the state of emergency on the business of organizations *operating* online after 13.03

With more than one answer to the question How does the state of emergency affect your business? **19%** of all respondents say that the crisis Decrease the demand for their products, for **31%** Opens new opportunities for development, for **47%** - Increase demand of products, for **7%** requires Forced leave, and for **16%** - the situation remains Unchanged. **Eight percent** of respondents were forced to resort to Staff reductions, for **10%** Increased the need for staff, **1%** - switched to Work from home mode, and **1%** indicated Others consequences, including bankruptcy and suspension of work.



**Fig. 5** Impact of the state of emergency on the business of organizations that did *not perform* online activity after 13.03

The difference between the indicators from 2020 and 2021 for organizations *performing* and *not performing* online activity after 13.03 is visually presented in **Fig.4** and **Fig.5**, respectively. The persistence and even increase of the adverse effects on business units without online activity (**Fig. 5**) prove the second hypothesis of the study, namely *that more negative consequences are suffered by enterprises that adhere mainly to traditional business models and refuse or are unable to digitize their activities*. There is a serious difference in terms of the need to *reduce the number of staff* in online

and offline trading: in the former this percentage decreased by **9%**, while in the latter - an increase of **23%**. *Forced leave* is also a preferred measure for organizations that refuse to adapt to the new digital realities: for them, the survey shows an increase of **5%** of this indicator, compared to a decrease of **14%** for existing e-merchants.

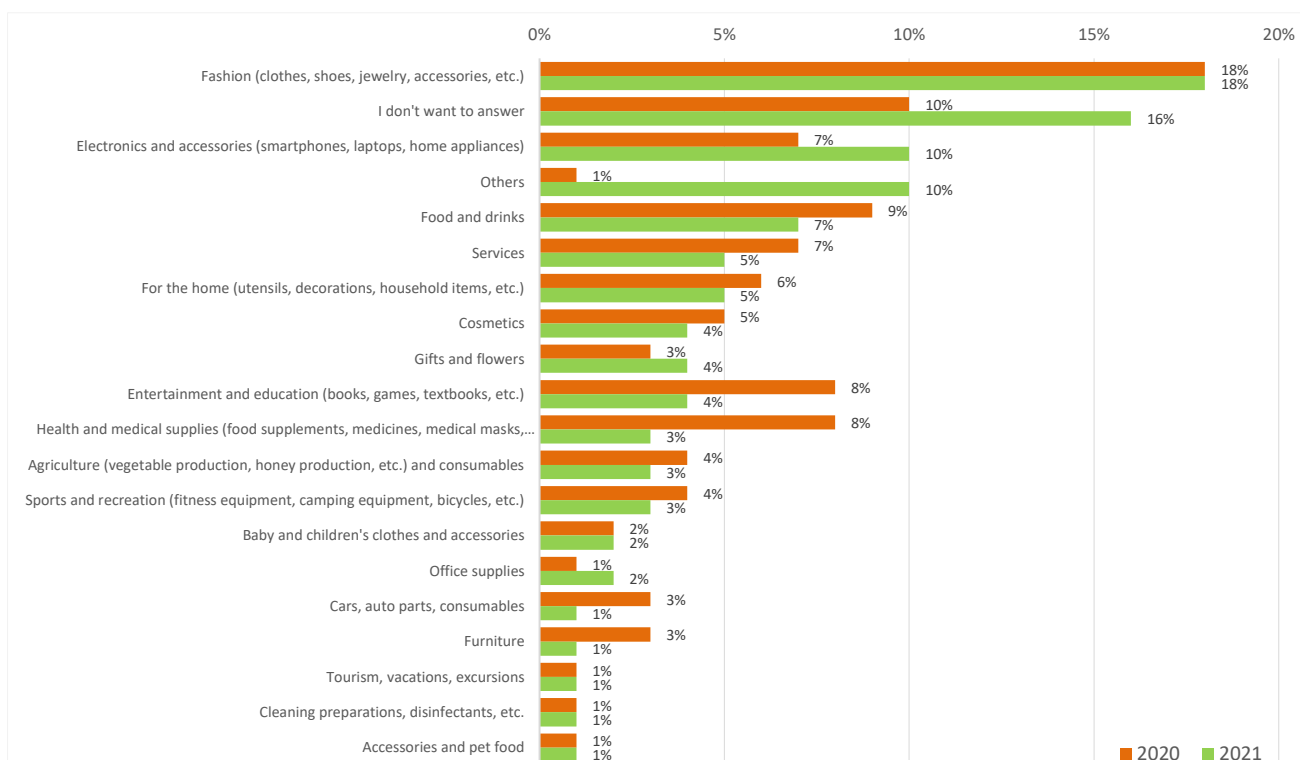
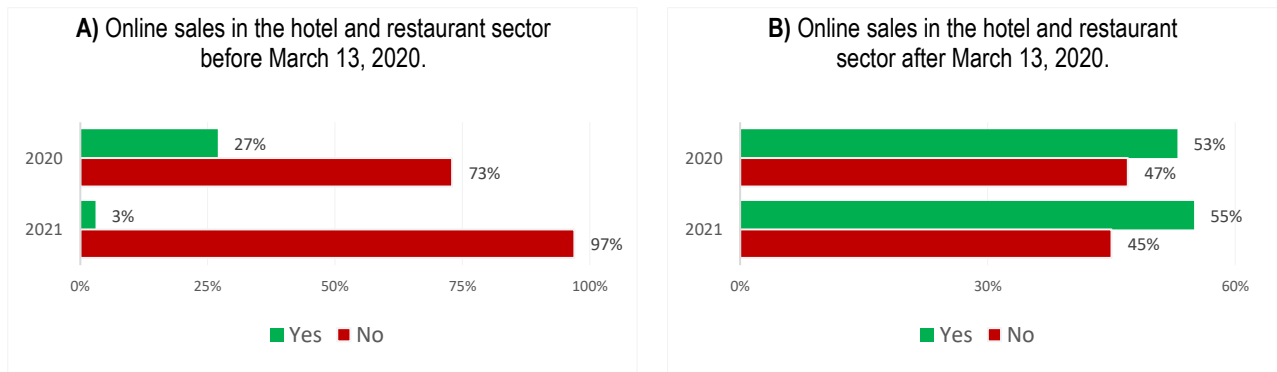


Fig. 6 Best selling products after March 13, 2020.

Open answers to the question *What is the best-selling product?* (Fig.6) are divided into several categories, as those that are not relevant to the study are summarized in *I do not want to answer* - **16%** of respondents, and **Others** - **10%**, which include vaguely categorized products or services such as: *dropshipping, Chinese goods, etc.* As the best-selling in both the current and the previous survey, the goods from the *Fashion* sector stand out - **18%**. The *Electronics* category grew by up to **10%**, and sales of *Office Supplies* increased slightly to **2%**. Followed by sectors *Food and beverages* - **7%**, *Services* - **5%**, *Home* - **5%**, *Cosmetics* - **4%**, *Gifts and flowers* - **4%**, *Entertainment and education* - **4%**, *Health and medical supplies* - **3%**, *Sports and recreation* - **3%**, *Agriculture* - **3%**, *Cars* - **1%**, *Baby and children's clothes* - **2%**, and about **1%** are represented by the groups *Furniture, Tourism, Cleaning products and Accessories and pet food*. The newly obtained results do not show significant changes in consumer preferences and overlap with the study cited in the Presentation of this study (Nielsen Admosphere, 2020).

The *Hotel and Restaurant Sector* was the most affected by the restrictions due to the declared state of emergency last year: before March 13, 2020 only **3%** of the respondents in this category had online activity (Fig.7A). After 13.03, their share increases to **55%** (Fig.7B), which overlaps with the results of a survey conducted in 2020, and some respondents say that they think the crisis *Opens new opportunities* or that their business is developing *Without change*. The group of digitally not adapted businesses (**45%**) has resorted entirely to the measures of *Forced Leave* and *Reduction of staff*.



**Fig. 7** Online sales in the hotel and restaurant sector before and after March 13, 2020

The study shows a positive trend towards an *Increase* with over **20%** in sales revenue made electronically. This growth confirms that e-business not only demonstrates sustainability, but is also a prerequisite for generating profit, despite the difficult economic environment in our country and around the world.

Despite the data provided by the transport and logistics company Transpress (Economic, 2020) for an increase of more than seven times in the transported goods between January and November 2020 of Bulgarian companies to the largest e-commerce platform in the world - Amazon, the current study shows conservatism in terms of online sales in and outside Europe. This means that it still does not develop and does not use the full potential and opportunities of digitalization and globalization.

In conclusion, the future of e-commerce really looks bright (Capital, 2020) - a year later, attitudes among respondents in the survey are rather positive. However, the sustainability of the digital business models that emerged in the COVID crisis remains questionable, which makes the forecasts for the development of the industry extremely difficult. The Bulgarian e-Commerce Association (BEA) predicts a merger between online and offline business (Economic, 2021), but only a year earlier predictions indicated that the pandemic would increase the division between traditional and digital trade (Investor, 2020). One thing is clear for sure - one who has not entered the digital age is doomed to isolation - this applies to both business and the individual (Economic, 2021).

### **Suggestions for potential business development**

The crisis of 2020 was compared by leading experts in the field of online business with a roller coaster in terms of management and changes in organizations, especially in view of the rapidly changing market requirements caused by COVID 19 (Capital, 2021). Although painful for many businesses, this difficult leap into the future has proved necessary for faster digital transformation. The newly acquired technological habits of consumers are expected to be preserved and the rise of e-commerce to continue.

Timely planning and implementation of modern technologies are crucial to meet customer expectations to the maximum. Part of the conditions for growth during and despite the crisis is for retailers to ensure maximum access to more buyers through as many channels as possible: own site, social channels, marketplace platforms, with the possibility of overseas sales. Business growth directly depends on the expansion of the territorial scope and flexible logistics solutions, which implies greater adaptability of entrepreneurs and more active penetration of ERP systems in order to optimize, organize and manage activities.

The pandemic-accelerated e-commerce processes also imply the accelerated introduction of innovations such as virtual reality and artificial intelligence. Augmented reality makes the decision to buy from buyers much more enjoyable and easier, and intelligent algorithms save business time and capital based on the multidimensional data they handle (Economic, 2021).

Despite the negatives, the pandemic has highlighted two extremely important issues that are directly reflected in e-commerce: social exclusion and the environment. The first implies a more personalized and emotional interaction with customers, and the second requires digital entrepreneurs to implement and comply with environmental practices and standards in their activities, ensuring consumers fair and green trade. These mandatory aspects for the successful business development of organizations require shaking off the shock of the pandemic and the crisis and the associated adverse consequences as soon as possible.

## **CONCLUSIONS**

It has been found that over the past year, many businesses have managed to partially or completely transform their business from traditional to digital. To date, respondents are much more optimistic about their future and income, with a significant increase in the share of those who open new opportunities in the crisis - from **20%** in 2020 to **34%** this year. It was also found that the percentage of online businesses before and after 13.03 in the current survey increased by **35%**.

It was analyzed that the organizations that operated online before the declaration of the state of emergency, as well as the companies that adapted their activities as quickly as possible to the new business realities, not only have endured the stress and negatives of blocking the economy more easily, but even have boasted an increase in revenue. In the 2020 survey, **31%** of respondents said they reported similar growth, with their share growing to **52%** in 2021. It was also analyzed that conservatism is maintained in terms of sales and coverage of customers outside Bulgaria.

It is justified that the potential business growth of online enterprises requires rapid adaptation to change, flexible logistics solutions, implementation of technological innovations, and expansion of the territorial scope.

The thesis of the survey that in the past year the companies selling and operating electronically had relative stability is defended, confirming the two hypotheses, namely that significantly more companies have included e-commerce in their business models (H1) and that more negative consequences are suffered by companies that refuse or are unable to digitize their operations (H2).

Long-term guidelines for improving the business climate in terms of e-commerce are proposed, including expanding the territorial scope, logistical flexibility, implementation of innovations and ERP systems to optimize, organize and manage processes, personalized interaction with consumers, and environmental responsibility.

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