

Impact of Covid-19 on the Logistics Sector of Public Postal Operators in the Western Balkans

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Abstract

The Covid-19 pandemic has a direct impact on the social, economic, political, and other segments of society through a large number of lockdowns in 2020 and 2021. The largest postal and logistics companies as an integral part of the supply chain have been directly affected by the Covid-19 pandemic. Disruption in the supply chain significantly affects the movement of goods and the economic development of countries. This paper investigates the impact of the covid-19 pandemic on the logistics sector, with special emphasis on public postal operators (PPO) in some countries of the Western Balkans (Bosnia and Herzegovina, Croatia, and Serbia). The paper analyzes the movement of express shipments in domestic transport, as well as imports and exports for 2020. There is almost no research on the implications of the covid-19 pandemic on the postal and logistics sectors of Bosnia and Herzegovina, Croatia, and Serbia. The aim of this research is to understand the impact of the pandemic on this sector.

Keywords: Covid-19, Logistics, Shipment, Mail

1. Introduction

The World Health Organization (WHO) declared the COVID-19 pandemic on 11 March 2020 [1], while in its latest update (January 28, 2022) it shows 360,578,392 confirmed cases of infection, 5,620,865 confirmed deaths [2]. As of 28 January 2022, the analyzed countries of the Western Balkans have 2,837,365 confirmed cases of infection and 41,101 confirmed deaths [3], [4], [5].

Governments around the world have taken a number of measures to curb the spread of the virus, and protect the functioning of the health system and the economy. Measures taken during the pandemic are the closure of state borders, quarantine and temporary physical closure of shops and companies, and the physical distance of people. The physical distance between people of 1.5 m is considered one of the key factors in reducing the virus infection. These measures had negative effects on tourism, catering, passenger transport, especially air transport, but also on public postal operators and their functioning. Due to the COVID-19 pandemic, world

production decreased in 2020 and world gross domestic product (GDP) decreased by 3.5% in 2020 [6].

The postal sector quickly had to adjust its network, services, and business priorities while taking into account the safety of its workers and the wider community. A large part of consumers had to stay at home due to quarantine, so they were forced to pick up products through online stores, which led to an increase in shipments through express deliveries, primarily the parcel segment. The global trend of shipments during 2020 was reflected in the markets of Bosnia and Herzegovina, Croatia and Serbia. The decline in business activity in the Western Balkans in the first three quarters of 2020 ranged from 5% to 30% compared to 2019. Companies that traditionally operated during the pandemic have accelerated their digitization processes to adapt their business to the new way of working. Governments around the world are offering support and working with e-commerce providers to speed up the process and ensure that companies continue to operate.

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This research is based entirely on primary and secondary data, and the analysis is analytical. Data were collected from various sources such as interviews, articles, research papers and various websites. The main focus of the analysis is the study of disruptions in Public Postal Operators caused by the COVID-19 pandemic, during lockdowns and after lockdowns.

2. Postal Traffic During the Covid-19 Pandemic

The coronavirus pandemic has ushered in a period of unprecedented huge changes within both the logistics and postal sectors. Quarantine and reduction of social distance have increased the use of modern technologies, the Internet and e-commerce. A significant share of domestic and international trade in both goods and services has been redirected digitally. Connecting different systems and creating an automated information chain between postal systems and service users have resulted in changes in technological processes, as well as in the reduction of the need for the direct contact of participants in the process. This way of connecting had a great effect on the process of selection of certain services and led to new opportunities in the field of e-commerce, increasing the productivity of employees of the provider and e-commerce [1].

The measures taken by postal operators due to the covid-19 pandemic are twofold, on the one hand, the increase in demand for e-commerce parcels, and on the other hand, the crisis in the economy has accelerated the trend of transition from physical to digital communication by reducing the demand for letters [1]. Coronavirus directly affected the reduction of international shipments, so in the first quarter of 2020, global trade decreased by 3% [7]. One of the largest European multinational postal and courier companies, Royal Mail Group is recording a constant decline in the letter segment, while on the other hand, the parcel segment is constantly growing. According to official data from the Royal Mail Group, the drop in letter shipments in January-September 2021 compared to January-September 2020 is 24.8%. The growth of the parcel segment [8] January-September 2021 compared to January-September 2020 is 32.2% (Figure 1) [9]. European Regulators Group for Postal Services - ERGP collected data on trends in the volume of postal services, which shows that after the Covid-19 pandemic there was an increase in the volume of parcels, mainly due to the growth of e-commerce and a decrease in the volume of letters [10]. During the pandemic, faster growth in e-commerce was where closure and control measures were more stringent [11], [12], [13]. Some state governments have recommended shopping through e-commerce to avoid physical contact [14]. The lower the level of e-commerce in a given country in 2019, the higher the growth rate of e-commerce during the Covid-19 pandemic

[11]. The increase in e-commerce purchases during the pandemic has had effects on the revenues and costs of e-commerce companies. In the first half of 2020, the largest e-commerce companies had revenue growth: Amazon (34% on annual basis), Alibaba (27%), JD (28%), Shopify (74%), Rakuten (16%) and Mercado Libre (50%) [11]. Like all other segments, e-commerce faced three main challenges during the pandemic: product availability, logistics and transportation disruptions, and consumer protection.

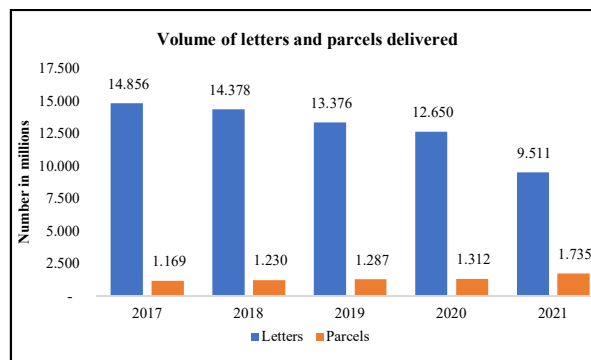


Figure 1. Volume of letters and parcels delivered through the UKPIL (UK parcels, international & letters) segment of the Royal Mail Group from 2017 to 2021 [9].

In its latest Parcel Shipping Index Report, global technology company Pitney Bowes reveals that the number of parcels in the world in 2020 reached 131.2 billion, which is 27 percent more than the 103.2 billion in 2019 [15].

The Universal Postal Union (UPU) monitors international mail in real-time through its big data platform [16]. How much the international postal sector was affected by the pandemic is shown by data from the Emergency Information System (EmIS), where since 31 December 2020, the number of 145 countries have sent a message announcing disruptions in their work, and over 456 messages have been sent since the beginning of the crisis [17]. The interruption of air services had a special impact on international postal traffic, and it significantly affected the delivery of consignments. Problems related to the availability of labour force during the pandemic also affected the time of customs clearance of goods. According to the report titled "How Covid-19 is changing the world: a statistical perspective - Volume III, customs clearance of goods during the peak of the crisis lasted over 64 hours, while in normal circumstances it took an average of 2 hours. According to estimates collected from high-frequency data [17], this indicates a 20% reduction in international trade in postal units. This is just one of the indicators of a disturbance in international postal traffic caused by a coronavirus or pandemic.

3. Postal Traffic of Bosnia and Herzegovina, Croatia and Serbia During the Covid-19 Pandemic

In the postal market of the analyzed countries, the rationalization of technological processes was carried out due to the difficult functioning of the work process during the state of emergency introduced due to the epidemic of infectious diseases caused by the COVID-19 virus. During 2020, public postal operators undertook a number of activities to improve the quality of consignment delivery, the end result of which is a significant increase in customer satisfaction. Postal operators introduced measures aimed at providing continuous postal service. National regulatory authorities monitored the development of the situation in the postal market, and provided advice and recommendations to both postal operators and users in order to ensure the continuation of service provision.

All operators, in accordance with government instructions, implemented health care measures such as equipping staff with sanitary protection, limiting the number of people indoors, observing the prescribed distance between staff in administrative work, but also staff and service users. In accordance with the recommendations, disinfection of the premises, equipment, etc. was done. Public postal operators have tried in various ways to maintain business and provide services, through part-time work, rotation of employees, work at home, time limit on delivery to certain areas, etc. Some public postal operators applied the rules that excluded the need for the recipient's signature at the time of delivery to avoid physical contact and maintain a social distance.

The orderliness of the markets of the analyzed countries is quite different. The market in the Republic of Croatia is fully liberalized, while the market in Bosnia and Herzegovina and the Republic of Serbia are still limited. An overview of Public Postal Operators by country is given in Table 1. The public postal operators are also the largest providers of postal services in the geographical territories where they operate, taking into account the criteria of services, revenues and employees.

Table 1. Public postal operators by analyzed countries [18,19].

Country	No. PPO	PPO
Croatia	1	JP HP-Hrvatska pošta d. d.
Serbia	1	Pošta Srbije
Bosnia and Herzegovina	3	JP BiH POŠTA d.o.o. Hrvatska pošta d.o.o. Pošte Srpske

The Covid-19 pandemic had an impact on the postal sector of the analyzed countries in both domestic and international postal traffic in terms of the volume of services, revenues of postal operators, quality of services provided and the number of operators. Based on official data from the Regulatory Agency for Electronic Communications and Postal Services, a total of 51 operators were active in the Republic of Serbia in 2020, which is eight operators less than in 2019 [20]. This data can be interpreted as one of the consequences of the COVID-19 pandemic in the Republic of Serbia. On the other hand, on the market in the Republic of Croatia, in 2020 the number of operators increased by 2 compared to 2019 [21]. The data used in the following graphs were obtained from public postal operators from Bosnia and Herzegovina, Croatia and Serbia.

Comparing 2019 with 2020, the number of services of the parcel and express segment in domestic traffic in the Public Postal Operators of the analyzed countries is in constant increase, averaging 7%. The largest increase was realized in the Republic of Croatia, i.e. the Croatian Post with an increase of 21%. An overview of parcel and express services in the last three years by analyzed countries of public postal operators is shown in Figure 2.

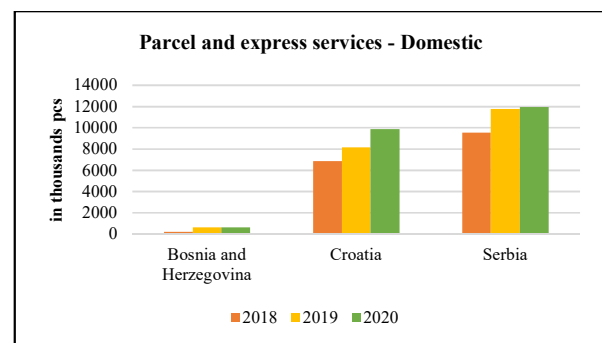


Figure 2. Parcel and express services in Domestic - Public postal operator.

The covid-19 pandemic has had a major effect on the movement of international shipments, especially due to air traffic disruptions. Despite the lockdowns and disruptions of air traffic, some operators have managed to increase imports (Bosnia and Herzegovina and the Republic of Croatia), on the other hand in the Republic of Serbia this trend was negative, i.e. the number of shipments in imports decreased by 5% in 2020 compared to 2019.

The trend of parcel and express services in imports is shown in Figure 3.

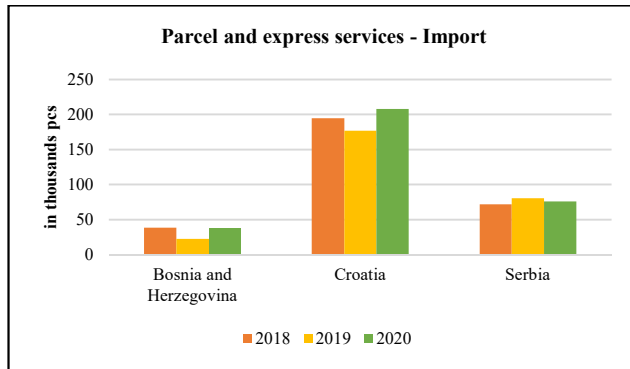


Figure 3. Parcel and express services in Import - PPO.

When it comes to the export of parcels and express services, public postal operators in Croatia and Serbia had an increase in volume (HP-Croatian Post increased by 20% and Post of Serbia increased by 4%), while public postal operators in the territory of Bosnia and Herzegovina had a reduction in export shipments by 35%. The trend of parcel and express services in exports is shown in Figure 4.

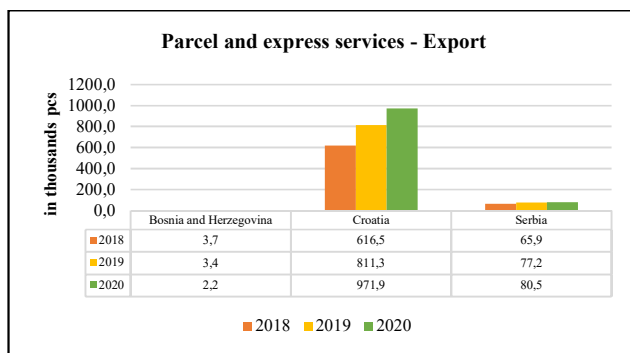


Figure 4. Parcel and express services in Export - PPO.

The downward trend of letter shipments in the analyzed countries follows the downward trend of these shipments in the world. The average decline in letter-post items in 2020 compared to 2019 is in the states: Bosnia and Herzegovina - a decline of 4%, the Republic of Croatia - a decline of 12%, and the Republic of Serbia a decline of 4%. Figure 5 shows the trend of letter shipments.

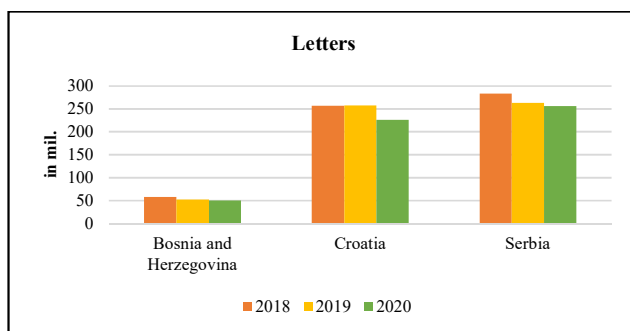


Figure 5. Letters - PPO.

4. Future Challenges

Like all other industries, the postal sector is trying to adapt to the new challenges and trends that the coronavirus has brought with it. As the end of the pandemic is not yet in sight, postal and logistics operators have adopted certain security procedures and protocols [22] on how to work and act in a pandemic and emergency. There are still big challenges for picking up and delivering shipments, including the social distance that must be between the shipper and the courier. A particular challenge for the transport of international consignments is the choice of mode of transport so that the pandemic has as little impact as possible on the transport of consignments.

Postal operators of the analyzed countries should focus on the accelerated digitalization and introduction of innovative technologies such as parcel lockers, etc., in order to reduce risk and enable social distance. The challenges facing operators in the future can be reflected and found in the problems that have not been overcome since the beginning of the pandemic.

Recovery of domestic and international demand is undoubtedly the main driving force for promoting the development of the postal and logistics industry of the analyzed countries. In some of the analyzed countries, it is necessary to adopt certain legal solutions that would accelerate the introduction of new services based on technology and innovation.

5. Conclusion

The postal sector quickly had to adjust its network, services, and business priorities while taking into account the safety of its workers and the wider community. Key management activities at the beginning of the pandemic focused on developing tailored business plans to ensure stable operations, it was necessary to make quick strategic decisions and focus on cost management. By adopting and implementing digital solutions, operators have ensured that services remain available to users. Companies that are specialized in certain activities had a larger decline than companies that have a wider range of postal and logistics services in their portfolio. The biggest change caused by the pandemic in the transport and logistics sector was primarily the need to organize uninterrupted work, protect the health of employees and users, as well as to comply with all commitments to clients. Most of the problems, however, were in air and sea transport, where at some point there was a time plug, where the goods primarily from Asia were not continuously taken over, so there was a sharp jump in the number of containers and air shipments.

The new conditions have given a chance to good ideas, and it is expected that the introduction of new

technologies will improve the performance of supply chains, provide optimal costs, increase productivity, and speed up distribution while guaranteeing quality service to clients. This research shows that the changes taking place in the global market of postal logistics transport have an impact on the market of the analyzed countries. Trends that occur in postal logistics traffic are reflected on the market of the Republic of Croatia, the Republic of Serbia and Bosnia and Herzegovina.

Postal service providers conducted their operations in pandemic conditions relatively well. However, it is necessary to consider future actions in the case of similar situations in which postal service providers allow normal communication and flow of goods and commodities within the population. This primarily refers to the adoption of strategies for action in times of crisis, making decisions that strengthen the resilience of companies and identifying weaknesses and shortcomings that may adversely affect business. Therefore, future research should be based on these aspects, taking into account postal service providers, both national and international, and the market of postal services as a whole.

Competing Interest Statement

The authors declare no known competing interests or personal relationships that could have influenced the work reported in this paper.

Data and Materials Accessibility

No additional data or materials were utilized for the research described in the article.

Transparent Statement

Authors (Amel Kosovac and Ermin Muharemović) as both author and editorial board member of *Science, Engineering and Technology* journal, confirm that the article underwent an independent peer review process. Reviewers were selected by the editorial team, and I did not participate in their selection or have access to their identities. The review process adhered to the highest standards of scholarly integrity.

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