
The Impact of Covid-19 on Air Transport Operation in Poland

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Abstract:

Purpose: The subject matter of the research was the effect of the COVID - 19 pandemic on the operation of air transport in Poland. The primary research objective was to present the key actions the aviation industry had to undertake to address new challenges.

Design/Approach: The analysis of the economic consequences having an impact on the operation of passenger air transport and actions undertaken at Polish airports in the new situation based on available literature, statistical data, and aviation market reports.

Findings: The rapid spread of the SARS CoV-2 virus initially resulted in a decreased demand for air transport and ultimately led to flight suspension and airport closure. Past observations and statistical data analyses clearly demonstrate that the aviation industry has changed due to the pandemic.

Practical Implications: Continuing developments in air transport entail not only an economic advantage but also stimulated investments in state-of-the-art technologies. Through an increased application of expert knowledge and innovative approaches of many sectors, there will be new opportunities to address the issue of the impact of crises on air transport.

Originality/Value: The indication of key actions undertaken by the aviation industry in Poland to mitigate the effects of the pandemics, which are long-term and will guarantee successful air transport into the future.

Keywords: Pandemics, Covid-19, air transport, economic impact.

JEL classification: N7, N70, R41, R42, R49.

Paper Type: Research study.

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1. Introduction

In 2020, the aviation sector had to handle the crisis caused by COVID-19 that affected the entire world and brought about considerable changes, both in communities and aviation organizations. Air transport is now operating differently from the way it used to operate just months or years ago. Over the last several dozen years, the aviation industry faced a number of crises, both natural and economic, which have had a lasting impact on its operations, SARS, the World Trade Center attacks, the Indonesian volcanic ash clouds, or the financial crisis of 2008. Its operations have also been affected by internal modifications, such as the deregulation of the aviation market in the USA and Europe, the privatization of major network air carriers, the competition on the part of low-cost air carriers with recognized network operators offering a full range of services. The above listed breaking points have had a profound impact on air transport. However, recently it is COVID-19 that has revolutionized the air industry in an unprecedented manner, and its consequences, already felt in the sector, will continue to have an impact in the years to come (Linden, 2021; Amankwah-Amoah, 2020).

Media report airline bankruptcy cases all around the world and cite state support to airlines and aviation organizations in the form of credits, loans, and other financial measures so as to ensure their liquidity. Almost every aviation organization across the world faces the challenge of guaranteeing their continued survival (Walków, 2020).

2. The Operation of the Polish Air Transport During the Pandemic – Event Chronology

On the basis of the analysis of the Polish aviation market's statistical data from the last few years, Table 1, we can safely say that they were successful and market forecast were optimistic (ULC, 2020). Along an increase in the wealth of citizens, the demand for air travels grew. The crises listed above were local rather global in nature (Paprocki, Hoszman, and Zagrajek, 2020). At the beginning of the year 2020, *Polskie Linie Lotnicze LOT* (PLL LOT) and *Polska Grupa Lotnicza* (Polish Aviation Group) were arranging the takeover of Condor airlines. There were no indications of what was yet to come (Walków, 2020; Rynek Lotniczy, 2020).

Air transport has been the first victim of the crisis related to the COVID-19 coronavirus pandemic. In response to the situation, the Polish government, similarly to other governments, started to introduce drastic measures to prevent the epidemic, and then the pandemic, such as border closure, mandatory quarantine, and social distancing rules (Walków, 2020; TVN, 2020; Onet, 2020) (Table 1). Ultimately, those means led to the grounding of airplanes and a breakdown in air transport (Walków, 2020). The sequence of the above events and their consequences is presented in Table 2.

Table 1. Passenger and air operation volume on domestic and international flights, both regular and charter at Polish airports over the period 2018-2020.

Airport Name	First Quarter			Dynamics		Second Quarter			Dynamics	
	2020	2019	2018	2020/2019	2020/2018	2020	2019	2018	2020/2019	2020/2018
1. Chopin in Warsaw										
Number of passengers	31072 29	369637 1	341873 0	-15.9%	-9.1%	64657	4891498	4577301	-98.7%	-98.6%
Number of PAX operations	34813	40298	37214	-13.6%	-6.5%	1488	46030	43540	-96.8%	-96.6%
2. Kraków - Balice										
Number of passengers	15331 49	163155 1	140503 4	-6.0%	-9.1%	14031	2171639	1782439	-99.4%	-99.2%
Number of PAX operations	11558	12180	10831	-5.1%	6.7%	301	15076	13022	-98.0%	-97.7%
3. Katowice - Pyrzowice										
Number of passengers	64852 0	710423	710967	-8.7%	-8.8%	8103	1312009	1269825	-99.4%	-99.4%
Number of PAX operations	5351	5252	5297	1.9%	1.0%	289	8877	8719	-96.7%	-96.7%
4. Wrocław - Strachowice										
Number of passengers	52604 5	684309	596626	-23.1%	-11.8%	6694	953304	880510	-99.3%	-99.2%
Number of PAX operations	4859	5985	5448	-18.8%	-10.8%	191	7445	7016	-97.4%	-99.3%
5. Poznań - Ławica										
Number of passengers	33113 6	386393	401086	-14.3%	-17.4%	4457	643071	656940	-99.3%	-99.3%
Number of PAX operations	3225	3618	3927	-10.9%	-17.9%	199	5041	5320	-96.1%	-96.3%
6. Łódź - Lublinek										
Number of passengers	37338	49107	46513	-24.0%	-19.7%	0	62190	54566	-	-
Number of PAX operations	224	380	282	-41.1%	-20.6%	0	444	414	-	-
7. L. Wałęsa Gdańsk										
Number of passengers	88340 7	998432	981195		-10.0%	17892	1457190	1337816	-98.8%	-98.7%
Number of PAX operations	77408	8243	8385	-6.0%	-7.6%	509	11046	10510	-95.4%	-95.2%
8. Szczecin - Goleniów										
Number of passengers	92139	120055	124587	-23.3%	-26.0%	6144	146609	158369	-95.8%	-96.1%
Number of PAX operations	1014	1025	1099	-1.1%	-7.7%	116	1203	1291	-90.4%	-91.0%
9. Bydgoszcz - Szwederowo										
Number of passengers	70745	82924	72075	-14.7%	-1.8%	0	107038	110149	-	-
Number of PAX operations	713	638	604	11.8%	18.0%	0	768	802	-	-
10. Rzeszów - Jesionka										
Number of passengers	11640 3	163966	151166	-29.0%	-23.0%	3104	197157	202935	-98.4%	-98.5%
Number of PAX operations	1298	1620	1490	-19.9%	-12.9%	126	1924	1878	-93.5%	-93.3%
11. Zielona Góra - Babimost										
Number of passengers	6612	4309	5471	53.4%	20.9%	1357	6343	6230	-78.6%	-78.2%
Number of PAX operations	208	147	154	41.5%	35.1%	88	187	148	-52.9%	-40.5%
12. Warszawa – Modlin										
Number of passengers	48915 3	718158	682902	-31.9%	-28.4%	2225	864259	822821	-99.7%	-99.7%
Number of PAX operations	3241	4352	4232	-25.5%	-23.4%	112	5018	4837	-97.8%	-97.7%
13. Lublin										
Number of	59011	75474	109916	-21.8%	-46.3%	869	90525	130223	-99.0%	-99.3%

passengers										
Number of PAX operations	540	620	896	-12.9%	-39.7%	12	645	1001	-98.1%	-98.8%
14.Radom - Sadków										
Number of passengers	0	0	0	-	-	0	0	0	-	-
Number of PAX operations	0	0	0	-	-	0	0	0	-	-
15.Olsztyn - Mazury										
Number of passengers	28259	28538	18728	-1.0%	50.9%	618	33917	30477	-98.2%	-98.0%
Number of PAX operations	240	202	132	18.8%	81.8%	16	260	234	-93.8%	-93.2%
Total										
Number of passengers	79291 47	935001 0	872499 6	-15.2%	-9.1%	13015 1	1293674 9	1202060 1	-99.0%	-98.9%
Number of PAX operations	75032	84560	79991	-11.3%	-6.2%	3447	103964	98732	-96.7%	-96.5%

Source: Own study compiled on the based of:

https://www.ulc.gov.pl/download/regulacja_ryнку/statystyki/1kw2020/wg_portow_lotniczych_1kw2020.pdf

https://www.ulc.gov.pl/download/regulacja_ryнку/statystyki/2kw2020/wg_portow_lotniczych_2kw2020.pdf

Table 2. The events having an impact on the operations of the Polish air transport amid the pandemic

No.	Date	Event	Consequence/ Reason
1.	16/01/2020	PLL LOT submits a tender to buy Condor, a charter flight air carrier and a member of the bankrupt tourist group Thomas Cook	Pro-development aspect
2.	30/01/2020	LOT cancels flights to China	Coronavirus
3.	14/03- 13/04/2020	LOT suspends some flights to the USA	The decision made by President Donald Trump to introduce a ban on entry with respect to travelers from the Schengen area
4.	15/03/2020	Announcement of epidemic emergency	An 83%-decrease in the number of takeoffs and landings at Polish airports
	15/03 – 16/06/2020	Suspension of regular flights from and to Poland	Coronavirus
	15/03 – 31/05/2020	and domestic flights	
5.	15/03 – 05/04/2020	Start of the <i>LOTdoDomu</i> (FLIGHT home) campaign as part of repatriation cruises Poles from abroad return to Poland, interested foreigners leave Poland	54,000 of carried passengers
	25/03/2020	Border closure extended until April 13	Coronavirus
	6.	31/03/2020	More restrictions introduced by the government
7.	09/04/2020	New restrictions are introduced	Face must be covered in public spaces
			International air and rail traffic suspension extended until April 26
			Border closure extended until May 3

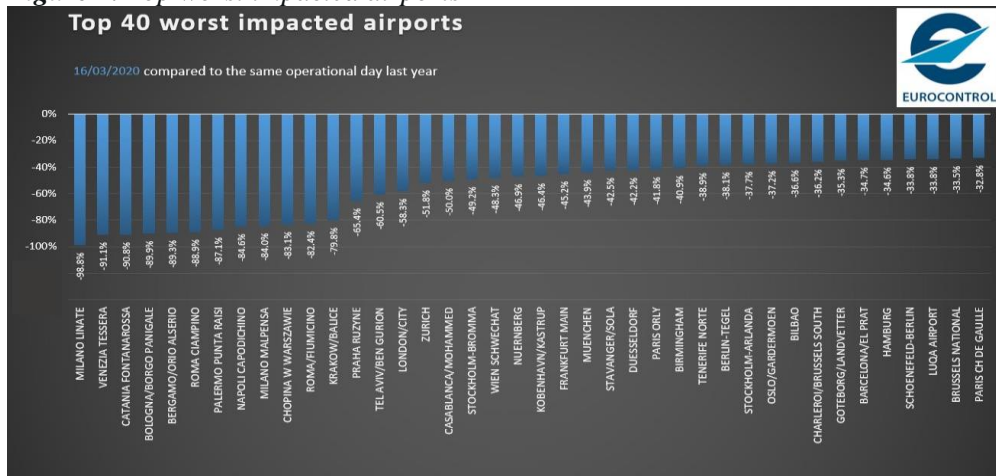
8.	13/04/2020	Polish Aviation Group withdraws from the takeover of Condor air carrier	Finance, strategy
9.	14/04/2020	The largest transport aircraft in the world lands in Warsaw carrying medical equipment	Aid in the fight against coronavirus
10.	16/04/2020	PLL LOT suggests a decrease in staff remunerations for the downtime	Maintenance of staffing levels and avoidance of mass redundancies
11.	26/04/2020	Extension until further notice of the mandatory quarantine for anyone crossing the border	Coronavirus
12.	29/05/2020	Polish Aviation Group registers its twin company LOT Polish Airlines SA	Ordering operating activities
13.	01/06/2020	LOT resumes domestic air service operation following sanitary rigor	Domestic air services will be operated between eight cities: Airplanes will fly up to twice daily from Warsaw to Cracow, Poznań, Rzeszów, Szczecin, Wrocław and Zielona Góra; up to three times daily from Warsaw to Gdańsk, once daily from Cracow to Gdańsk. This schedule is to be in force until 19 June.
	01/06/2020	The government declares readiness to grant public aid to the carrier	Coronavirus
14.	17/06/2020	The Estonian Minister for the Economy and Infrastructure, Taavi Aas, announces the sale of LOT shares in NORDICA lines	PGL declared continued cooperation with Nordica and is currently reviewing the option to participate in the capital increase planned by the shareholders
15.	01/07/2020	Restart of international cruises	Emergence of over 130 air links to 36 European destinations
		Restart of transatlantic flights and flights to Japan	New York, Chicago, and Toronto
16.	15/09/2020	A ban on flights from Poland to 44 countries. The ban was introduced due to the spread of SAR-CoV-2 virus infections	Ban on international flights to Spain, Malta, Moldavia, Montenegro, the USA. The ban did not apply to charter flights of the tourist sector
17.	30/09/2020	Publication of the report about the aviation industry hit by the crisis	Possible 46 million job losses in the aviation industry and the logistics and tourism sectors
18.	15/10/2020	Up-date to poviats under restrictions	152 poviats in the red zone
19.	23/10/2020	Up-date to poviats under restrictions	The entire Poland in the red zone
20.	04/11/2020	Introduction of new restrictions by Mateusz Morawiecki	New restrictions to be binding from 7 to 29 November: Elementary school grades 1 – 3 to be taught online, extension of online learning for grades 4 – 8, closure of theatres, cinemas, art galleries, some shops in malls,

			hotels available only for guests on business trips
21.	22/12/2020	New restrictions introduced by the government binding from 28/12 to 17/01/2021 (national quarantine)	Ban on gatherings larger than 5 people, ban on moving around on New Year's Eve, ban on assemblies, children and teenagers below the age of 16 may not move around between 8:00 am and 4:00 pm unless accompanied by an adult

Source: Own study compiled on www.wiadomosci.onet.pl; www.forsal.pl; www.lot.com.pl; www.businessinsider.com.pl; www.wiadomosci.onet.pl; www.tvn24.pl; www.pulsmedycyny.pl

The above restrictions introduced in Poland contributed to the inclusion of the Warsaw Chopin Airport at the 10th position on the list of Top 40 airports worst impacted by the consequences of the SARS-Cov-2 pandemic published by Eurocontrol (Walków, 2020) - Figure 1.

Figure 1. Top worst impacted airports



Source: <https://businessinsider.com.pl/firmy/zarzadzanie/koronawirus-spowodowal-kryzys-w-liniach-lotniczych/21n3004> (4.01.2020)

3. Materials and Methods

The subject matter of the research was the impact of COVID – 19 on the operation of air transport in Poland. The primary research objective was to present the issues the aviation industry has had to face during the pandemic and to systematize the actions undertaken by the Polish government to limit the spread of the virus – actions that have made a difference to air transport.

The presented research goal led to the following research problems: What is the impact of the pandemic on the Polish air transport? What actions are undertaken by

the Polish government in the fights against the pandemic? What is the impact of government actions on air transport in Poland? The source of data are reports, expert opinions, legal acts, books and online publications relating to the operation of the air transport sector amid the COVID-19 pandemic

4. The Pandemic and its Consequences on the Polish Aviation Market

The decisions taken by the Polish government, among them the closure of Polish borders for foreigners, cancellation of international and domestic flights (PLL LOT executes only cargo air services upon the opening of the air bridge between China and Poland and flights as part of the *LOTdoDomu* campaign) and the collapse in the demand are some of the factors which have contributed to airline crisis (Walków, 2020; LOT, 2020).

Experts in the aviation industry comment the situation as follows: Michał Fijoł, a member of the board of PLL LOT for commercial purposes says:

“We have reached the business hell. Neither this nor the coming year will be profitable.” He also emphasizes that *“... insofar as the current year is exhausting for the carrier, the year 2021 may be even more so because of one trend in particular.”* (Walków, 2020).

Therefore, it is worth posing the question: How will air transport operate in Poland in the nearest future? The upcoming months will be labor intensive for the airlines in order to restore confidence of the passengers and prove that flying is safe again. To do so, airlines will need to seek various, also non-conventional, solutions. Over the next weeks we may witness new developments on the aviation market. We will see whether air carriers will be able to equate their needs with the abilities and expectations of the passengers who, though ready to travel, feel insecure. One of the reasons behind it could be the persisting pandemic, cancellation of scheduled flights and problems with refunds (Press Release, 2020).

Nowadays, PLL LOT is striving to rebuild its network of connections through the employment of the following actions:

- expansion of direct tourist flights which have been carried out directly from regional airports, the Warsaw Chopin airport and Budapest. In the summer, 300 thousand passengers availed of this option.

- changes in PLL LOT's operations:

- * improving offer's flexibility,

- * ability to make changes to purchased tickets free of charge,

- * introduction of e-press,

- * change of on-board products,

- * changes related to passenger handling (Walków, 2020; Business Insider, 2020).

On-board policies: mandatory face/nose covering at all times. Due to the cancellation of social distancing with a checkerboard seating algorithm on 1 July

2020 (the obligation to leave a half of the seats unoccupied introduced by the Main Sanitary Inspectorate (GIS) was binding between 1 and 30 June 2020), all airplane seats are available for sale. Summer vacation flights continue to follow the standard rules regarding the carry-on – passengers are allowed to bring a carry-on that must not exceed 55 x 40 x 23cm with a maximum weight of 8kg. In addition, one is allowed a baby carriage, an umbrella, or a laptop case.

As part of free services, passengers will receive a sweet or a savory snack and a bottle of water. Shop&More and SkyBar in-flight sale services will be resumed (snacks, beverages, alcohol), available on demand. The only allowed payment method will be a credit card. Paper LOT magazines and journals will be replaced with electronic press. Since 1 June, every passenger has been able to download his/her favorite journals directly onto one's mobile device 36 hours before the take-off and 6 hours following landing. There are circa 1000 titles available.

What is more, in accordance with the procedure entitled “*BezpiecznyLOT*” (SafeFLIGHT), passengers can avail of disinfectants available on-board. On-board staff, equipped with relevant protective means, runs in-flight services following the principles of limited staff-passenger contact (Business Insider, 2020). Michał Fijot responds to the above changes as follows: *We hope that LOT will continue to be the largest carrier in the Central-East European region, both with respect to passenger and cargo services* (Walków, 2020).

Nonetheless, the most compelling issues for the Polish aviation market are not restrictions but financial matters, i.e. cost reduction and government support, as confirmed in a conversation with journalists by Michał Fijot: “... *the months to come will be difficult for LOT. We are rounding up negotiations with the lessors to lower the costs. We are conducting discussions with the owner (the State Treasury - ed.) because airlines around the world have received tremendous financial support – we also have to face this issue*” (Walków, 2020).

Jacek Sasin, the head of the national asset department, has referred to the issue of financial aid: “... *LOT will require state support and we declare that we will provide one. However, we must stress that actions are needed to rationalize costs now when operations are at their minimum level*”. The above actions refer to the minimization of fixed costs, the change in staff's working hours, the method of remuneration, and the issue of renegotiation of lease agreements.

On 1 June, the Deputy Prime Minister emphasized: “... *it is too early to talk about any concrete bail-out for LOT. ...its size will depend on the pace of air traffic thawing*” (Walków, 2020).

Nearly all airlines operating on the global market, now in an adverse financial situation, have called to governments for support – Figure 2.

Figure 2. Number of airlines at certain profitability levels. The horizontal axis shows the number of airlines; the vertical axis – profits in USD million. The blue line signifies the 2008 data and the red line – 2018.



Source: <https://businessinsider.com.pl/firmy/zarzadzanie/koronawirus-spowodowal-kryzys-w-liniach-lotniczych/21n3004>.

Given the above, IATA called on governments to support airlines with respect to the following: making the law regarding compensation for delayed or cancelled flights amid the pandemic more flexible, relaxing the rules leading to the loss of unused airport slots for the period of air service suspension, and providing financial support both in the form of direct aid, loans, financial guarantees, and tax exemptions. Alexandre de Juniac, Director General and CEO of IATA, former CEO of Air France, referred to the above as follows: “Some of you may wonder why, given the broad economic impact of this crisis, governments should focus on airlines. It is because connectivity is crucial. The world will get through this crisis. And when it does it will need a functioning air transport sector. Without financial relief that is not guaranteed”. “...Prioritizing air transport—helping airlines financially survive through these dark times—will position the world for the eventual recovery.” He also reminded that about 35% of the value of global trade is transported by air and the industry supports almost 70 million jobs.

Nicholas Wyatt, Head of R&A and Travel & Tourism at GlobalData, has also commented on financial support for airlines worldwide. He believes that the question about public aid is not “if” but “when”. *Governments will be forced to step in and either bail out airlines directly or extend support by way of ‘time to pay’ and tax relief arrangements. Even if there is public opposition to such intervention, governments will be left with no choice but to intervene and save what is, in some countries, a systemically important industry.*” (Walków, 2020; ICAO, 2020; ACI, 2020; IATA, 2020; Gudmundsson, Cattaneo, and Redondi, 2020).

With reference to the above, the European Commission agreed to Polish support to PLL LOT. The loan and capital injection totaled PLN 2.9 billion. The Polish government decided to grant state support to the national air carrier, likewise many

other EU states and countries worldwide. This is because the absence of support would lead to insolvency and have major consequences for the entire economy (Piotrowski, 2020; Walków, 2020; Orlikowski, 2020).

5. Conclusions

The COVID-19 pandemic had dramatic consequences for both Polish and global aviation in 2020. The restrictions introduced by the governments, involving blockades, mobility constraints or mandatory quarantines, hit the sector hard causing limitations in the operations of the leading airlines and airports worldwide and a drastic increase in the risk of potential bankruptcy cases among the companies operating on the aviation market (Linden, 2020; Sun, Wandelt, and Zhang, 2020).

The events presented in the paper clearly demonstrate that the present-day situation of the aviation industry is alarming, whereas the scale of the problems triggered by the outbreak of the pandemic is unprecedented. However, despite the above, it is worth to find some positive aspects of the situation. One of them is making more explicit the importance of air transport as a strategic sector of the economy, one which ensures expeditious transportation of medicines and materials required to combat the disease and plays a major role in repatriation operations (TOR, p. 5; Paprocki, Hoszman, and Zagrajek, 2020).

Despite the events which have shocked the Polish and global aviation markets, all of the market participants are hopeful about the future and reckon on its swift reactivation that actually depends on an easy access to vaccines of the populations worldwide.

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