The Impact of the Spread of COVID-19 on Airports across the World

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1. Introduction

The novel coronavirus is raging all over the world.
As of April 24th, the number of infected people worldwide is approximately 2.77 million, and the number of deaths exceeds 190,000. Each industry has been hit by the effects of this coronavirus, and the economy has stagnated in every possible way. In the aviation industry, the effects are tremendous. Even in major developed countries, many national airlines are taking measures to reduce or cease 80% to 90% of flights. According to IATA estimates, passenger revenue will fall by $314 billion this year for airlines around the world, and countries are embarking on supporting their national airlines.

Still, some airlines have been unable to withstand this unprecedented decline in demand. Australia's second largest airline, Virgin Australia, entered into voluntary management procedures under the Civil Rehabilitation Law of Japan on April 21st. Also, Europe Norwegian Long Haul LCC, a subsidiary of Norwegian Air Shuttle, has gone bankrupt. We have started to see that some airlines cannot withstand the threat of the novel coronavirus.

The decline in aviation demand has made a big impact on the management of airlines. It has also similarly affected airports. However, while airline trends have been widely discussed every day, airports have received less attention, despite the fact that there have been various movements at airports around the world. In this paper, I will report on the operational and management impacts of the spread of the novel coronavirus on national airports globally, as well as the status of support in their respective countries.

2. North America

2-1 United States

As part of the Coronavirus Aid, Relief, and Economic Security (CARES) Act, the US Department of Transportation announced the Airport Grant program on April 14th, which will serve 3,000 large and small airports nationwide (1), and is aimed to aid safe operations of airports, maintain the employment of airport staff, and suppress the deterioration of airport credibility.

Program resources total approximately $10 billion. Additionally, allocated grants are available for spending deemed appropriate in accordance with the Federal Aviation Administration's (FAA) policy on airport revenue use.

In the following paragraphs, I will delve into trends that have emerged at congested airports, so designated by IATA as Level 3 and Level 2, due to the spread of the novel coronavirus.

At two of the largest and most heavily congested airports in the United States, New York's John F. Kennedy International Airport (JFK) and LaGuardia Airport (LGA), FAA air traffic controllers got infected with the novel coronavirus while in their control towers (2).

Following the discovery of the infection, both airports closed their control towers, suspended airport operations, and conducted disinfection operations.

In addition, 26 field workers at LGA involved in an $8 billion renovation project tested positive for the novel coronavirus. Thus many workers, including individuals who were in close contact with those infected, were forced to voluntarily self-isolate. Consequently, there is a major delay in the progress of the project (3).

On the west coast, Los Angeles International Airport (LAX) was also hit hard. Passenger traffic at the airport dropped by 90%. Delta Air Lines relocated to Terminal 2, closing Terminal 3, where they had operated. In addition, United Airlines closed Terminal 8, and is tentatively moving to Terminal 7 (4). Meanwhile, San Francisco International Airport, which is also on the west coast, announced that they would postpone the start of the 1 billion yen project for Terminal 3 renovations for at least 6 months, which had been scheduled to start in June of this year. (5)

Concerning other areas of the country, Chicago O'Hare Airport (ORD), which supports the economy of Chicago, the third-largest city in the United States, announced that for the time being they will close two of its seven runways due to the decline in airport passengers by about 50%.(6) Las Vegas McCarran International Airport (LAS) is planning short term reduced operating hours of gates at Terminal 1 and inspection stations at Terminal 3.(7)

On the other hand, despite the difficult situation, some airports are taking measures to improve airport utility, while others are endeavoring to execute maintenance and renovation projects. The Ronald Reagan Washington National Airport (DCA), located

in the capital city of Washington D.C., is promoting a program to build 14 new boarding gates and National Hall, a developing passenger area behind security check that will be opened in 2021, despite the demand for air travel reaching catastrophic levels (8).

Additionally, Westchester County Airport (HPN) in New York State is also using this period to close and repair their 1st runway during the daytime, when originally they had planned to continue airport operations during the day and only conduct repairs at night. (9). Denver International Airport (DEN) is deferring three months of rent and landing fees for partnered airlines, or approximately $60 million worth of payments (10). Meanwhile, at Dallas / Fort Worth International Airport (DFW), tenants' rents will be changed from a minimum guarantee method to a sales-based model until September 30th. As a result, their income is expected to fall by around $45 million to $55 million (11).

2-2 Canada

The novel coronavirus has even impacted major airports in Canada. At Montréal-Pierre Elliott Trudeau International Airport (YUL), many stores were forced to temporarily close based on guidelines from the Quebec provincial government. (12) The airport likewise closed one runway and one-third of their boarding gates. They also suspended some planned construction work, reduced executive and employee compensation and salaries, and accepted assistance from the Canadian Emergency Wage Subsidy program (13).

Ottawa International Airport (YOW) saved $25 million in costs by suspending large-scale projects. They also postponed attracting local stores, delayed construction of a hotel, reduced use of non-essential equipment, and cut employee wages and working hours (14).

In addition, many other airports in Canada, including the Toronto Pearson International Airport (YYZ), asked authorities to allow a deferment period to satisfy regulations, grant flexibility in adjusting federal funds, provide relief for airport rents for the remainder of the 2020 term, and contribute assistance of airport rents until 2022 (15).

3. European Regions

3-1 United Kingdom

The impacts from the novel coronavirus has reached London Heathrow International Airport (LHR), one of the world's leading international airports. Terminals 3 and 4 were closed, and airport operations were integrated into Terminals 2 and 5 (Terminal 1 was closed in 2015, and became part of an expansion of Terminal 2) (16).

In the UK, the number of cases where airports are being used as testing sites for the novel coronavirus is increasing. Drive-through testing stations have been set up for employees working for the UK National Health Service (NHS) at London Stansted Airport (STN), Glasgow Airport (GLA) in Scotland, and Edinburgh Airport (EDI) (17).

3-2 Germany

Germany is also one of the countries heavily affected by the novel coronavirus. Fraport, which operates the Frankfurt International Airport (FRA), says that they currently have enough assets to deal with impacts without government support. However, when Terminal 2 was closed in April, the number of passengers at the airport in the first half of the month decreased by 97% year-on-year, and the number of aircraft departures and arrivals also decreased by 86% year-on-year. (18). At Munich International Airport, the number of passengers in the first week of April decreased by 99% year-on-year, and the number of arrivals and departures also decreased by 93% (19).

3-3 Netherlands

The impact on Amsterdam Airport Schiphol (AMS), the largest airport in the Netherlands, is also not insignificant. At the airport, some terminal facilities have been closed, and the so-called "Core Schiphol" plan is being implemented to carry out merged terminal operations. However, the number of passengers has decreased to 5%, and the number of departures and arrivals is only about 10% year-on-year. On the other hand, it was announced that the current limited facility operations would be utilized to change the plan to efficiently renovate and conduct maintenance (20).

4. Other Areas

The spread of infections has likewise affected airport operations in regions other than the West. For example, Taiwan Taoyuan International Airport (TPE) announced on April 14th that there were a total of 669 passengers at the airport, with 0 of them at Terminal 1 exclusively (21). Furthermore, three days later, 20 boarding gates in the airport were closed for the time being (22). However, making effective use of this period when aircraft takeoffs and landings have decreased significantly, they have planned to proceed with re-paving work on the north runway and taxiway (23).

5. Conclusions

The examples introduced in this article are just a few of the unprecedented situations happening at airports around the world. Never before has the aviation industry, including airports, faced such a serious crisis on a global scale. However, airports' operating bodies and methods differ depending on the country and region. State-owned airports and public organizations can more easily receive public support from national and local governments than those private airports who first need to find internal solutions or seek assistance from private financial

institutions. The United States is a typical example of the former, and many major European airports fall into the latter. Revenues acquired at airports are mainly aviation earnings, such as from landing fees and airport facility usage fees, and non-aviation revenue from food and beverage sales and other services within the terminal (facility leasing, parking lot management, etc.). If the number of flights decrease, aviation income will also. As a result of reduced flights, the number of passengers and non-aviation income will also lessen. Furthermore, if airport operations become stagnant or are stopped due to a decrease in income, it will have a great impact on local companies and employment opportunities that enjoy the airport's economic benefits, which may lead to a collapse of the regional economy. An airport is a clamp, or a keystone, that connects multiple layers of destinations and aviation networks. Governments should understand the risk of losing airport functions, as it will take longer for the world to return to normal life without airport operations. Airports need more attention and support around the world.

References
(1)https://www.faa.gov/airports/cares_act/
(2)https://www.businessinsider.com/coronavirus-airports-and-faa-centers-temporarily-closed-for-cleaning-2020-3
(3)https://www.nydailynews.com/coronavirus/ny-coronavirus-lga-workers-sick-covid-19-20200402-lhrldlgmpzdg3cnmglfsblwcvq-story.html
(4)https://labusinessjournal.com/news/2020/apr/09/lax-air-traffic-falls-terminals-closing-down/
(5)https://centreforaviation.com/members/direct-news/sfo-postpones-1-billion-terminal-3-west-project-521067
(6)https://centreforaviation.com/news/chicago-ohare-closes-two-runways-due-to-reduced-travel-demand-amid-coronavirus-outbreak-988726
(7)https://blueswandaily.com/las-vegas-mccarran-airport-reduces-terminal-hours-due-to-coronavirus/
(8)https://www.bizjournals.com/washington/news/2020/04/13/reagan-national-airport-plugs-away-on-new.html
(9)https://centreforaviation.com/news/westchester-county-airport-to-accelerate-runway-rehabilitation-project-amid-coronavirus-outbreak-990453
(10)https://centreforaviation.com/news/denver-international-airport-enabling-carriers-to-delay-rent-for-three-months-990773
(11)https://www.moodiedavittreport.com/dallas-fort-worth-airport-board-ratifies-suspension-of-mag-payments-and-restructures-duty-free-contract/
(12)https://centreforaviation.com/news/aeroports-de-montreal-reports-temporarily-closre-of-stores-due-to-coronavirus-990689
(13)https://centreforaviation.com/news/aeroports-de-montreal-deploys-exceptional-measures-in-response-to-coronavirus-991809
(14)https://centreforaviation.com/news/ottawa-international-airport-authority-implements-cost-reduction-measures-amid-coronavirus-outbreak-989843
(15)https://centreforaviation.com/members/direct-news/greater-toronto-airports-authority-responds-to-the-impact-of-covid-19-520550
(16)https://centreforaviation.com/members/direct-news/london-heathrow-airport-terminal-movement-to-terminal-2-522057
(17)https://www.airport-technology.com/news/london-stansted-airport-coronavirus-testing-centre/, https://www.scotsman.com/health/coronavirus/glasgow-airport-car-park-be-transformed-drive-through-coronavirus-testing-site-2529533, https://www.edinburghnews.scotsman.com/news/transport/edinburgh-airport-opens-drive-through-coronavirus-testing-centre-priority-key-workers-2540107
(18)https://centreforaviation.com/news/frankfurt-airport-pax-down-97-in-early-apr-2020-991436
(19)https://centreforaviation.com/news/munich-airport-at-1-capacity-in-first-week-of-apr-2020-991372
(20)https://www.futuretravelexperience.com/2020/04/schiphol-construction-schedule-covid-19-disruption/
(21)https://centreforaviation.com/news/taiwan-taoyuan-airport-t1-records-zero-passengers-on-14-apr-2020-991782
(22)https://centreforaviation.com/news/taiwan-taoyuan-airport-to-temporarily-close-20-boarding-gates-991988
(23)https://centreforaviation.com/news/taiwan-taoyuan-airport-brings-forward-maintenance-projects-991992