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Poland's Central Transportation Hub and the Smooth Development of Air Passenger Traffic in Poland

Summary: The paper analyzes the passenger aviation market in Poland in the context of plans to build the Central Communication Hub. The structure of air traffic and the threats that stand in the way of an ambitious ruling plan were discussed. The potential of LOT Polish Airlines in relation to competing airlines in Europe (both legacy and LCC) was also analyzed. The author also presented doubts in the context of infrastructure challenges in the development and development of intermodal transport solutions accompanying CPK.

Keywords: CPK; LOT Polish Airlines; Chopin Airport; Air traffic in Poland

Centralny Port Komunikacyjny a bezpieczeństwo rozwoju lotniczych przewozów pasażerskich w Polsce

Streszczenie: W artykule poddano analizie rynek lotnictwa pasażerskiego w Polsce w kontekście planów budowy Centralnego Portu Komunikacyjnego. Omówiono strukturę ruchu lotniczego oraz zagrożenia, jakie stoją na drodze ambitnego planu rządzących. Analizie poddano także potencjał PLL LOT w odniesieniu do konkurencyjnych linii lotniczych w Europie (zarówno linii legacy, jak i LCC). Autor przedstawił także wątpliwości w kontekście wyzwań infrastrukturalnych w zakresie rozwoju i rozbudowy towarzyszących CPK transportowych rozwiązań intermodalnych.

Słowa kluczowe: CPK, PLL LOT, Lotnisko Chopina

Introduction

Passenger volume at Polish airports has grown almost continually in recent years. The year 2017 saw a record number of over 40 million passengers passing through Polish airports (Urząd Lotnictwa Cywilnego [ULC], 2018). This article endorses the view that soon the Chopin Airport in Warsaw will no longer be able to function efficiently, and that the construction of a new Central Transportation Hub (known by its Polish acronym,

CPK – Centralny Port Komunikacyjny) will help ensure the development of Poland's air travel market. The following research questions provide a framework for exploring the following:

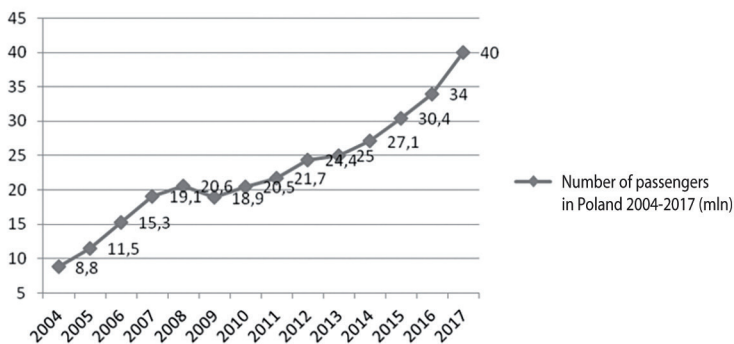
1. How has passenger traffic in Poland been structured, with respect to the operations of the central and regional airports, and has it been subject to changes during the development of the market?
2. What limits the development of air traffic at Chopin Airport?
3. What doubts does the planned construction of a CPK arouse, and what changes to the civil air traffic system would the opening of the CPK bring?

In response to the above questions, I have described the characteristics of Polish civil aviation market, conducted an analysis of documents and studies, and also referred to the public debate surrounding the CPK's planning. I have also conducted a comparative analysis of selected aspects of the operation of the air travel market in Poland and Europe, taking into account the current situation and prognosis for the future of LOT Polish Airlines.

The Civil Aviation Market in Poland

The need to build a new central airport in Poland has been recognized since the beginning of this century. As early as in 2003, the Ministry of Infrastructure formed an interdisciplinary team of specialists whose task was to determine a location for such an airport (Pijet-Migoń, 2012, 154–155). Those in government have also observed a dynamic increase in the number of travellers served at Polish airports since 2004–2005. This has been related to the appearance in Poland of new, low-cost carriers (LCC). The above-mentioned team's work led to the proposal of two possible locations for a new airport: Nowy Dwór Mazowiecki/Modlin, and Baranów (Pijet-Migoń, 2012, p. 156). Since that time, air traffic in Poland has significantly increased, as shown in Figure 1.

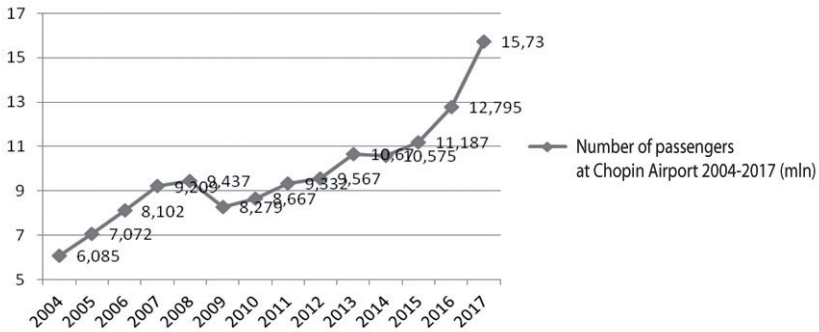
Figure 1: Number of airline passengers in Poland, 2004–2017 (millions)



Sources: the author's research, on the basis of the following ULC (2008, p. 17; 2009, p. 20; 2011; 2013; 2017a; 2018a).

When analyzing the process by which the air travel passenger market has grown, it is essential to note the leading role that the development of regional airlines has played. While the number of passengers nationally has risen by 450% during the study period, the number at Chopin Airport in Warsaw, Poland's largest, has risen "only" by 250% (Figure 2). The statistics are obviously impressive but point mainly to the growing role of airports located beyond the capital region.

Figure 2. Number of passengers at Chopin Airport, 2004–2017



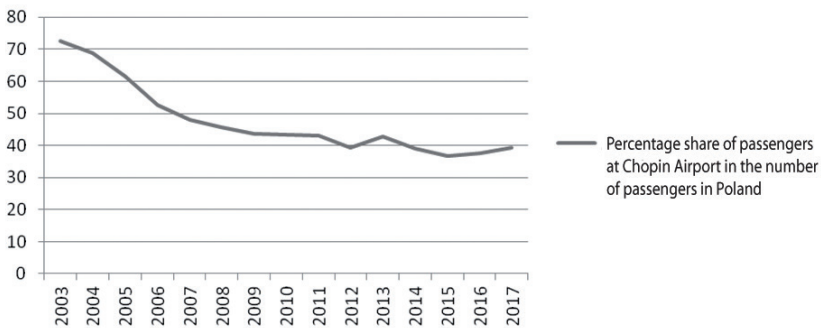
Sources: the author's research, on the basis of the following: ULC (2008, p. 17; 2009, p. 20; 2011; 2013; 2017a; 2018a).

Between 2003 and 2017, the capital airport's share fell by nearly 73% to a level that has oscillated in recent years at about 40% (Figure 3). The strong increase in the number of passengers served in regional airports in recent years would seem to point to a further but less significant growth in their share of all passenger traffic.

Warsaw's airport, with its network of intersecting runways, has not been working well and is slowly nearing the end of its operational possibilities. A study by the ARUP consulting firm, commissioned by the airport management board of Polish Airports State Enterprise, the airports' authority, pointed out that:

- the current runway capacity (42 operations/24-hours periods) has already been almost completely reached;
- the limited remaining passenger capacity reserve will likely have been used by 2020;
- the capacity of some of the terminal processes has already been exhausted (ARUP 2018, p. 16).

Figure 3: Chopin Airport's share of passengers served at Polish airports, 2003–2017



Source: the author's research, on the basis of the following:
 ULC (2008, p. 17; 2009, p. 20; 2011; 2013; 2017a; 2018a).

The report bears out some essential facts. The number of free slots is decreasing markedly; these slots will be taken by more capacious aircraft, which in turn may generate large passenger flows. Wizzair, for example, currently uses only A-321 Airbuses at its Okęcie (Chopin) operational base; equipped with 230 passenger seats, they have replaced 180-seat A-320 planes. Other carriers are also regularly increasing the number of places that they provide within specified time frames. At present, the Emirates airline uses the Boeing 777-300, which can carry about 450 passengers, to service its connections to and from Warsaw. The airport did not agree to the use of the world's largest passenger airplane, the Airbus A-380 (with about 550 seats) on such routes, explaining that it lacked the space and the appropriate infrastructure to serve this flying giant (Leman, 2018). It is possible that Emirates, following in the path of its competitors at Qatar Airways, will increase the number of its operations to two each day. Another wide-hulled plane that has appeared at the Warsaw Airport is the A-330 Airbus, used by Turkish Airlines; each week it "visits" Poland with as many passengers carried each day by smaller aircraft (Morga, 2018). It must be added that the number of flights offered by the Turkish carrier in Poland is limited only due to restrictions laid down in bilateral arrangements between Turkey and Poland; the carrier itself has often stated its willingness to begin taking passengers from Poland's regional airports, as well. LOT Polish Airlines is also quickly increasing the number of flights it offers from Warsaw; for years, it has been systematically expanding its fleet and connections network. Poland's longest-running airline has quickly doubled its fleet of wide-hulled planes, while the cases referred to above have led it to use almost the whole non-Schengen zone of the airport. For now, this is the airport's most heavily used section. It is not surprising, then, that the airport management views the quick expansion of this part of the infrastructure as a priority. Undoubtedly, this will start in 2019 as the Ministry of National Defense, which manages a nearby section of the airport, has agreed to lease it to the owners of Chopin Airport. Paweł Cybulak finds that "the obtained land will enable the creation of, among other facilities, new parking places for passenger airlines:

eight type-C planes (for example, the Boeing 737) or, depending on need, three type-E planes (for example, the Boeing 787) and two type-C planes” (Cybulak, 2018).

Table 1: Prognosis of the number of passengers in Poland to 2035

Year	Number of Passengers (thousands)
2017	39,300
2018	42,758
2019	46,271
2020	49,853
2021	53,439
2022	56,634
2023	59,466
2024	62,440
2025	65,312
2028	74,175
2030	79,920
2035	94,462

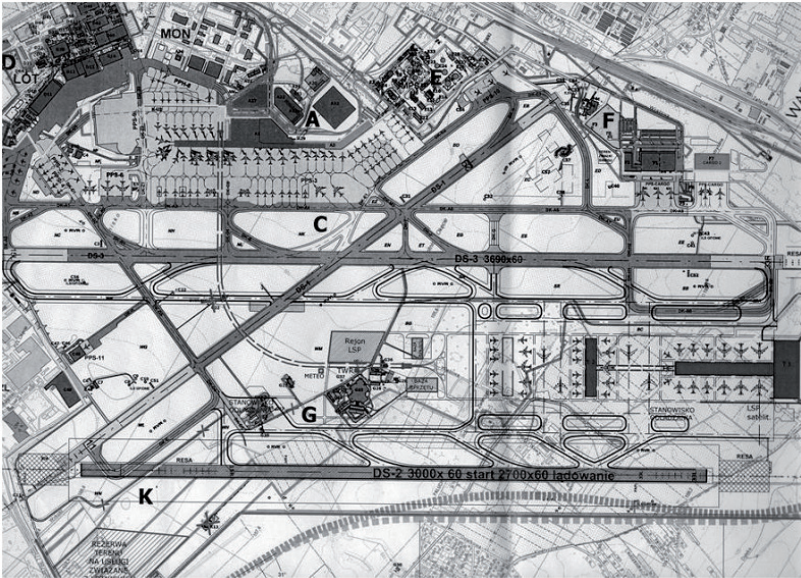
Source: the author’s research, on the basis of: Civil Aviation Authority (CAA, 2017); ULC (2017b).

The above-mentioned ARUP report includes a prognosis of the development of Warsaw’s airport. Based on their own calculations and a prognosis of the number of passengers to 2035 prepared by the Civil Aviation Authority (Table 1), the analysts concluded that the number of travellers at the capital city’s airport will increase from 24.2 million to 32.2 million by 2028, significantly exceeding the airport’s operational capability even after expansion (ARUP, 2018, p. 13). They also predict an increase in flight operations to 50 per hour (ARUP, 2018, pp. 20–25). Assuming that the capital’s airport will continue to service about 40% of all of Poland’s air passengers, their number will sooner or later reach a limit that cannot be exceeded. A certain solution was put forward in the first decade of this century: construction of a further runway, parallel to the main one (Figure 1). In view of the construction of roads and other commercial facilities since this time, it is unlikely that this option will be considered again. Furthermore, a new runway and the resultant increase in air traffic would certainly lead to numerous protests. It is essential to move some of this traffic beyond the airport’s present site at Okęcie. European legislation enables administrative procedures to move air traffic to another airport, subject to a number of principles:

- the airports serve the same city or conurbation
- the airports are served by adequate transport infrastructure providing, to the extent possible, a direct connection making it possible to arrive at the airport within 90

- minutes including, where necessary, on a cross-border basis;
- the airports are linked to one another and to the city or conurbation they serve by frequent, reliable and efficient public transport services; and
- the airports offer necessary services to air carriers and do not unduly prejudice their commercial opportunities. (Regulation (EC) No.1008/2008..., 2008, Article 19).

Illustration 1: Construction plan for a third runway and terminal at the Chopin Airport, Warsaw, Poland. BSiPL POLCONSULT, February 2007.



Source: Concept of a general plan of the F. Chopin Airport in Warsaw, BSiPL POLCONSULT, February, 2007. In: Suchorzewski (2016, p. 16).

Amsterdam's Schiphol Airport is conducting a similar procedure: some carriers and connections are to be moved to the Lelystad Airport (Kociubiński, 2018). On December 3, 2018, the Polish Ministry of Infrastructure announced this type of consultation related to the transfer of some air traffic from the capital airport. However, as Krzysztof Loga Sowinski has noted: "The essential difference between the two consultations lay in the question of how the proposed principles of sharing were presented. When the Dutch conducted their consultations at the end of last year, they presented specific conceptions of sharing to the airports and carriers, along with thoroughly considered justifications, supported by comprehensive studies. There was extensive material, to which specific postulates and conclusions could be submitted, which ultimately changed the Dutch authorities' original proposals. Polish Ministry of Infrastructure, on the other hand, offered neither proposals nor solutions and only asked for opinions and proposals for a concept of sharing. It was not known what stakeholders in the Polish aviation sector were supposed to refer to. It is difficult to hold consultations on something that does not exist. Of course, it is not an easy task to work out a concept of sharing Warsaw's air traffic

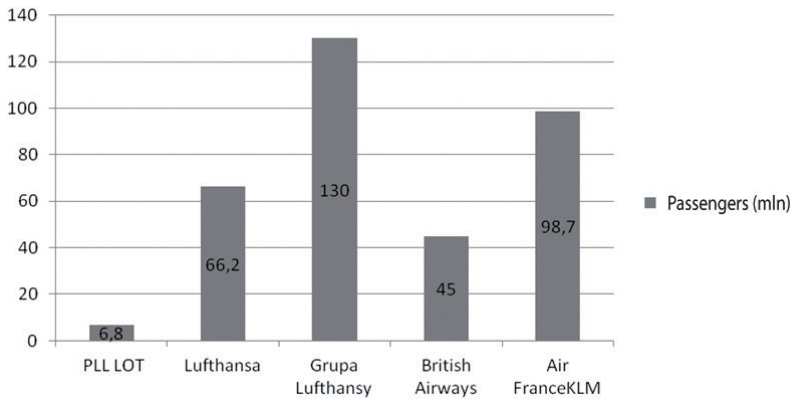
that has a chance of acceptance by the European Commission. All the same, ministry officials should not expect that someone will assume this responsibility for them.” (Loga Sowiński, 2018b).

In December 2018, the European Commission rejected Amsterdam Airport’s request to move air traffic, based on its weak network of transportation links to Lelystad Airport, as well as the unjustified advantages the change would bring to the Netherlands’ largest carrier, KLM Airlines (Urbaniak, 2018; Piotrowski, 2018b). I am concerned that the Polish request, with a significantly weaker grounding in the realities of the law and of technical infrastructure needed only to create airports, will not be positively assessed, especially in view of the special considerations that our “national” carrier will receive.

The Central Transport Hub (“Solidarity” Hub) in Public Debate Since 2017: a Project Full of Unknowns

The Central Airport, or in its new version, the Central Transport Hub (CPK; also named the “Solidarity Transport Hub”), surfaced in public debate following an interview with the chairman of Poland’s governing party, Jarosław Kaczyński held by Radio Białystok in February 2017. The leader of the Law and Justice Party (PiS) noted that central Poland needed a large airport from which connections with the whole world would be granted (Pilarski, 2017). As examples of large, functioning airports, he gave Vienna and Prague (which, in 2017, served fewer travellers than the Chopin Airport). The project’s public face – quickly promoted to the rank of vice-minister, as the government’s representative for the CPK project – was Mikołaj Wild. His plan, still quite general, assumes the creation of a new airport in the community of Baranów by 2027, serving at the outset 35 to 40 million passengers a year (Fryc, 2018). Its largest and most important carrier was to be LOT Polish Airlines (Walków, 2018b). Mikołaj Wild foresaw that the “national” airline would then carry no fewer than 15 million passengers, while the project’s manager, Rafał Milczarski, states: “It seems to me that by the end of 2019 we will have exceeded the historic number of 10 million passengers. If in the first three years of operation, we consolidated our network of connections with public assistance, and yet were able to double our size and the number of passengers we carried, it means that we should be able to grow at least two or three times by 2027, and move to the CPK with 20 or even 30 million passengers” (PAP, 2018). The announced dynamic development of LOT Polish Airlines inspires respect; however, if we are talking about competing with other European airlines and building an airport for tens of millions of passengers, we need first to have an airline that can go into competition with large European airlines. Figure 4 illustrates LOT Polish Airlines’ record compared to that of the significant players from our continent in terms of the number of passengers served; the following Figure 5 shows another essential disproportion in terms of the number of airplanes.

Figure 4. Number of passengers served in 2017 by LOT Polish Airlines and its competing European legacy airlines

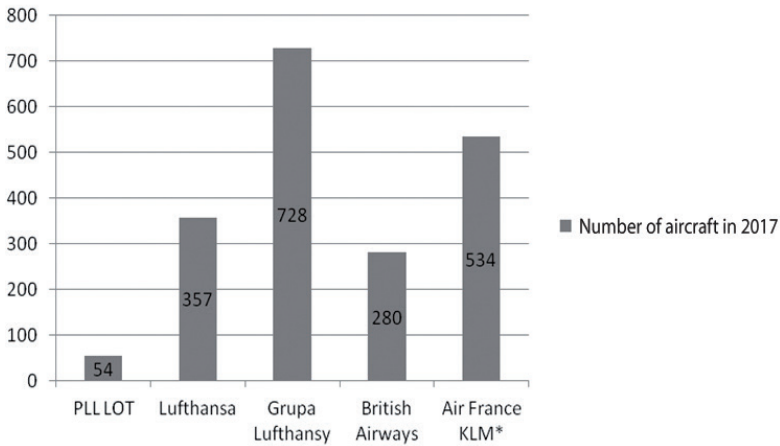


Source: the author's research on the basis of the following: PLL LOT (2018), Lufthansa Group (2018), Air France KLM (2018), British Airways (2018).

Figure 4 above shows that LOT Polish Airlines is a regional airline, not a large one which – in spite of its aspirations – will have trouble competing with much larger competitors. European network carriers have significantly more resources at their disposal that allow them to deal with cyclical periods of recession that occur in civil aviation. Still growing, the Polish carrier copes very well for an airline of its size; yet, economies of scale are very important in this sector.

Over a dozen planes have joined LOT Polish Airlines' fleet in the last year, but this will not make it, in the long run, a carrier that can meet the needs of an airport planned to serve 35 million people. In recent years, more passengers in our country have used Ryanair, Europe's largest low-cost line. LOT, comparatively more expensive for its customers and concentrated on the building of a Warsaw "national" hub, has been for many years in second place in terms of the number of passengers (Figure 6).

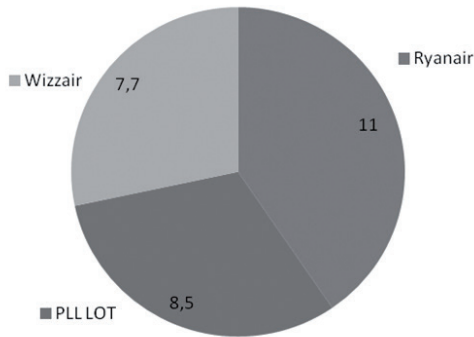
Figure 5. Number of planes owned by LOT Polish Airlines and competing European legacy airlines, 2017.



*Data for the AF-KLM group, 2016.

Source: the author’s research, on the basis of the following: PLL LOT (2018), Lufthansa Group (2018), Air France KLM (2018), British Airways (2018).

Figure 6. Market share of Poland’s leading three carriers, 2017.

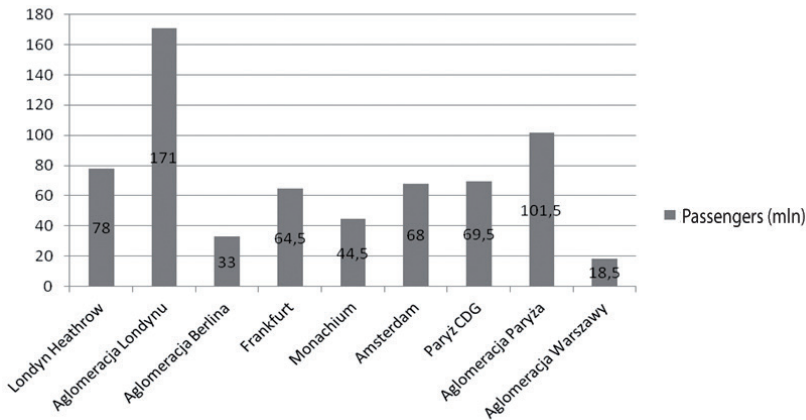


Source: the author’s research, on the basis of ULC (2018a, 2018b).

A further issue for the CPK project is the future of the Chopin Airport after 2027, when the newly-built airport would take over its leading role. The ideas of government officials change fairly often. In the first part of 2018, the prevailing view was that Chopin, at Okęcie, needed to be closed (obviously, it seemed so because of the projected volume of air traffic); later that year, before local elections, an idea emerged that both airports would operate in parallel. Ryszard Czarnecki, a member of the European Parliament representing the governing party, stated: “Okęcie will be important and convenient for those living in Warsaw, complementing the Central Transportation Hub. This is Prime

Minister Morawiecki's will and decision. Okęcie will remain, and we will build CPK as well. If Berlin has several airports, why should we not have at least two?" (PAP/kw, 2018). The idea that the Chopin Airport should continue to function was mentioned in the context of local operations – although it was not stated precisely what that was to mean (LUC, MNIE, 2018). Amidst the media confusion, Mikołaj Wild announced: “analyses will be added to the CPK feasibility study that will decide on the future of the Chopin Airport in Warsaw, whose traffic will be taken by the Central Transportation Hub. This will be ready by 2020 at the latest.” (Walków, 2018b).

Figure 7. The number of passengers served in 2017 in the Warsaw agglomeration and at selected airports and European agglomerations.



Source: the author's research on the basis of the following: CAA (2018), Statista.com (2018), Orban (2018), Schiphol (2018), ULC (2018a, 2018b).

Figure 7 presents the extent to which Europe's present hubs differ from the airports serving the Warsaw agglomeration. It should be added that the Berlin agglomeration, represented by the Tegel and Schönefeld airports, does not play a central role in Germany's civil aviation system; the airports in Munich and Frankfurt handle long-distance flights. This data does not clearly indicate that the Warsaw agglomeration's population has a hidden potential to strengthen the new hub, even though passenger counts from the Masovia region include those now using the low-cost Modlin airport. Taking into account that the rebuilt Radom airport – dedicated to serve charter and “low-cost” airlines – will be in operation by 2027, each of these airports will to some extent “draw off” the planned CPK's passengers. It is also not certain whether, given the above-mentioned attempts by administrators to share traffic with Chopin Airport, low-cost and charter carriers can be persuaded to leave it. Surprisingly, especially in the face of the current trend toward the gradual blurring of the line between low-cost and traditional carriers, there is one track of thought that suggests that “cheap” carriers will not want to use the new CPK. For many years, an increasing number of Wizzair planes have taken off regularly from Chopin Airport. Since the winter of 2018, Easyjet's white and orange planes have appeared at

Warsaw's airport. If such airlines can afford slots at airports such as Frankfurt, Madrid or Paris, it is very unlikely that they will not appear at the CPK, if it is built.

Even if we assume that LOT Polish Airlines will be in such good condition as it is now and that other airlines which will want to use CPK will appear, two further essential questions are inevitable. The first concerns the project's financing; its first stage, after careful consideration, can be estimated to cost about 35 billion PLN (Fryc, 2018). The expenditure on railway infrastructure included in this amount takes into account only the station and infrastructure needs directly related to the CPK. It would cost no less than a further 40 billion PLN to build new railway lines, and rebuild old ones so that Poles could travel to the CPK within four hours (Fryc, 2018). It is estimated that the construction of no fewer than 800 kilometres of new track would be required by 2035. Here a further problem occurs (optimistically assuming that financing can be obtained), related to the possibilities of this unprecedented type of building activity. Since 1989 not even 50 kilometres of new track has been laid in our country (Loga Sowiński, 2018a). Therefore, it is difficult to believe that a much longer length of track can be laid down very readily.

Summary

The Chopin Airport's days of efficient operation are numbered, despite infrastructure investments which have managed to put off its demise by several years. As a result, intensive efforts have been made to make a clear prognosis for Mazovia's network of airports, including the facility which will fulfil the role of a central transportation hub. It seems obvious that when it is built, the present central airport will need to be closed, as passenger flows (even those forecast for several years) will be insufficient to justify, economically, keeping both airports open. This article has indicated changes in the structure of passenger traffic in Poland, where regional airports play a dominant role, and that the Radom and Modlin airports will guarantee a reserve capacity given thorough reconstruction and facilitated access (this requires a rebuilding of passenger service infrastructure), allowing passenger traffic in Poland to develop freely in the coming years. The possible violation of European law, however, poses a threat to this process. If attempts to move some passenger traffic away from the Chopin Airport go outside the law, serious complaints from European institutions may be expected. There may be similar consequences if LOT Polish Airlines is unlawfully favoured in this matter. It is also doubtful, though a thorough explanation of the issue is beyond the scope of this article that a CPK will play the role of a hub for all of Central and Eastern Europe; where would that leave Prague, Vienna or Budapest? LOT is not the first airline that has tried to drain other regional airports of passengers who change planes at a central hub. In the text, I have shown that the proposed CPK is not a large-scale project compared to its European competitors and that the resources of our "national" airline are too small to stand up to global trends, including the mergers that may be observed in the airline sector. A problem – though it might be overcome – may lie in persuading workers at

the Chopin Airport to accept employment outside of Warsaw. It is more difficult to convince me that the required railway system can be efficiently provided for; unless such a system is in operation, the CPK will not be especially attractive to travellers who can, in a comparable amount of time, use the services of a competing carrier hub, connecting to regional airports without problems. The Baranow community's residents' unwillingness to accept the CPK project, expressed during a referendum that took place there, can also be dealt with by legal means. Perhaps these residents will warm to the project when they consider its prospective benefits to themselves. Growth in the number of airline passengers in Poland warrants the construction of a new airport, but doubts remain as to the means and methods that government officials are employing to this end; whether they are found to be deeply distasteful or hold our country to ridicule in international public opinion, while destabilizing Polish civil aviation's dynamic growth.

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