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An understanding of how aviation is handled in Helsinki and Finland

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Abstract

In conventional aviation research, airport development is often illustrated as 'closed' and interlinked by transport systems that facilitate passenger transport; airlines provide the capacity in airspace, while airports provide the capacity for airlines and passengers on the ground. However in this article, we examine the driving forces behind the increase in the number of passengers through a social aeromobility approach and using a case study of Helsinki airport, drawing on stakeholders' interviews. The main argument of the article is that the development of the airport network in Finland is a consequence of social processes and discussions involving multiple stakeholders with different local and global perspectives, where aviation policy is related to the narrative: 'Finland is an island'. Further, we argue that such a narrative helps stimulate a political awareness of aviation, and this motivates the acceptance of large investments in infrastructure. In conclusion, the article therefore also puts forward the view that aviation development theoretically must be understood as more than a 'global flow of machines in the aviation system', and that the relationship between places and flying needs to be brought much more to the fore in future aeromobility research.

Introduction

International connectivity is often seen as a key element for maintaining and developing both the business environment and tourism in regions and countries. From 2004 to 2014, Helsinki airport has undergone positive development – the airport connectivity has increased by 12% while its hub connectivity has increased by 88% (ACI Europe 2014). An important question is how Finland is exploiting its geographical location in order to develop its aviation? Therefore, this article will focus on the case of Helsinki airport in order to gain an understanding of the driving forces behind the positive development in the number of passengers. Based on the aeromobility paradigm, which focuses on mobilities in relation to airlines and airports, the analysis is founded on an inter-disciplinary approach where places will be approached as relational and subjective actors as an alternative to conventional aviation development (Cwerner et al. 2009).

In the article, we will argue that the overall framework of aviation in Finland to some extent is based on time and place and that aviation policy is related to the narrative: 'Finland is an island'. Further, we will argue that this narrative has a large influence on how stakeholders and the aviation industry relate to each other. We will argue that the narrative helps stimulate a political awareness of aviation and this motivates the acceptance of large investments in infrastructure, despite the troubled financial situation Finland is facing. Finally, we will argue that the development of the airport network in Finland is a consequence of discussions between multiple stakeholders with different local and global perspectives.

In context, this article is a part of a larger PhD project that, via European case studies, will produce new knowledge and understanding regarding how aviation is handled in different contexts. The aim is to develop application-oriented knowledge based on the European experience, so that Copenhagen airport (CPH) can increase its connectivity to the benefit of Danish society.

Aeromobility – theoretical approach

Conventional analyses of aviation and airports often rely on ‘predict and provide’ theories which are based on quantitative and context-independent data. The analytical approaches tend to take the form of statistical optimization or forecasting of passenger or cargo units moving from A to B in order to maximize traffic or trade flow while minimizing travel costs and travel time (Goetz 2015:366). Aviation is often illustrated or described as an interlinked transport system that facilitates passenger transport; airlines provide the capacity in airspace while airports provide the capacity for airlines and passengers on the ground (Graham 2003:1). The transport system is part of a larger system on which it depends, and where local and global geo-economics influence and stimulate the system. Figure 1 illustrates the virtuous circle and how the transport system can be interlinked through external factors (ACI Europe 2014).



Figure 1: The virtuous circle of aviation connectivity (ACI Europe 2015)

There is empirical evidence that aviation generates and stimulates economic development (Green 2007, Brueckner 2003, Mikkala & Tervo 2013), and that the direction of the causality between aviation and economics is context dependent. Their impacts also differ; analysis indicates that within service-related industries, a 10% growth in passenger numbers will increase employment by 1%, while the increase in passenger numbers has no effect on jobs in the manufacturing and other goods-related industries (Brueckner 2003). The impact of aviation and airports has often been evaluated in terms of the economic and employment effects. These effects can often be divided into direct, indirect, induced and catalytic effects, where direct effects are generated by employees at airports and in the airlines. Indirect effects are generated within the sectors which supply airports, while induced effects are caused by personal spending by people from the direct and indirect categories. Catalytic effects are wider spin-off effects in society, these are harder to measure and have less causality in relation to the other effect categories (Goetz 2015:369).

Moreover, the conventional perspective often links airports or airlines to quantitative performance measurements and statistical regression models which are developed in order to analyse and understand outcomes. Burghouwt and Dobruszkes (2014) state: *‘Several authors have developed regressions in an effort to describe variation in the supply or demand for air transport as a function of geo-economic and airline industry related variables. Of course, there are deviations from the models, meaning that numerous cities generating more or less flows than expected. Surprisingly, these deviations from the model have received little attention’* (Burghouwt & Dobruszkes 2014).

Further, the conventional approach to aviation often has a narrow perspective which does not embrace or quantify the wider effects and externalities of development. As Whitelegg states: *‘Aviation is outstanding example of a commitment to the widely discredited ‘predict and provide’ philosophy that dominated road*

building discussions until the early 1990s. Individual airlines and airports operators are deeply committed to the year-on-expansion of aviation without limit, and are prepared to invest large amounts of money to achieve this objective. Such a commitment to growth is fundamentally at odds with policy commitments to sustainable development' (Whitelegg 1997:88).

This means historically that conventional aviation research has constituted a lot of black boxing with only little focus on how aviation is produced and consumed within modern societies. In contrast to the conventional perspective, the aeromobility paradigm has a wider societal perspective and sees travel as more than just objects moving (Cwerner et al. 2009; Lassen 2005, 2006). As Adey argues: airports are embedded '*within local and national cultures, histories and uses*' (Adey 2006:360). The research field of aeromobility consists of a wide range of different research disciplines such as: '*technology, community, governance, time/space, social interaction, urban development and environment, among other issues*' (Cwerner et al. 2009:9). By only focusing on one discipline, or having a narrow disciplinary approach, there is a risk of not embracing the complex dimensions of aeromobility (Cwerner et al. 2009:9). Therefore, this article will have an inter-disciplinary approach; a context-dependent understanding of the driving forces behind aeromobility development at Helsinki airport. Particular places will be approached as relational and subjective actors. It is the latter perspective that is the focus of this paper.

Aeromobility is a relatively new approach to mobility. Therefore, it is limited regarding how developed the research agenda is. In the paragraph below we will illustrate some of the research elements that earlier have been argued as key elements of aeromobility research (Cwerner et al. 2009:9-11).

First of all, research within aeromobility needs to be transdisciplinary, as stated above. Second, research within aeromobility must also embrace a variety of empirical fields. This is due to the different elements that affect the mobility. Aeromobility contributes to different local and global externalities – such as the local noise challenge and local and global CO₂ emissions (Graham 2003:220) – in order to facilitate the social dimension of globalization. In order to produce an understanding of the driving forces behind aeromobility, the research could rely on different empirical fields such as safety, security, different airline and airport systems, international and national and local governance in relation to traffic policies and regulations. It is important to have multi-focus approach since it can be difficult to evaluate externalities without perspectives on how aeromobility produces social coherence in a local or global context. Furthermore, it does not make sense to evaluate the different security or safety systems that are supporting aeromobility without an understanding of its relation to international and national governance and politics (Cwerner et al. 2009:9).

Third, aeromobility could, in the light of fascination and complexity, have a tendency to focus on airports, airlines or destinations. Despite the importance of these key elements, it is important also to develop an understanding of the impact of air travel on everyday life and how this facilitates new ways of living and socially interacting. What are the drivers for people's willingness to use or not use air transport? Drivers for air travel could be people's dreams, plans and work relations (Cwerner et al. 2009:9-10).

Fourth, beside the focus on and understanding of how aeromobility impacts and interacts with people's everyday lives, aeromobility also has a significant influence on how information, culture, goods etc. are distributed across the globalized world (Cwerner et al. 2009:10).

Fifth, aeromobility facilitates and contributes to segmentation and differentiation of people based on how systems interact with the individual. This differentiation can be based on different dimensions of social life such as: '*economic, gender, ethnic, racial, age, physical ability*' (Cwerner et al. 2009:10). It is important to

stress that aeromobility is able to and does produce equalities and inequalities among people in the way they travel. These differences can come in different forms but dimensions such as increased security and surveillance tend to differentiate people (Cwerner et al. 2009:10-11).

Furthermore, aeromobility has a background in a social science, often drawing on interpretive science (Gadamer 2004/1960) and it was founded as an interdisciplinary approach. This motivates for openness towards various research designs and combinations of approaches from different fields.

As stated above, conventional studies indicate that there is a relatively clear correlation between connectivity and economic development (CAPA 2016). Despite this clear relation, there are other local and regional elements impacting the development of aviation. After the liberalization of the airline industry in Europe throughout the 80s and 90s (Latrou & Oretti 2007:8), European airlines have been, to a great extent, operating without interference from states or governments. This liberalization leaves society with relatively fewer ways to influence the development of airports and aviation. However, public and private stakeholders can attempt to setup aviation systems that exceed local market-driven traffic flows – either by focusing on developing airport hub functions or focusing on low cost airlines and their niche markets (Burghouwt & Dobruszkes 2014). Some of the direct ways to influence aviation development can be formed by elements: *'infrastructure, market access, taxation and airport charges'* (CAPA 2016). These elements depend on the local and regional contexts along the global development of network.

The point is that there are a number of different elements affecting the development of aviation. Therefore, the following analysis is based on a model of understanding involving 3 different themes, as illustrated Figure 2. These themes are: organization of aviation, infrastructural investments and transport policies, and represent the cornerstones for data collection in order to uncover some of the qualitative aspects of development in aviation.

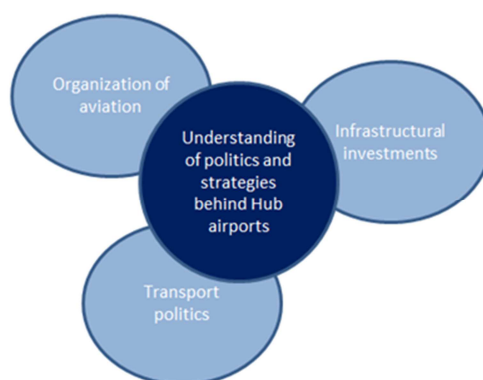


Figure 2: Themes to analyse in order to understand the politics and strategies behind the Hub airport

It is important to stress that the aeromobility perspective does not reject the conventional perspective of aviation, but that it has a wider perspective that tries to understand some of the non-quantitative forces and politics behind aeronautical development. As illustrated above, in this approach places are recognized as subjects and not as objects and this paper will try to identify and understand the driving forces behind Helsinki airport. In conclusion, we will state what the theoretical implications of the findings from the case study are for further aeromobility-related studies.

Methodology

The analytical approach to understanding the politics and strategies behind aviation in Finland is founded on a case study methodology. This approach should make it possible to achieve a holistic, in-depth and thorough interpretation of the data and observations (Flyvbjerg 1991, 2001). Further, since the case studies combine qualitative and quantitative data, it will be possible to obtain a context-dependent knowledge, which should open up to an inductive interpretation (Flyvbjerg 1991:145).

Case study design

In order to obtain as much information and understanding of how societies handle hub airports the selected cases for study will be based on extreme/deviant cases (Flyvbjerg 2006). This approach is driven by the idea that *'the typical or average case is often not the richest in information. Atypical or extreme cases often reveal more information because they activate more actors and more basic mechanisms in the situation studied'* (Flyvbjerg 2006: 229).

From 2005 to 2015, the level of annually departing seats from Helsinki airport towards China and Japan has increased by more than 331,000 (SRS seat data). In the same period, annually departing seats from Copenhagen airport have decreased by more than 22,000 while Stockholm airport have had an increase of less than 49,000 departing seats. Oslo airport has not managed to attract any routes to Asia and Warsaw Chopin Airport only increased the annually departing seats from zero to 38,000. In the light of this comparison between main airports in the North and North-eastern part of Europe, Helsinki airport has managed to attract a significant part of this traffic flow between Europe and Asia. Due to this extreme/deviant development, Helsinki airport has been chosen as the case for this paper.

The case study of Helsinki and Finland will be analysed using 2 steps. The first step is to gather and analyse historical passenger numbers in order to understand the function of the airport. What kind of passenger flow does the airport generate and how has the development been undertaken. This analytical step will primarily be based on quantitative data from e.g. air traffic databases and webpages. Step 1 is labelled: 'Description of the aviation system in Finland'.

The second step will focus on the different stakeholders such as the authorities, airport owners, airlines and labour unions. The purpose of this is to gain an understanding of the driving forces behind aviation in Finland. This step will be based on interviews and key documents such as aviation strategy papers and annual reports. Below, in Table 1 and 2 are listed the names of the people interviewed and documents¹ used in the analysis.

Representing	Interview persons	Company/Organization	Title
Government	Mikael Nyberg	Ministry of Transport and Communications	Director general
Airport	Anonymous	Finavia	Analyst
Finnair	Rikke Munk Christensen Lauri Tierala	Finnair Finnair	Head of Traffic Planning at Finnair Manager, Market Access and Aeropolitics
Tourism Business	Tea Taivalkoski Kaisa Saario	Finnish Hospitality Association MaRa Finland Chamber of Commerce	Legal Counsel Advisor
Unions	Anu Hietala	Cabin union (SLSY)	Industrial Relations Officer
Unions	Juha-Matti Koskinen	Finish aviation union (IAU)	General secretary

Table 1: People interviewed in order to understand the driving forces within Finnish aviation

Document	Topic	Type	Year
Airport industry connectivity report	Connectivity	Industry report from ACI	2014
Flying by nature - Global Market Forecast 2007-2026	Passenger forecast	Industry report from Airbus	2007
Aviation connectivity in Europe: the EU and airlines could learn lessons from the Gulf and Turkey	Passenger forecast	Industry report from CAPA	2016
Annual review/report 2007, 2009,2015	Company review	Company report - Finnair	2007,2009, 2015
Finland's Air Transport Strategy 2015-2030	Strategy	Ministry report	2015
Lentoliikennestrategian taustaraportti - background report to Finland's air transport Strategy 2015-2030	Strategy	Ministry report	2015
Finland's China action plan	Strategy	Ministry report	2010

Table 2: Documents used to gain an understanding of the driving forces within Finnish aviation

This approach should generate a deeper holistic and context-dependent understanding of the different concepts and driving forces underpinning the support and development of aviation in Finland. Step 2 is labelled: 'An understanding of the driving forces behind aviation in Finland'.

¹ Some of the documents are used as background documentation

Helsinki hub airport – case study

Description of the aviation system in Finland

In the following, the analysis of Helsinki airport is presented. In 2015, in total there were 20.1 million passengers arriving and departing from the 23 active operating airports in Finland. The state owned corporation: Finavia operates and owns 22 airports across Finland, where 19 are airports with commercial or scheduled traffic. The other 3 airports are military airports and/or airports for general aviation traffic (Finavia 2016a; Analyst, Finavia interview 2016: 13:48). Besides the airports operated and owned by Finavia; there is one active operating airport owned by the municipalities. Furthermore, there are multiple smaller airfields scattered around Finland.

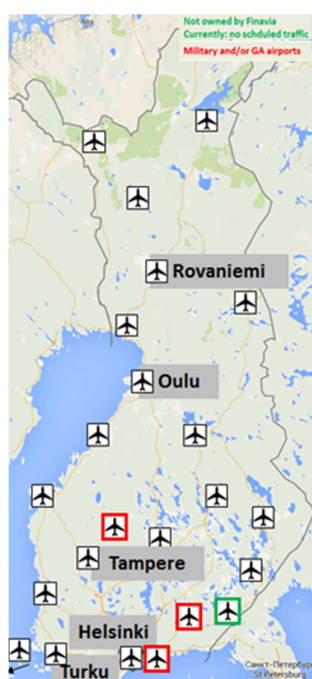


Figure 3: 23 Airports in Finland; 22 owned by Finavia and one privately owned

Helsinki airport is by far the largest airport in Finland with 16.4 mpax (82% of total traffic). Oulu airport in mid-Finland has 1.0 mpax (5% of total traffic), while the airports Rovaniemi, Tampere and Turku have approximately 2% of the traffic² (Finavia 2016b). Over the last 10 years (2005-2015) there has been a total traffic growth in Finland of 2.9% (CAGR)³. While international traffic has increased by an average of 4.6% (CAGR), the domestic traffic has decreased by 0.7% (CAGR) over the 10 years (Finavia 2016b). In Finland in 2015, 74% of total traffic was international and 26% was domestic.

Helsinki airport has two primary functions, it functions as a hub airport between Europe and Asia and it is a vital gateway for domestic air traffic. Helsinki airport has, over a 10 year period from 2006 to 2015, had an average growth rate of 4.0% (CAGR) in passengers. In 2015 the airport handled 2.6 million domestic passengers and 13.8 million international passengers (Finavia 2016b). From 2008 to 2015 the number of transfer passengers increased by 4.8% (CAGR). The transfer ratio has increased by 3.8% from 27.5% to 31.3% (Finavia 2016b). The main carrier at Helsinki airport is Finnair, which uses Helsinki airport as its main

² In comparison with the Danish aviation market (2015): Total passenger: CPH: 26.6 mpax (CPH 2015), BLL: 2.9 mpax (BLL 2015) and AAL: 1.5 mpax (AAL 2015).

³ CAGR: abbreviation for the compound annual growth rate.

hub. Finnair is by far the largest airline in Helsinki airport with 67% of all passengers (SRS seat data)⁴ and 87% of all transfer passengers (Sabre pax data). The second largest airline operating at Helsinki airport is Norwegian, with 12% of all passengers, while SAS has 4.9% of all passengers and Lufthansa has 3.8% all passengers (SRS seat data). The top 5 international destinations in 2015 from Helsinki were Stockholm, Copenhagen, London, Paris and Frankfurt, these destinations constituted 25% of all traffic (SRS seat data). The most popular domestic destinations from Helsinki in 2015 were Oulu and Rovaniemi with respectively 6% and 3% of all traffic (SRS seat data). Long haul traffic - outside Europe – constituted 13% in 2015 and destinations in Asia are by far the largest long haul market with 11% of the total traffic (SRS seat data). Within the last 10 years (2005-2015) Helsinki has increased its capacity to China and Japan by 127% – in comparison e.g. Germany has only increased by 61%; France 24%; the UK: -9% and the Netherlands: 45%.

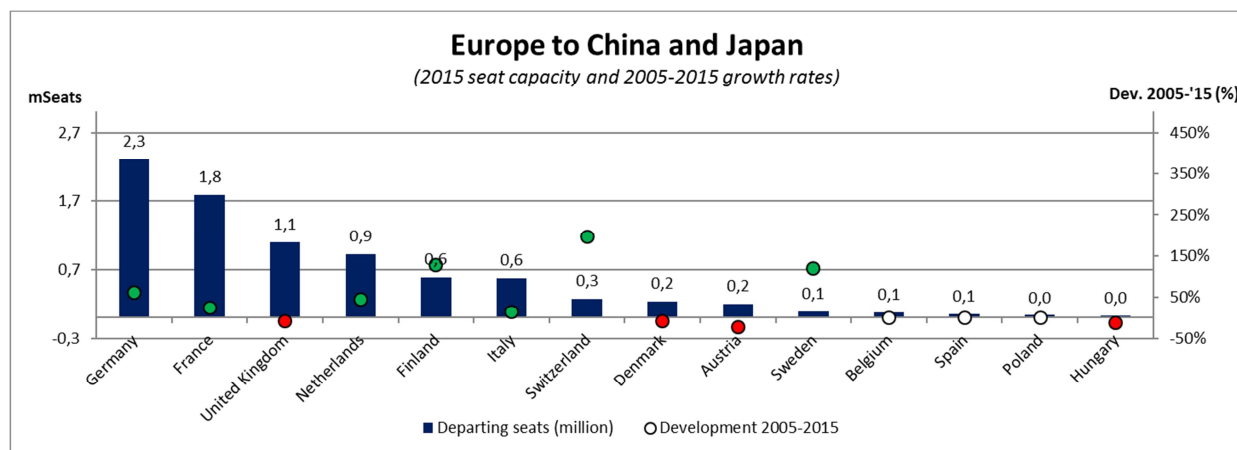


Figure 4: Development in seats from European countries to China and Japan in 2015 and 2005-2015 development (SRS seat data)

Helsinki airport, together with the other 21 airports owned by Finavia, are organized as a network of airports. This implies that airports with financial deficit are allowed to be cross-subsidized by other airports in the network. Currently, Helsinki airport is the only profitable airport out of the 22 airports, which makes Helsinki airport a key financial driver for financing the entire national network of airports (Ministry of Transport and Communication 2015:2).

⁴ The data source is based on number of seats and not passengers. The passenger ratios listed here will therefore only be a proxy due to the different load factors of different airlines.

An understanding of the driving forces behind aviation in Finland

In spring 2015, the Ministry of Transport and Communication published 'Finland's Air Transport Strategy 2015-2030'. The report was written based on an initial analysis with inputs from various stakeholders such as 'companies, local and central chamber of commerce, municipalities' authorities and other ministries' (Director, Ministry of Transport and Communication 2016: 30:39).

The overall air transport vision acknowledges air transport as an important factor for the country's economy, future development and competitiveness (Ministry of Transport and Communication 2015: 4). The two main drivers behind this vision are the hub function of Helsinki airport and the development of regional airports (Ministry of Transport and Communication 2015: 6). In line with this strategic paper: 'Finland's Air Transport Strategy 2015-2030'; the sections to come will first focus on Helsinki airport as a hub and second we will focus on the development of regional airports.

In order to try to understand the drivers behind this positive development there are multiple factors that have to be accounted for. Asking the Director General, Ministry of Transport and Communication, what he thinks have been the key to success, he states that Helsinki airports location between Europe and Asia, Finnair's long haul fleet, Finavia infrastructure and traffic rights and are the key drivers in the success of Helsinki airport:

The success story is pretty much with our location between Asia and Europe and Finnair and Finavia how they play this game together ...; especially Finnair with the long haul capacity and I think also they have been able to negotiate with Russia, Japan and China relatively well to have the traffic rights they need, they have modernized their fleet and we have been able to expand Helsinki airport. So I think there are a lot of small issues that have come together (Director General, Ministry of Transport and Communication 2016: 9:43)

Location is mentioned as a key driver for success, as traffic from Europe to Asia has a natural path over Helsinki airport. The Finish export market has also had a long tradition focusing on the Asian – and especially the Japanese and Chinese – market (Manager, Market Access and Aeropolitics, Finnair 2016: 9:34).



Figure 5: Helsinki airport has a natural location - especially as a hub between Europa and Northeast Asia (Finnair 2007a)

In the following we will try to investigate and understand the drivers and development of Helsinki airport and the regional airports. The hub of Helsinki airport will be investigated in the light of development of Finnair, capacity in Helsinki airport and traffic rights.

Finnair development

Finnair is the main airline in Helsinki airport with 67% of total traffic (SRS seat data). After some challenging years, Finnair has managed to change the situation from years with financial deficit to growth and profit (Manager, Market Access and Aeropolitics, Finnair 2016: 23:55). The main long haul strategy for Finnair is flights to Asia. This strategy is not new, since Finnair has been flying to Asia for more than 30 years. Manager, Market Access and Aeropolitics, Finnair states:

Finnair have had a long tradition in Asia, we were the first airline to launch a direct flight to Tokyo in 1983. We were the only European carrier that kept flying to China even after Tiananmen Square, so it has been very long-term commitment of using the geographical location and obviously there are links to the Asian and Chinese economies as more Chinese passengers coming into Europe and more European passengers going to China. The Asia strategy was built on Japan, but now it has two very strong poles – both China and Japan (Manager, Market Access and Aeropolitics, Finnair 2016 12:16)

This focus on Asia is stressed by the Head of Traffic Planning, Finnair:

I have never experienced an airport with such a clear strategy where the airlines are so loyal to it (Head of Traffic Planning, Finnair 2016 13:51)

Due to the long-term strategic focus, Finnair, in 2007, ordered 19 new A350-900 long haul aircraft (Finnair 2007b:5). In the 2007 version of the Airbus industry report: 'Global Market Forecast 2007-2026' Airbus forecast from 2007 to 2016 an increase of 5.9% RPK⁵ between Europe and Asia-Pacific (Airbus Inc. 2007: 90). In 2009 and 2010, the European airline industry had severe challengers due to the financial crisis; despite these difficulties, Finnair did not change its long-term focus and continued the process of investing in new A350-900 aircrafts⁶

As stated in Finnair 'Annual review 2009' at the height of the financial crises: 'Finnair holds several trump cards, which won't lose their value even when the company encounters the severest turbulence' (Finnair 2009: 17) and the Asia strategy is listed as a key focus area⁷.

The first new aircraft A350-900 was delivered in late 2015 and in 2023 all of the 19 new aircraft will be in operation. The current plan is to phase out the existing A340 aircrafts and in 2020 Finnair will have 20 long haul aircraft (Finnair 2015:15).

⁵ RPK: Revenue Passenger Kilometer

⁶ An A350-900 aircraft is a significant investment of €305 million per aircraft (Airbus Inc. 2015) - This is the official list price in 2016. Depending on configuration, engines, number of purchase etc. the price will vary.

⁷ In the annual review 2009: Key areas are labelled 'Trump cards'.

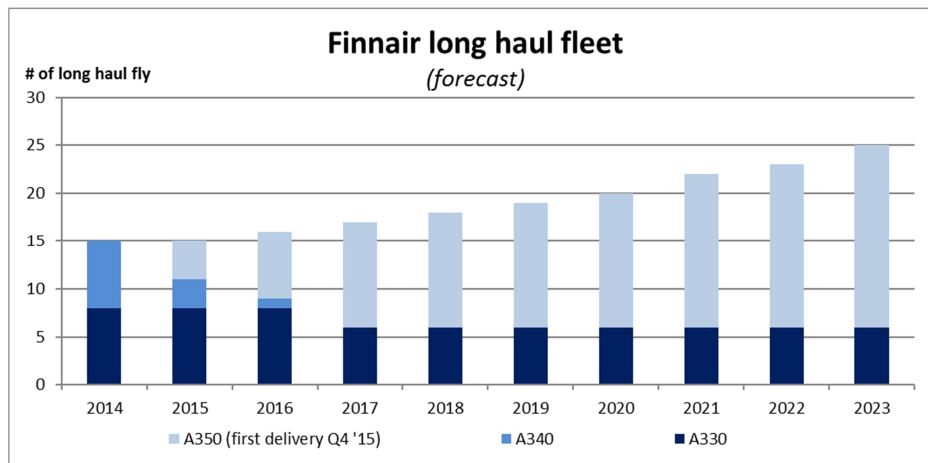


Figure 6: Finnair have ordered a total of 19 new A350 long haul aircraft. The first A350 operated from late 2015 while the last A350 will be delivered in 2023. (Finnair 2015:15)

In the turbulent times for Finnair, the political understanding and support is important; Manager, Market Access and Aeropolitics, Finnair states that most politicians understand that domestic air traffic and long haul traffic support each other:

Finland is a country of long domestic distances, the cities and counties need domestic travel and the they [politicians] are aware that many domestic routes in themselves will not make profit, even if it was a low cost carrier and the only way of keeping that route alive is if it is part of a wider network and brings network value. And the only way of doing that is if Finnair has a long haul strategy ... so I think members of parliament sort of have acknowledged that the Asian strategy is a risk, but it is probably the only way anybody could see Finnair sort of staying independent and having a future – and as a result be able to serve the domestic market (Manager, Market Access and Aeropolitics, Finnair 2016 27:14)

One side of the turnaround of Finnair is the investment in new long haul aircraft. Another side is the adjustment of the operating cost structure at Finnair to be competitive. Lately, Finnair and the labour unions have had hard negotiations. The outcome of the negotiations has enabled Finnair to generate profit (Manager, Market Access and Aeropolitics, Finnair 2016: 23:55).

One of the cost issues was related to outsourcing of cabin crew. The solution was that outsourcing was put to a hold for a period and it was agreed that on e.g. some Asian flights, there should be some Asian crew. Industrial Relations Officer, Cabin union (SLSY) thinks there were very hard negotiations with Finnair because the politician was not always on the cabin crew side, as she states it:

Most of the politicians think Finnair is very important for the economy so they are willing to sacrifice the cabin crew (Industrial Relations Officer, Cabin union (SLSY) 2016 19:12)

The development of Finnair is to some extent depending on the political understanding of aviation. As this paragraph illustrates, there is a high awareness of the importance of aviation in Finland. This relates both to the domestic traffic and the long haul strategy. The driving force of political awareness could be an enabler for understanding the motivation for conducting large aircraft investments and accepting lower costs of the cabin crew.

Expansion of Helsinki airport

An important driver in handling aviation and supporting the hub function in Helsinki is the development and expansion of the airport. The political acceptance and focus on the expansion of Helsinki airport can very well be supported by the narrative stating: 'Finland is an Island' – as Manager, Market Access and Aeropolitics, Finnair elaborates:

[In the] political world where big narratives always have the power... one is 'Finland is an Island', if you look at the map it is true, the long Russian boarder and then the Baltic sea. It is in the psyche of every Finn, in order to go to other parts of the world you either take a ship or plane, which obviously raises the importance of international ports and airports (Manager, Market Access and Aeropolitics, Finnair 2016: 9:34)

There are primarily two issues relating to expansion of Helsinki airport: the externalities due to the expansion and the cost of expansion. Elsewhere in Europe, expansion and externalities such as noise and land use are generating protests among local residents and politicians (Watkinson 2015). In Finland, Director General, Ministry of Transport and Communication gives quite another perspective. He states that the expansion of the airport is a matter of life and death:

We think it is a question of life and death: the Helsinki airport – all local issues must consider the expansion of the airport to get more passengers and more shops. I think the local government has to take care of the importance of Helsinki airport (Director General, Ministry of Transport and Communication 2016 20:50)

Therefore, as the Director General, Ministry of Transport and Communication, states, it is important to strengthen the hub function of Helsinki airport, including increasing the capacity from 16 million yearly passengers to 23 million in 2030 (Ministry of Transport and Communication 2015: 2). This expansion requires significant investments both in airport terminal expansion and in transport infrastructure to and from the airport. As part of the expansion, a new train connection from Helsinki to the airport opened in 2015; an investment of approx. €1 billion paid by the government (Analyst, Finavia 2016: 59:20). Finavia are planning to invest €1 billion in airport terminal expansions (Analyst, Finavia 2016: 43:29). In order to start the new expansion, the government is financing the airport with €200 million (Analyst, Finavia 2016: 47:55).



Figure 7: The new train station opened July 2015, with only 30-45 min travel time between Airport and city centre (Finavia 2016c)

Currently, the plan is to expand the terminals by 75,000 m², double the bridge-served stands from 8 to 16 and increase baggage facility capacity by 50% (Finavia 2016d). The expansion of Helsinki airport is high on the political agenda since it is known to be an enabler for the growth of aviation in Finland. The narrative: 'Finland is an Island' supports this political awareness.

Traffic rights

In order to fulfil the long haul Asian strategy, traffic rights are important. Traffic rights can be bilateral agreements between two states – multilateral if more than two states are involved – in relation to commercial air transport (Gidwitz 1980:135). The bilateral agreements can relate to the kind of service; scheduled, charter or cargo, a given airline is allowed to fly to a given airport or over a given territory (Gidwitz 1980:135). Within Europe, the airline market was liberalized in three steps from 1986 to 1992 (Latrou & Oretti 2007:8). As part of this process, restrictions on market entry, capacity, frequency and pricing were removed within the EU (Burghouwt, Mendes de Leon, & P. De Wit 2015:6). However, with Russia, China and most of Asian countries, traffic rights must be negotiated. Therefore a good relationship with Russia and China is important.

The ministry of transportation handles the negotiations or sets the meetings with the Russians – they did it last time in the beginning of March. You need to do it all the time or at least annually (Analyst, Finavia 2016: 40:40)

The Head of Traffic Planning, Finnair states that Finland actually has a comparative advantage compared to other European airlines in relation to traffic rights in Russia since Finland and Russia are neighbours (Head of Traffic Planning, Finnair 2016: 46:55).

It is not always easy to negotiate traffic rights and in this sense, Finland does not have that much to offer in relation to other European countries. In this context, it is accepted that development and negotiation of traffic rights require a long time horizon. Manager, Market Access and Aeropolitics, Finnair states:

[In] all of Asia except Japan [you need to negotiate traffic rights], so it a risk and it is a challenge. It kind of forces you to think really long term and advance step by step and then of course ... The point to point interest in Helsinki is quite limited, so to get traffic rights we always need to work quite a bit and have the support of local airports or local administrators – that is one option. Another option is working together with another carrier in that country. Another is having very high political support (Manager, Market Access and Aeropolitics, Finnair 2016: 34:08)

Since Finland is not a very attractive point-to-point market, the development and negotiation of traffic rights is a long process that requires time. Sometimes the development of traffic rights requires the development of relationships with other airlines, airports or local and national politicians. An example of such a relationship could be the establishment of a 'Sister Airport Relationship' with Capital Airports Holding Company in China, which is the largest airport operator in China with more than 40 airports in China (Finavia 2016e).

The focus on regional airports

Besides the focus and the development of Helsinki airport as a hub, the regional airports are important elements and drivers in the Finnish air transport strategy. The regional airports have different functions compared to Helsinki airport. One function – due to the long distances in Finland, there being more than 1,000 km between the south and the north of Finland – of regional airports is to generate the possibility for increasing mobility and therefore coherence in Finland. Another function of the regional airports is to provide the possibility of providing a feed to international traffic in Helsinki. The passengers coming from the regional airports are helping, e.g. Finnair, to fill their long haul aircraft (Ministry of Transport and Communication 2015).

It is a challenge that all regional airports are making financial losses. Depending who you ask, the yearly loss from the regional airports range from €20-40 million (Director General, Ministry of Transport and Communication 2016: 30:39; 53:01) (Analyst, Finavia 2016: 1:12:25). Due to a network principle, the deficit of the regional airports is covered by Helsinki airport. The Director General, Ministry of Transport and Communication, sees the air transport network as a balance between the regional airports and the development of Helsinki airport (Director General, Ministry of Transport and Communication 2016: 10:47).

In order to solve the situation, the Ministry of Transport and Communication would have liked to rethink the entire transport network by using more land transport, such as rail and road, over small and medium long distances and then potentially close some of the regional airports in order to have more focus on Helsinki airport (Director General, Ministry of Transport and Communication 2016 25:28).

It makes sense for the Ministry of Transport and Communication to have this cost focus in relation to regional airports due to their ownership of these airports, but local stakeholders are to some extent against the shutdown of the regional airports. Despite the intentions of the Ministry of Transport and Communication to close some of the regional airports, the process is not straightforward:

From the [regional] areas perspective, they are very dependent on the airports, so we sometimes have the political discussion if we should get rid of some of the airports in order to lighten the burden of Helsinki Vantaa, but we have not been very successful (Director General, Ministry of Transport and Communication 2016 11:34).

In contrast, Finnair does not fully agree with the Ministry of Transport and Communication with respect to the potential shutdown of regional airports. Finnair do acknowledge that domestic routes might not be financially sound looking at the point-to-point market, but this perspective is too narrow as network effects have to be included in order to evaluate the profitability. Finnair evaluate a domestic route as profitable if there are more the 100,000 pax a year, while Finavia has a threshold of 300,000 pax per year.

The outcome of the strategy paper did not state that some of the regional airports were to be closed despite the Ministry of Transport and Communication's willingness to do so. Instead, it was agreed to establish 5 working groups focusing on: *'the demand and the tourism and how they could have more passenger [in the local areas]'* (Director General, Ministry of Transport and Communication 2016 35:47)

Analyst, Finavia was also slightly disappointed: *'To put it bluntly, the outcome was that: they did not dare to define a number of how many airports we need'* (Analyst, Finavia 13:48). In the same way, the Director General, Ministry of Transport and Communication is not very content with the result: *'I'm not angry - but slightly upset that in our business ... no one is ready to make an effort and so this has been also in this*

airport discussion very frustration sometimes' (Director General, Ministry of Transport and Communication 2016 43:06).

In respect to the development of the aviation network in Finland, one issue is the development or shutdown of regional airports. Out of the 18 regional airports owned by Finavia with regular passenger traffic, 9 of them have less than 100,000 passengers per year (see Figure 8), and 14 of them have less than 300,000 pax per year.



Figure 8: Regional airports in Finland with commercial or scheduled passenger traffic (Finavia 2016b). Due to different perspectives, Finavia and Finnair have different thresholds regarding when a regional airport is profitable.

Even though Finavia has managed to sell one airport and close two between 2015 and 2016, the regional airports are still a financial burden for the entire aviation network. However, due to the local residents, political attention and the network value estimation from Finnair, no more airports have been sold or closed. In order to understand the development of the increase in traffic flow from Europe to Asia, it is important to be aware of the link to domestic regional airports as a driver for development of Helsinki airport as a hub.

Conclusions

The initial purpose of this article was to generate an understanding of the drivers behind the development of the hub function for Helsinki airport and in general the development of Finish aviation.

As shown in this paper, the development of aviation cannot be seen as an optimization of neutral passenger flow. Places have to be recognized as subjects and not as objects. The development of aviation depends greatly on relations between time and space. As shown, aviation is driven by a time perspective both in relation to the attention span of political awareness, and also in relation to the specific time in the geopolitical history (see also Cresswell 2006). Due to the current political situation in Russia and China, it is possible to have a long haul strategy which depends on traffic rights in Russia and China; this could be a challenge. Further, it is important to acknowledge spaces on different scales as drivers for aviation. In relation to the large-scale dimension, the geographical position in relation to central Europe and Russia is important as well as spatial understanding on a national level with focus on regional airports. Additionally, the local space surrounding the airport is important to keep in mind in the development of aviation.

As stated in the beginning of this article, the Ministry of Transport and Communication has published Finland's Air Transport Strategy 2015-2030. The paper was very much focusing on how to improve and expand Helsinki airport and on lowering the financial burden caused by regional airports.

Location is indeed a key factor behind the success of Helsinki airport, but an important perspective is how society handles this advantages.

One of the key drivers behind the success of Helsinki airport is the development of Finnair. Their Asian strategy has been the same for a long time and despite financial challenges, Finnair managed to order new long haul aircrafts to support the strategy. One reason why Finnair could purchase these new aircraft could be due to the political awareness of the link between domestic coherence and the hub function connecting Asia and Europe.

A second key driver for developing the hub in Helsinki is the facility expansion. As stated, the narrative related to 'Finland is an island' increases the political awareness of developing the airport. This narrative helps support the current expansion plan towards a capacity of 20 million passengers in 2020 (Finavia 2016f).

A third driver behind the Helsinki hub is the negotiation of traffic rights, which requires political persistence and a long-term perspective.

The other important dimension in Finish aviation is the extensive airport network. Currently, there are 22 airports owned by Finnavia. These airports are important for domestic coherence, but also as feeder traffic for long haul flights. Despite the fact that the Ministry of Transport and Communication was in favour of closing some of the regional airports, there are no current plans to close any of them. This is a consequence of local political interest and the value of the network effect.

Based on this analysis, we will argue that the success of Helsinki airport as a hub to a large extent is based on its location between Asia and Europe. The location facilitates the strong narrative: 'Finland is an island', which motivates political awareness.

Theoretically, the conclusion of this article therefore raises a number of alternative and new perspectives on both the conventional theories for understanding airports as global flow machines, but also argues for a stronger focus on 'place' in aeromobility research. Such perspectives follow the findings of other researchers such as Adey (Adey 2006) and Cidell (Cidell 2006), where the airport is seen as a subject in relation to history, place and society in the process of the global economy. Therefore; the article calls for more research on the relations between place and aeromobility in the future. As Urry argues, even the aeromobility system that enables air travel is itself in motion in the way that it affects many towns and cities (Urry 2009). As shown in this article, it is not the case that 'places' such as Helsinki passively react to the development of global air traffic, rather, they strategically cope with the process of the local-global development of air travel (see also Cidell 2006). Such a perspective calls for a stronger focus on 'processes of placing' (Urry 2007) in further aeromobility research.

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