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An understanding of how aviation is handled in Helsinki and Finland

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Abstract

The last decade Helsinki airport have generated a significant growth in the air traffic between Europe and Asia. This article will focus on the case of Helsinki airport in order to gain understanding on the driving forces behind the positive development in number of passengers. The theoretically framework is based on the relatively new aeromobility paradigm that embraces a holistic societal perspective on aviation. Based on interviews with key stakeholders, such as representatives from airport, airline, government, unions including business and tourism organizations, the article produce an understanding of how aviation in Finland is influenced by time/place relations. The natural geographical position in relation to traffic between Europe and Asia is exploited by long term focus on the national carrier: Finavia, Helsinki airport and traffic rights. Development of these areas requires long term commitment, understanding of dynamics with in aviation systems and willingness to invest; even in turbulence times. The narrative related to 'Finland is an island' is a key driver for political awareness, stronghold and essential for understanding the strategies and politics behind Helsinki as an airport hub. This raises a number of perspectives on conventional theories' understanding of airports as global flow machines. Therefore; the article calls for much more research on the relations between place and aeromobilities.

Introduction

International connectivity is often seen as key element for maintaining and developing business environment and tourism in regions and countries. The decade from 2004-2014; Helsinki airport have had a positive development – the airport connectivity has increased by 12%; while its hub connectivity has increased by 88%. (ACI Europe 2014). An important question is here how Finland is exploiting the geographical location in order to develop its aviation? Therefore, this article will focus on the case of Helsinki airport in order to gain understanding on the driving forces behind the positive development in 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 alternative to conventional aviation development. (Cwerner et. al. 2009).

In the article; we will argue that the overall frame of aviation in Finland to some extent is based on time and place and the aviation policy is linked to a narrative: 'Finland is an island'. Further; we will argue that the narrative has a large influence on how stakeholders and the aviation industry relates. We will argue that the narrative helps stimulate a political awareness of aviation and this motivates for the acceptance of large investments in infrastructure despite the troubled financial situation Finland is facing. Finally; we will argue that the development airport network in Finland is a consequence of discussion 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 on how aviation is handled in different contexts. The aim is to develop application-oriented knowledge based on European experience, so CPH airport can increase connectivity to the benefit of Danish society.

Aeromobility – theoretical approach

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

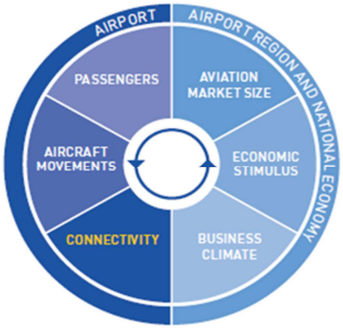

Figure 1: The virtuous circle of aviation connectivity (ACI Europe 2015)

There are several empirical evidences that aviation are generating and stimulating the economic development (Green 2007, Brueckner 2003, Mukkala & Tervo 2013), the direction of the causality between aviation and economic are context depending and can be discussed. The impact also differs; analysis indicates that within service related industries 10% growth in passengers will increase employment by 1%, while increase in passengers has no job effect on manufacture and other good related industries (Brueckner 2003). The impact of aviation and airports are often been evaluated in economic and employments effects. These effects can often be divided into direct, indirect, induced and catalytic effects, where direct effect generated by employees at airports and airlines. Indirect effects are generated within the supplies to airport, while induced effects are caused by personal spending by people from direct and indirect categories. The latter catalytically effects are wider spin-off effects in society, these are harder to measure and has less causality in relation to the other effect categories (Goetz 2015:369)

Moreover; the conventional perspective often link airport or airlines to quantitative performance measurements and statistical regression models are developed in order to analysis and understand these outcomes. Burghouwt and Dobruszkes (2014) states: "*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 qualify wider effects and externalities of developments. As Whitelegg state: "*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 there in conventional aviation research has been a lot of black boxing with only little focus on how aviation is produced and consumed with in modern societies. In contrast to the conventional perspective; the aeromobilities paradigm has a wider societal perspective and see travel as more than just objects moving (Cwerner et. al. 2009; Lassen 2005, 2006). As also Adey argues: Airports are embedded "*within local and national cultures, histories and uses*" (Adey 2006:360). The research field of aeromobilities 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 aeromobilities (Cwerner et. al. 2009:9). Therefore this article will have an inter-disciplinary approach; a context depending understanding of the driving forces behind aeromobilities development at Helsinki Airport. Particular places will be approached as relational and subjective actors. It is the latter perspective that is in focus in this paper.

Aeromobilities are a relatively new approach to mobilities. Therefore it is limited 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 element of aeromobilities research (Cwerner et. al. 2009:9-11).

First of all research within aeromobilities needs to be transdisciplinary as stated above.

Second; research within aeromobilities must also embrace a variety of empirical fields. This is due to the different elements that affect these mobilities. Aeromobilities contributes to different local and global externalities - such as local noise challenge and local and global CO2 emission (Graham 2003:220) - in order to facilitate the social dimension of globalization. In order to produce an understand of the driving forces behind aeromobilities, the research could rely on different empirical fields such as safety, security, different airline and airport systems, international, 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 evaluated externalities without perspectives on how aeromobilities produce 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 aeromobilities without an integration and relation to international and national governance and politics (Cwerner et. al. 2009:9).

Third; aeromobilities could in the light of fascination and complexity have a tendency to focus on airport, 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 social interactions. What are the drivers for people's willingness to use the air transport and sometime withhold them from using this kind of transport mode? Drivers for air travel could be people's dreams, plans and work relations. (Cwerner et. al. 2009:9-10).

Fourth; beside the focus and understanding of how aeromobilities impact and interact with people's everyday life, aeromobilities also have significant influence on how information, culture, goods etc. are distributed across the globalized world (Cwerner et. al. 2009:10).

Fifth; aeromobilities facilitates and contributes to segmentation and differentiation of people based on how systems are interacting with the individual. The differentiation can be based on different dimension of

social life such as: "*economic, gender, ethnic, racial, age, physical ability*" (Cwerner et. al. 2009:10). It is important to stress that aeromobilities are able and do produce equalities and inequalities among people in the way they travel. This differences can comes in different forms but dimensions such as increased security and surveillance tend to differentiated people (Cwerner et. al. 2009:10-11).

Furthermore; Aeromobilities has a background in a social science often drawing on interpretive science (Gadamer 2004/1960) and it is founded as an interdisciplinary approach. This motivates for openness towards various research designs and combinations among these.

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 airline industry in Europe throughout the 80's and 90's (Iatrou & Oretti 2007:8), European airlines are to a great extent operating without interference from states or governments. This liberalization leaves the society with relatively few ways to influence the development airports and aviation. However public and private stakeholders can attempt to setup aviation system that exceeds local market driven traffic flows – either by focusing on developing airport hub function 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 are depending on the local and regional context along the global development of network.

The point is that there are a number of different elements affecting development of aviation. Therefore; the following analysis is based on the model of understanding involving 3 different themes as illustrated Figure 2.

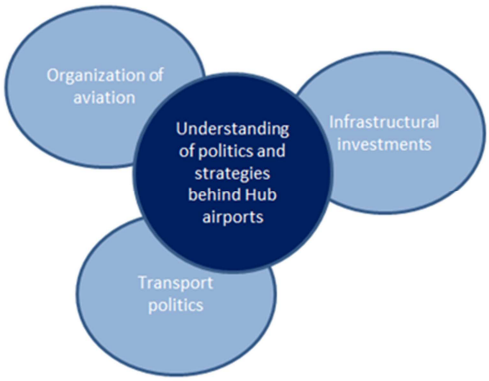

Figure 2: Themes to analysis in order to understand the politics and strategies behind Hub airport

It is important to stress that the aeromobilities perspective does not reject the conventional perspective on aviation, but aeromobilities has a wider perspective that tries to understand some of the non-quantitative forces and politics behind the aeronautical development. Based on an approach where places are recognized as subjects and not as objects; this PhD project will try to identify and understand the driving forces behind Helsinki airport.

Methodology

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

Selection of case studies

In order to obtain as much information and understanding of how societies handles hub airports; the case studies will be based on extreme/deviant cases (Flybjerg 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*" (Flybjerg 2006: 229). This strategic selection of cases will increase the possibility for generalizability across the case studies and therefore a deeper understanding of strategies and policies behind hub airports (Flyvbjerg 2001). Despite the different cases; the studies will focus on European airports, since they all operates under relatively comparable framework conditions, which could increase the potential of knowledge transfer to the Danish context.
So far, 4 European airports have been selected for the PhD project based on an information oriented selection (Flybjerg 2006:230). Within this selection strategy the cases can be labeled as: 'Extreme/deviant' due to their individual characteristics (Flybjerg 2006).

Case airports	Information oriented selection with focus on 'extreme/deviant' cases *Based on Flyvbjerg (Flyvbjerg 2006: 230)*
Amsterdam 58,3 mio. passengers i 2015	One of the main airport hubs in Europe
Helsinki 16,4 mio. passengers in 2015	Significant hub in relation to Europe/Asia traffic
Brussel 23,4 mio. passengers in 2015	Significant passenger drop due to bankruptcy of Sabena in 2001. After 14 years passenger level back at index 100
Zurich 26,2 mio. passengers in 2015	Significant passenger drop due to bankruptcy of Swissair in 2000. After 10 years passenger level back at index 100

Table 1: Case airports and selection criteria

Case study design

The case study of Helsinki and Finland will – together with the other cases – be analyzed using the same 2 steps. First step is to gather and analyze historical passenger numbers in order to understand the function of the given airport. What kind of passengers flow is the airport generating and how has the development been. This analytical step will primarily be based on quantitative data from e.g. air traffic databases and webpages. Step 1 is labeled as: 'Description of the aviation system in Finland'

Second step will focus on the different stakeholders such as authorities, airport owner, airlines and labor unions. The purpose is to gain an understanding behind the driving forces behind aviation in Finland. Second step will be based on interviews and key documents such as aviation strategy papers and annual reports. This approach should generate a deeper holistic and context-depending understanding of the different thoughts and driving forces supporting and developing the aviation in Finland. Step 2 is labeled as: 'An understanding of the driving forces behind aviation in Finland'

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

Table 2: Interviewed persons in order to understand the driving forces within Finnish aviation

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 20,1m passengers arriving and departing from the 23 active operating airports in Finland. The state owned corporation: Finavia are operating and owns 22 airports across Finland, where 19 of them are airports with commercial or scheduled traffic. The other 3 airports are military airport and/or airports for general aviation traffic (Finavia 2016a; Analyst, Finavia interview 2016: 13:48). Beside the airports operated and owned by Finavia; there are one active operating airport owned by the municipalities. Furthermore; there are multiple smaller airfields scattered around Finland.

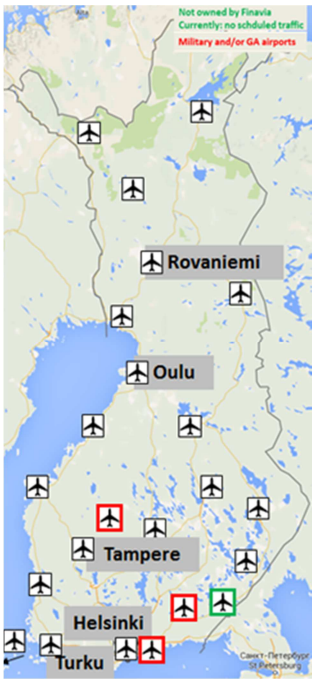

Figure 3: 23 Airports in Finland; 22 owned by Finavia and one privately owned

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 airport: Rovaniemi, Tampere and Turku have approx. 2% of the traffic[1] (Finavia 2016b). The last 10 years (2005-2015) there has been a total traffic growth in Finland of 2.9% (CAGR). While the international traffic has increased by an average of 4.6% (CAGR), the domestic traffic has decreased by 0.7% (CAGR) over 10 years (Finavia 2016b). In Finland totally in 2015 74% of traffic was international and 26% was domestic.

Helsinki airport has two primary functions, it function as a hub airport between Europe and Asia and then it is a vital gateway for domestic air traffic. Helsinki airport have 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 has increased by 4.8% (CAGR). The transfer ratio has increased by 3.8%-points from 27.5% to 31.3% (Finavia 2016b). The main carrier at Helsinki airport is Finnair, which are using Helsinki

[1] 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).

airport as main hub. Finnair is by far the largest airline in Helsinki airport with 67% of all passengers (SRS seat data) and 87% of all transfer passengers (Sabre pax data). The second largest airline operating at Helsinki airport is Norwegian with 12% 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 largest domestic destinations from Helsinki in 2015 were Oulu and Rovaniemi with respectively 6% and 3% of all traffic (SRS seat data). Longhaul traffic - outside Europe – constituted 13% in 2015 and destinations in Asia is by far the largest long haul market with 11% of total traffic (SRS seat data). Within the last 10 years (2005-2015) Helsinki has increased capacity to China and Japan by 127% - in comparison e.g. German has only increased by 61%; while France: 24%, UK: -9% and Netherlands: +45%. Russian and Turkey have had significant growth rates of >170% and >490% in the capacity to China and Japan.

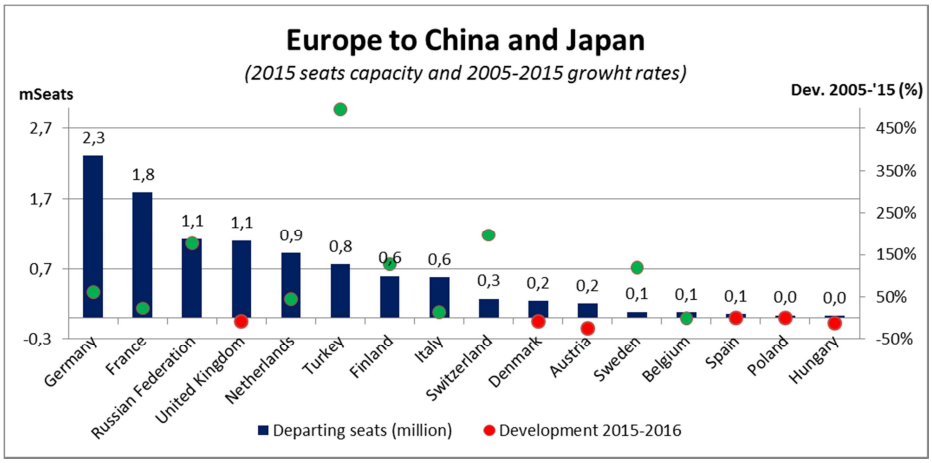

Figure 4: Development in seats from European countries to China and Japan in 2015 and 200***5-2015 development (SRS seat data)***

Helsinki airport including 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).

An understanding of the driving forces behind aviation in Finland

In spring 2015 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 acknowledge 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 the strategic paper; the sections to come will firstly focus on the Helsinki airport as a hub and secondly we will focus on 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 Director General, Ministry of Transport and Communication what he thinks have been the key to success? He states that Helsinki airport location between Europe and Asia, Finnair long haul fleet, Finavia, traffic rights and infrastructure are the key drives 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 the 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 the 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 the success as traffic from Europe to Asia has a natural path over Helsinki airport. The Finish export 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 by Finnair development, 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 have 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 have been flying to Asia for more than 30 years. Manager, Market Access and Aeropolitics, Finnair states:

> "*Finnair have had a long tradition on Asia, we were the first airline to launch a direct flight to Tokyo in 1983. We were the only European carriers that kept flying to China even after the Tiananmen Square, so it has been very long term commitment of using the geographical location and obviously with linked to the Asian and Chinese economy 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 Head of Traffic Planning, Finnair:

> "*I have never experimented an airline with such a clear strategy and that the airline is so loyal to it*" (Head of Traffic Planning, Finnair 2016 13:51)

Beside the long term strategic focus; Finavia did in 2007 order 19 new A350-900 long haul aircrafts (Finnair 2007b:5). The first new A350-900 was delivered in 2016 and in 2023 all 19 aircrafts will be in operation. The current plan is to phase out the existing A340 and in 2020 Finnair will have 20 long haul aircrafts (Finnair 2015:15).

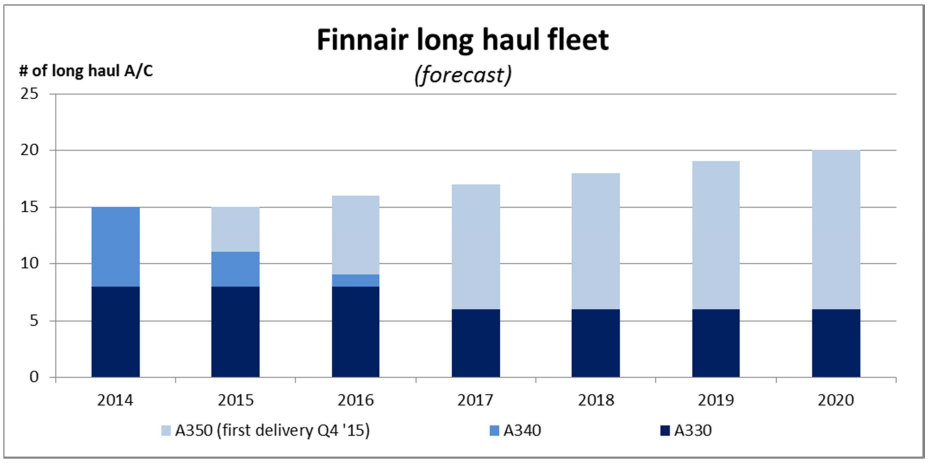

Figure 6: Finnair have ordered a total of 19 new A350 long haul aircrafts. The first A350 did to operate from late 2015 while the last A350 will be delivered in 2023. (Finnair 2015:15)

An A350-900 aircraft is a significant investment of € 305 million per aircraft[3] (Airbus Inc. 2015). There can be different argument why such an investment is possible. In the latter part of 2007 the disturbance in the world economy started; IMF states that: "*The world economy has entered an uncertain and potentially difficult period"* (International Monetary Fund 2007: foreword). On this background Finnair managed to facilitate a significant order of new aircrafts in 2007. One of the reasons why this was feasible in the given market was due to Finnair long haul strategy.

[3] This is the official list price in 2016. Depending on configuration, engines, number of purchase etc. the price will vary.

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 them self 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 bring 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 having acknowledge that the Asian strategy it is a risk, but it is properly 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 for Finnair is the investment in new long haul aircrafts. Another side is the adjustment of the operating cost structure at Finnair to be competitive. Lately; Finnair and the labour unios had hard negotiations. The outcome of the negotiation have enable Finnair 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 flight there should be some Asian crew. Industrial Relations Officer, Cabin union (SLSY) thinks it was some very hard negotiation with Finnair because the politician was not always on the cabin crew side, for as she states it:

> "*Most of the politicians think Finnair is so 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. This political awareness could be an enabler for understanding the motivation to conduct large aircraft investments and accept lower the cost of the cabin crew.

Expansion of Helsinki airport

An important element in handling aviation and supporting 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 support by the narrative stating: 'Finland is an Island' – as Manager, Market Access and Aeropolitics, Finnair elaborate:

> "*[In the] political world where big narrative 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 physic 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 the externalities such as noise and land use are generating protest among local residents and politicians (Watkinson 2015). In Finland Director General, Ministry of Transport and Communication is giving 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 to 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 Director General, Ministry of Transport and Communication states it is important to strengthen the hub function in 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 but also in transport infrastructure to and from the airport. As part of the expansion, a new train connection from Helsinki to the airport did open in 2015; it was an investment of approx. € 1 bn. paid by the government (Analyst, Finavia 2016: 59:20). Finavia are planning to invest € 1 bn. in airport terminals expansions (Analyst, Finavia 2016: 43:29). In order to start new expansions the government is financing the airport with € 200 million. (Analyst, Finavia 2016: 47:55)

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

Currently the plan is to expand the terminals with 75.000 m2, double the bridge served stands from 8 to 16 and increase baggage facility with 50% (Finavia 2016d). The expansion of Helsinki airport is high on the political agenda since it is known as 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 agreement if more than two states – in relation to commercial air-transport (Gidwitz 1980:135). The bilateral agreements can relate to what kind of service: scheduled, charter or cargo a given airline is allowed to fly to a giving airport or over a territory (Gidwitz 1980:135). Within Europe the airline market was liberalized in three steps throughout 1986 to 1992 (Iatrou & Oretti 2007:8). As part of this process, restrictions on market entry, capacity, frequency and pricing were removed within EU (Burghouwt, Mendes de Leon, & P. De Wit 2015:6). But 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 negotiation or set the meeting with the Russians – they did it last time in beginning of March. You need to do it all the time or at least annually".* (Analyst, Finavia 2016: 40:40)

Head of Traffic Planning, Finnair states that Finland actual has a comparative advantages in relation to other european airlines in relation to traffic rights in Russia, since Finland and Russia are neighbors (Head of Traffic Planning, Finnair 2016: 46:55)

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

> *"[In] all of Asia except Japan [you need to negotiate traffic rights], so it as 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. Sometime development of traffic rights requires development of relationship to other airlines, airports or local and national politicians. An example of such relation could be the establishment of 'Sister Airport Relationship' with Capital Airports Holding Company in China, which is the largest airport operator with more than 40 airports in China (Finavia 2016e)

The focus on regional airports

Beside the focus and development of Helsinki airport as hub; the regional airports are important elements in the Finish air transport strategy. The regional airports have different functions compared to Helsinki airport. One function; due to the long distances in Finland – there are more than 1000 km from the south of Finland to the north of Finland – regional airports generate the possibility for increase mobilities and therefore coherence in Finland. Another function; regional airports provide the possibility of feed to international traffic in Helsinki. The passengers coming from the regional airports are helping e.g. Finnair to fill their long haul aircrafts (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 form the regional airport ranges 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. Director General, Ministry of Transport and Communication see 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 in the small and medium long distance and then potential 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 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 from the Ministry of Transport and Communication to close some of the regional airports, the process is not straight forward:

> *"From the [regional] areas perspective, they are very depending on the airports, so we some time 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 success full"* (Director General, Ministry of Transport and Communication 2016 11:34).

In contrast; Finnair does not fully agree with Ministry of Transport and Communication, in respect to potential shutdown of regional airports. Finnair do acknowledge that domestic routes might not be financial sound looking at the point-to-point marked, but this perspective is too narrow, 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 Finnavia 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 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 a bit disappointed: "*To put it blunt, 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; 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 has less than 100.000 passengers per year (see *Figure 8*), and 14 of them has less than 300.000 pax per year.

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

Even though Finavia has managed to sell one airport and close two throughout 2015 and 2016, the regional airports are still a financial burden for the entire aviation network. But due to the local residents, political attention and the network value estimation from Finnair no more airports have been sold or closed down.

Conclusions

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

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

Location is indeed a key factor behind the success of Helsinki airport, but an important perspective is how the 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 long time and despite financial challenges; Finnair managed to order new long haul flight to support the strategy. A 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 expansions. As it is stated; the narrative related to 'Finland is an island' increases the political awareness of developing the airport. This narrative helps supporting the current expansion plan towards 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 persistent and 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 traffic. Despite; that Ministry of Transport and Communication was in favor of closing some of the regional airports, there are no current plans to close any of these. This is a consequence of local political interest and the value of 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 location between Asia and Europe. The location facilitates the strong narrative: 'Finland is an island', which motivates for political awareness and stronghold.

The conclusion of this article therefore raises a number of alternative and new perspectives on the conventional theories' understanding of airports as global flow machines. 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 global economy. Therefore; the article calls for more research on the relations between place and aeromobilities in the future.

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