Aviation Strategy for Denmark

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Foreword

In Denmark, we are used to having good flight connections throughout the year. However, this is not something we should take for granted in either the near or distant future. In Europe and the Nordic countries there is increasing competition in attracting new flight connections and more daily departures to important destinations around the world.

It is vital for Denmark that we continue to increase our connectivity to the world around us. This international connectivity affects Denmark's level of globalisation and is therefore a key parameter for our business sector, our job market and our ability to attract tourists.

Objective of the Government's aviation strategy

With its new aviation strategy, the Government wishes to strengthen the basis for the establishment of more routes and more daily departures to and from Denmark and within Denmark. This will increase Denmark's national and international connectivity to the benefit of economic growth, employment and cohesion between regions.

Aviation is a special sector for Denmark. Not only does the sector create the basis for other companies' activities and thereby enriche our society, through its domestic traffic, it creates cohesion between the Danish regions. It is therefore vital that we, to a greater degree than previously, include domestic aviation in our plans for the total transport system in Denmark.

This strategy focuses on the various elements and presents a number of initiatives, each of which can help to create the basis for continued improvement in connectivity to, from and within Denmark.

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1. The route to greater connectivity

Aviation is crucial for Denmark's connections to the rest of the world and cohesion within its borders. These connections ensure ease of access for both tourists and the business sector while providing the Danish population with the means to travel rapidly and efficiently to global destinations. Domestic connections in Denmark bind the country more effectively together and serve as a fast alternative to other forms of transport.

When airlines establish new routes to and from Denmark or increase the number of departures on existing routes, it has a direct effect on the national economy. The most important factor is that aviation ensures connectivity, which supports the basis of activities in Denmark. The value of this connectivity is estimated to be DKK 30-57 billion. International connectivity and effective flight connections thus play an important role for Denmark's economic growth and employment, factors which make Denmark an attractive choice when international companies are choosing where to place their activities.

Air cargo is a key part of Denmark's international trade. Even though it amounts to less than 1 % of all goods transport to and from Denmark, when measured in terms of tonnage, air cargo is estimated to account for 20-30 % of the total value of Danish exports. Frequent connections to large air cargo hubs are therefore important for those particular branches of the Danish business sector which produce high-value items for foreign customers. At the same time, air cargo can contribute by creating a basis for even more intercontinental routes since, in itself, air cargo can be the deciding factor in ensuring a profitable route economy.

The number of passengers using Danish airports is in constant growth and connectivity to Denmark increases year by year. However, this does not mean that there is no competition in acquiring new routes and retaining existing routes. Larger airports, particularly in London, Paris, Amsterdam and Frankfurt, attract many routes and are bases for large airlines. At the same time, competition from new airlines, such as Ryanair, Norwegian and EasyJet, has meant that traditional and medium-sized airlines, such as SAS, are under pressure. Similarly, the competition has increased in the Nordic countries and an increasing number of direct routes have been established to and from Oslo, Helsinki and Stockholm.

Copenhagen Airport is still the biggest airport in the Nordic countries, both in terms of passenger numbers and total connectivity to other destinations. A decisive factor in this advantage over the other Nordic countries is the fact that SAS, as a Scandinavian network carrier, has traditionally chosen Copenhagen Airport as its primary hub.

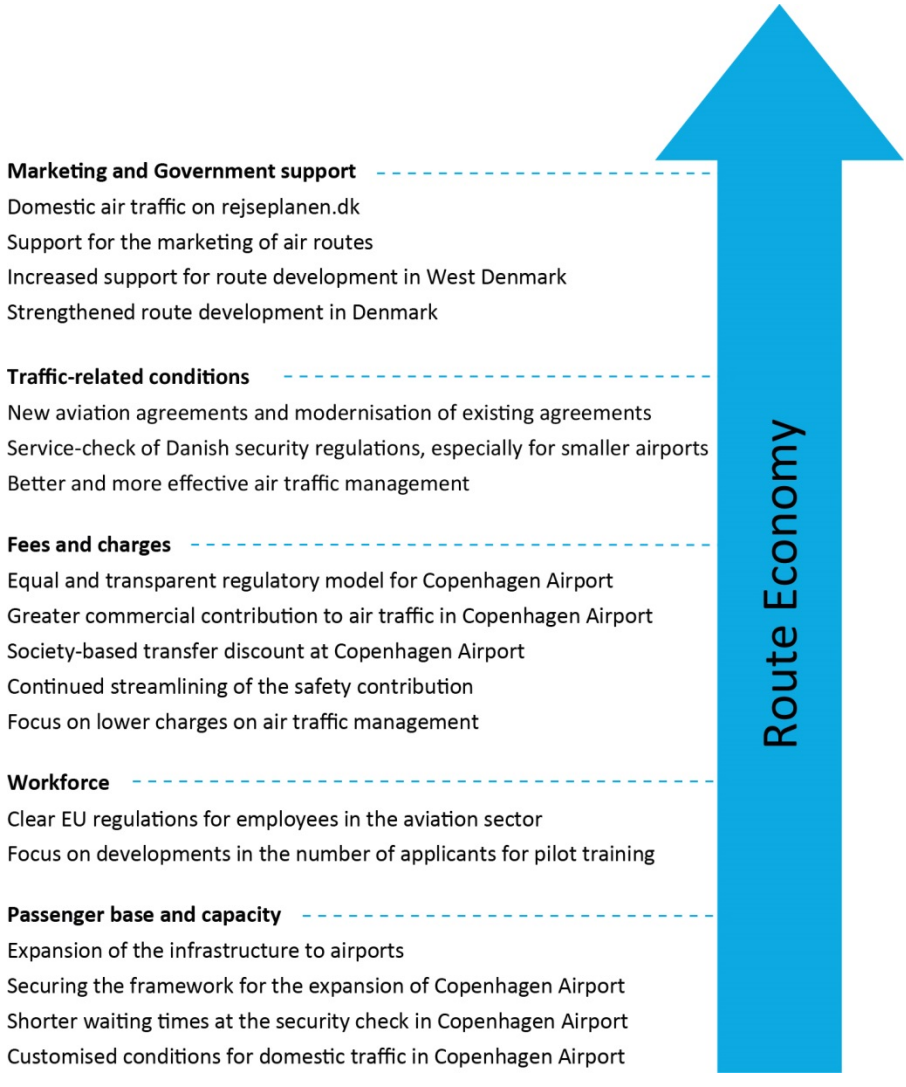
However, Copenhagen Airport's position as the Nordic hub is threatened by a relatively low growth in the number of international departures and a drop in the quality of connecting opportunities for transfer passengers since 2006. Even so, if one includes the possibilities for connections from the airports which are served by flights from Copenhagen, the total connectivity to the rest of the world is growing steadily. This is because Copenhagen Airport has secured good connections to other, larger hub airports which have experienced a positive increase in their number of departures. Thus, there are good connections to the rest of the world with just one stopover from Copenhagen Airport.

Recent years have seen a significant development in Danish regional airports with scheduled flights. This is the result of strong strategic route development, coupled with the fact that developments in the European aviation market have been advantageous for regional airports. As a result, West Denmark is now directly connected to large European hubs. This has meant that international access to West Denmark has increased and now amounts to about one quarter of Denmark's total connectivity by air traffic.

Since 2005, connectivity to, from and within Denmark has grown by approximately 26 %. This is a sizeable increase but, during recent years, competition from other large and smaller airports in Europe has sharpened and other countries have also focused on creating growth in the aviation sector. Using the policies set out in this aviation strategy, the Government wishes to provide a sound framework for aviation in Denmark which will support a continuing high connectivity and continued growth, thus benefitting Denmark.

Figure 1.1 illustrates a number of the Government's initiatives intended to strengthen the foundation on which the aviation sector can provide further connectivity to, from and within Denmark.

Figure 1.1| Strengthened base for increased connectivity



1.1. Passenger base and capacity

A survey of airlines' decision-making criteria in choosing an airport indicates that the passenger base is a key factor in establishing new routes or increasing their operations on existing routes. It is also crucial for airlines that the airport has the necessary capacity in terms of attractive take-off and landing times.

Expansion of the infrastructure to airports

An airport's passenger catchment area is an expression of how many potential passengers live within a reasonable distance from the airport. The passenger catchment area for Danish airports can thus be increased by improving the surrounding road and railway connections. At present, there are a number of infrastructure improvements in progress, many of which will increase passenger catchment areas for the Danish airports and the Government has instigated a number of investigations concerning additional, new improvements. These are described in more detail in chapters 5 and 8.

Securing the framework for the expansion of Copenhagen Airport

A larger passenger catchment area is not enough if an airport suffers from capacity limitations. At present, Danish airports have no significant capacity restrictions. However, it will be a crucial element in continued growth, especially in terms of international connectivity, that Danish airports are able to keep up with an increase in demand.

Capacity limitations are most relevant at Copenhagen Airport, which has therefore put forward an expansion plan to enable the airport to handle a minimum of 40 million passengers per year. The Government gives its full support to this vision of achieving 40 million passengers and will cooperate with Copenhagen Airport to ensure an expansion of the airport which, in the short and the long term, will benefit Danish society as a whole. This is described in more detail in chapter 5.

Shorter waiting times at the security check in Copenhagen Airport

Just as the time taken to travel to and from the airport affects the size of the passenger catchment area, so too does the time it takes for the passenger to get to and from the aircraft. This is because that part of the total journey time determines just how early the passenger must get to the airport to be sure of reaching their departure on time.

In Denmark, the general size of the regional airports usually means that it is fast and easy for the passenger to get to and from the aircraft without spending unnecessary time in the airport. At the same time, the airports are well-aware that it is important for domestic passengers to get through the airport as quickly as possible.

During some periods in 2016, security checks in Copenhagen Airport were characterised by long and unpredictable waiting times for the passengers. In addition to being detrimental to international passengers, this posed a particular challenge for domestic air traffic whose competitive advantage in comparison with car, train and bus transport is the fast travel time. The Government will introduce service targets for passenger interface areas, starting with the security checks in the future capacity monitoring of Copenhagen Airport. This should ensure a minimum average service and a maximum waiting time for passengers. This is described in further detail in chapter 8.

Customised conditions for domestic traffic in Copenhagen Airport

Most of Denmark's domestic air traffic is to and from Copenhagen Airport. This means that the conditions determined by Copenhagen Airport in respect of domestic air traffic is of major importance as far as the competitiveness of domestic air traffic against other modes of transport. In 2015, the domestic and international terminals were merged, which resulted in improved conditions for transfer passengers. At the same time, however, it meant that the smaller domestic operators had to cope with more difficult conditions.

The Government encourages Copenhagen Airport to focus on adapting the conditions for domestic air traffic to the needs of passengers and operators. Amongst other things, Copenhagen Airport should investigate all possibilities for a lower level of charges and focus on the conditions for domestic air traffic during the airport's expansion to 40 million passengers. This is described in more detail in chapter 12.

1.2. Workforce

An important factor for airlines is the availability of qualified personnel. Denmark has historically had a strong aviation sector with qualified pilots, cabin crew and mechanics.

Clear EU regulations for employees in the aviation sector

Increasing competition between airlines in Europe has meant that Danish airlines have been particularly challenged in terms of expenditure on wages and personnel. This has been a driving force for unfair competition in the form of an unintended difference in member states' implementation, use and administration of the regulations.

The Government has taken steps at EU level to ensure a uniform framework for fair competition between airlines and to ensure acceptable working conditions for employees in the European aviation sector. Airlines should compete on innovation, quality and price. This is described in further detail in chapter 11.

Focus on developments in the number of applicants for pilot training

The Danish aviation sector has made the Government aware of the risk that, in the coming years, there will be a shortage of pilots. This is because the intake of new students at Danish pilot training facilities has been low in the years following the financial crisis. The most recent intake, however, indicates that a sufficient number of pilots are now being trained in Denmark. The Ministry for Transport, Building and Housing will monitor the development to ensure that this positive development is not a mere fluctuation but is the result of a more structural rise in the intake of aspiring pilots. This is described in more detail in chapter 11.

1.3. Fees and charges

The fees and charges that airlines must pay for operating in any given country are a deciding factor for the placement of new routes or the expansion or retention of existing routes. Denmark has not introduced a special flight tax, as is the case in Norway and which is also included in Sweden's aviation strategy. The Government has no intention of introducing this type of aviation tax as it would weaken the conditions and, thus, the competitiveness of Danish aviation, resulting in lower connectivity.

Equal and transparent regulatory model for Copenhagen Airport

Most of the charges that an airline pays for operations in Denmark often go to the airports. In Denmark, because of its vital importance and its geographic monopoly, Copenhagen Airport in the only airport subject to state regulation of airport charges. This means that charges must be set in accordance with the EU Directive on airport charges.

At Copenhagen Airport, charges are negotiated together with service and capacity levels between the airport and the airlines. The State also plays a role in ensuring equality in the negotiations, whereby society's long-term interests, such as connectivity, are also taken into consideration. Recent years have indicated a need for modernisation and adjustments to this regulating model to ensure a more equal and transparent negotiating situation. The

Government will therefore make adjustments to the regulatory model before the 2018 negotiation. This is described in further detail in chapter 6.

Greater commercial contribution to air traffic in Copenhagen Airport

A key element in the regulatory model for Copenhagen Airport is that part of the profits from the airport's commercial activities should directly contribute toward the airlines being charged less to use the airport. Some of the profit from, for example, parking and shopping is thereby used to improve the attractiveness of Copenhagen Airport and this creates a basis for a higher level of connectivity than would be the case with no commercial activities.

Copenhagen Airport has developed in such a way that the airport's commercial activities no longer contribute directly to strengthening the airport's attractiveness to the airlines through either lower charge levels, a higher level of service, or more investments.

The Government will carry out an adjustment of the regulatory model in order to ensure that a greater part of Copenhagen Airport's commercial revenue is used directly to cover the costs of air traffic. This will create the basis for improved national and international connectivity. This is described in more detail in chapter 6.

Society-based transfer discount at Copenhagen Airport

Historically, Copenhagen Airport has been a hub for air traffic in Northern Europe, mainly because SAS has used Copenhagen Airport as its primary hub, where passengers transfer between different routes. This has created an increased market base, especially for intercontinental routes which, in turn, has meant a greater level of international connectivity than Denmark would normally have expected. In recent years, Norwegian has also increased the proportion of transfer passengers in Copenhagen Airport.

The Copenhagen hub is especially challenged by increased competition, particularly from the large hubs in Europe and the large airports in Stockholm and Oslo. The Government will therefore focus on strengthening the conditions for the hub in Copenhagen Airport by introducing a society-based reduction in the relationship between the charge per transfer passenger and the charge per locally departing passenger. This is described in further detail in chapter 6.

Continued streamlining of the safety contribution

Today, the Danish Transport, Construction and Housing Authority charges what is known as a safety contribution which, among other things, is used to oversee flight safety. The positive growth in the number of passengers in Denmark in recent years has meant that it has been possible to reduce this contribution. The Danish Transport, Construction and Housing Authority will continue to streamline the safety contribution, so that passenger growth in Denmark will benefit the airlines. This will take place at the same time as the safety level is maintained. This is described in further detail in chapter 11.

Focus on lower charges on air traffic management

Airlines also pay for air traffic management to the state-owned company Naviair, which is responsible for the civilian air traffic control in Danish airspace. This charge has been reduced several times in recent years and the Government will strive to continue increased efficiency efforts in Naviair with the aim of reducing the charges paid by the airlines. This is described in further detail in Chapter 11.

1.4. Traffic-related conditions

Airports and airlines operating in Denmark are subject to a number of basic framework conditions which are put in place by both Danish and foreign authorities. It is these conditions which, directly or indirectly, affect the possibilities for creating national and international connectivity.

New aviation agreements and modernisation of existing agreements

A prerequisite for opening new international routes is that there is an air service agreement between Denmark and the other country. This is not a problem within Europe where the air traffic market has been liberalised. In many countries outside Europe, however, there are restraints concerning which airlines may use the airport, how many departures are permitted and to which cities they are permitted to fly. There are, additionally, certain restrictions governing overflying by certain air carriers, which are a barrier to further growth in international connectivity.

Together with the aviation sector, the Government will undertake coordinated and higher-prioritised actions to renegotiate and modernise Denmark's aviation agreements with non-European countries. The Government wishes to reduce the constraints on free air traffic, thus ensuring that agreements are as liberal as possible. This is described in further detail in chapter 10.

Service-check of Danish security regulations, especially for smaller airports

For smaller, regional airports especially, the total cost of security is a considerable item among the airport's total expenses. This is because the demands placed on personnel and procedures are high as a result of a large and justified focus on preventing unlawful actions directed against aviation. Most of the regulations regarding security are EU regulations, while a smaller number are special national regulations.

The Government wishes to focus on the Danish security regulations in order to determine whether there are unnecessary national special regulations for the smaller airports in Denmark. The Danish Transport, Construction and Housing Authority has therefore set up a working group with representatives from the aviation sector to carry out a service check of Danish security regulations as they presently apply, especially in the case of the smaller airports. The working group shall among other subjects look into both education of security personnel and the authority's approval of transport companies. This is described in further detail in chapter 8.

Better and more effective air traffic management

If Denmark is to retain and develop its national and international connectivity, its airspace must have enough capacity to handle air traffic demand. The Government is, therefore, focusing on the efficient flow of air traffic in Danish airspace.

The state-owned company Naviair has set up an investigation to look into the possibility of controlling air traffic at a number of regional airports with the help of new technology. Furthermore, the Danish and Swedish authorities have launched a project aimed at creating the most favourable conditions for air traffic control around Oresund. This is described in further detail in chapters 5 and 8.

1.5. Marketing and Government support

Marketing increases a route's visibility and consumer awareness. This attracts more passengers thereby creating a better basis for a new route or more frequent departures on an existing route. The larger Danish airports have staff or departments dedicated to actively attracting new routes and further developing the airport's route networks in cooperation with the airlines. In many countries, including Denmark, the authorities also contribute to

route development by providing financial support for marketing. This support comes from the State, the regions and from local authorities.

Domestic air traffic on rejseplanen.dk

A key element in marketing is visibility. In Denmark, domestic air traffic has not achieved the same level of visibility as other forms of public transport. The Government wants this to change. The Danish Transport, Construction and Housing Authority has entered into a dialogue with the parties behind rejseplanen.dk with the intention that domestic air traffic should be treated on par with other forms of public transport. This shall be the beginning by which domestic air traffic is considered as a more integrated part of the transport system in Denmark. This is described in further detail in chapter 12.

Support for the marketing of air routes

Denmark was one of the first countries in the world to establish a route development programme, Global Connected, in 2010. Today, there are similar programmes in a number of countries, including Sweden, whose programme, Connect Sweden, was established in 2013.

Route development should primarily be governed by the commercial interests of the airlines or the airports but, given the substantial socioeconomic gains resulting from connectivity, it is important for the Government that route development is both supported and coordinated. The Government will therefore work towards ensuring continued economic support for the Global Connected route development programme. This is described in further detail in chapter 10.

Increased support for route development in West Denmark

Global Connected is divided into two sections, Greater Copenhagen Connected and West Denmark Connected. Today, a strong consortium has been established for route development in Copenhagen Connected and this can help build up and inspire stronger efforts for route development in West Denmark.

In order to support the growing potential for route development in West Denmark, the Government will explore the possibilities for increasing support for and strengthening the efforts of West Denmark Connected. However, a prerequisite for increased support for West Denmark Connected is that

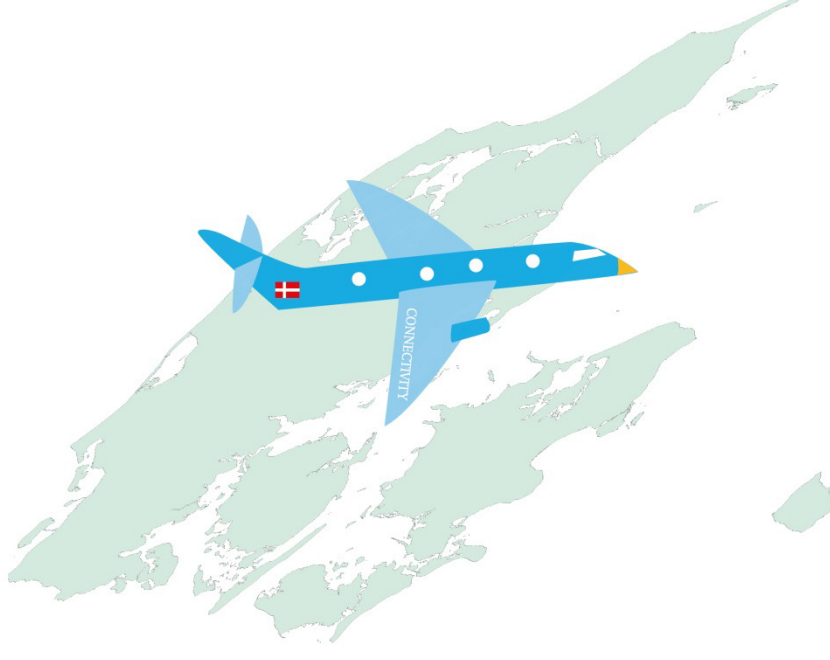
parties involved in West Denmark Connected establish a more organised programme. This is described in further detail in chapter 10.

Strengthened route development in Denmark

Airports and airlines around the world largely operate according to commercial and market conditions. In many countries, however, the state and political conditions still play an important role in the aviation sector. Good and stable relations with governments and authorities in other countries can thus make it easier to open new intercontinental routes or to secure landing permits at foreign airports.

The Government will prioritise and exert more coordinated efforts to support route development throughout Denmark. This will happen by, among other things, including route development in the agendas for ministerial visits to those countries where Denmark is interested in establishing a route or increasing the number of departures. This is described in further detail in chapter 10.

Present And Future Importance Of The Aviation Sector



2. Socioeconomic importance of the aviation sector for Denmark

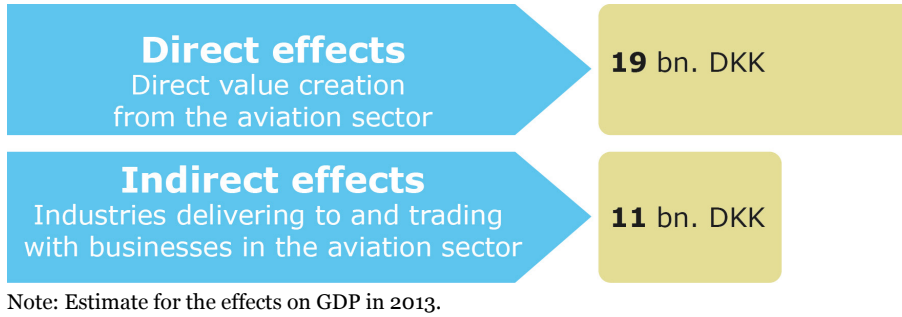
The aviation sector in Denmark is a significant contributor to the Danish economy. This is not only by virtue of the activity and income generated directly by the aviation sector but also by the indirect effects of domestic and international connectivity which affect the other parts of the economy.

Taken as a whole, it is estimated that the aviation sector supports the creation of approximately DKK 30 billion in value as the result of both direct and indirect effects. Furthermore, the increased connectivity that the aviation sector has created in the last 20 years is estimated to have contributed to an increase in GDP by up to DKK 30-57 billion due to the improved possibilities for international interaction in the form of trade, investment, tourism etc.

2.1. Value creation from activities in the aviation sector

Figure 2.1 illustrates the GDP value creation divided between both direct and indirect effects. As shown in the figure, direct effects create the greatest value for Denmark.

Figure 2.1 | Estimates of the value created by the aviation sector in Denmark



Note: Estimate for the effects on GDP in 2013.
Source: Copenhagen Economics (2016a) based on Intervistas (2015)

Compared with the estimates from Copenhagen Economics (2016a) and InterVistas (2015), figures from the Danish national accounts show that the aviation sector created a GDP of about DKK 22 billion in 2015. To this must

be added contributions from ancillary companies in connection with transport which among other things includes airport operations.

Although the figures are not entirely comparable, they nevertheless support the estimate that, taken as a whole, the aviation sector, including its indirect effects, contributes about DKK 30 billion to the Danish GDP.

The aviation sector creates activities in Denmark in a number of ways

The approximately DKK 30 billion value creation estimated by Copenhagen Economics (2016a) and InterVistas (2016) comes from a number of activities and effects related to the Danish aviation sector.

Direct effects

The direct value created by the aviation sector, generated by the activities of airlines, airports and other aviation-related companies such as air traffic control and airport handling companies.

Indirect effects

The value created from industries which supply or support the aviation industry such as the wholesalers who supply the food for in-flight catering or companies selling fuel or carrying out aircraft repair and maintenance work.

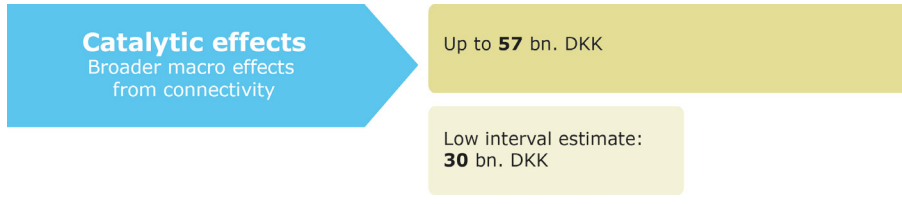
Figures from Statistics Denmark show that in 2015 about 12,000 people were employed in jobs directly associated with aviation activities in Denmark. An estimate from Copenhagen Economics (2016a) and InterVistas (2015) shows that, including the number of people employed in other jobs within or associated with the aviation sector, the total number of people employed in Denmark in the aviation sector is about 30,000, of whom about 23,000 are employed in connection with Copenhagen Airport.

2.2. Value created by connectivity

The aviation sector's greatest single contribution to the national economy is considered to come from the positive effects of the connectivity that the sector creates. According to Copenhagen Economics (2016a) Denmark's connectivity is estimated to contribute a value of DKK 30-57 billion to the national economy.

This is based on an assessment of the relationship between GDP and connectivity in several European countries and should be viewed in connection with the fact that the positive effect on GDP will depend, for example, on the simultaneous building up of new trade relations and improved sharing of knowledge.

Figure 2.2| Estimates of the value created from connectivity in Denmark



Note: Estimated as the value to Denmark of the aviation sector's contribution from increased connectivity during the past 20 years.
Source: Copenhagen Economics (2016a) based on Intervistas (2015)

The calculated value of the aviation sector is not an expression of the value that would otherwise be lost in the absence of aviation. In this case other forms and sectors of transport would take up part of the overall demand, in which case not all effects would be lost.

In the present analysis connectivity is used as a measure of how well air traffic connects two areas. In this respect a distinction is made between direct and indirect connectivity whereby the latter is weighted according to the quality of the indirect connection.

Measuring connectivity in aviation

The overall connectivity from an airport or a country is the sum of the direct and indirect connectivity created by airlines through their route networks.

Direct connectivity

Direct connections from one Danish airport to another airport measured by the number of weekly departures.

Indirect connectivity

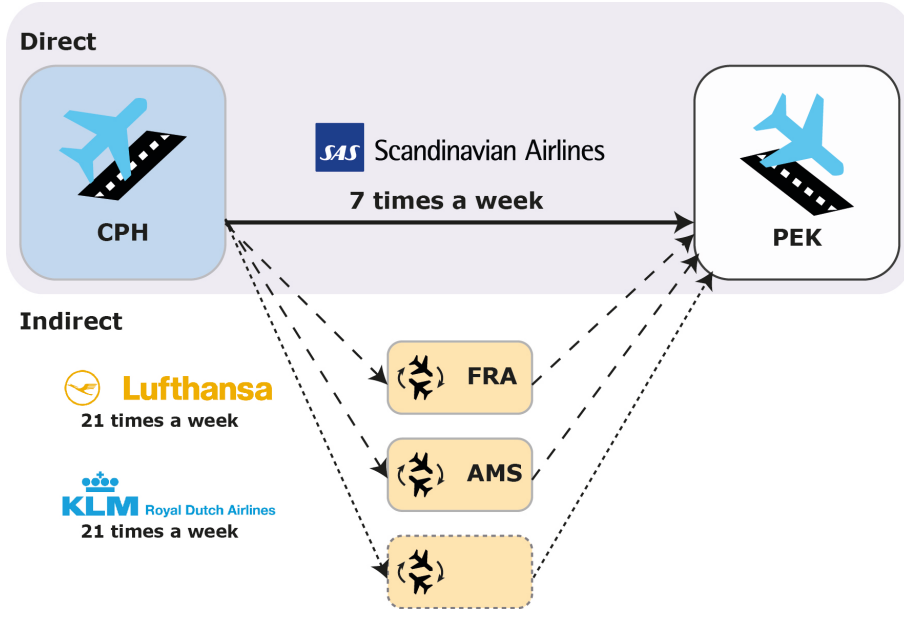
Indirect connections from one Danish airport to another airport with one stopover, i.e. involving transfer in another airport. Indirect connections are weighted according to quality which depends on transfer and flight times compared to a direct route.

In the aviation strategy a connectivity index is used. This index counts the number of direct and indirect connections to and from a particular airport with one stopover based on all of the airlines' timetables. Figure 2.3 illustrates how the connection between Copenhagen and Beijing consists of both a direct connection and an indirect connection with one stopover. Since both types of connection create connectivity, both are included in the measure of total connectivity.

Since SAS cooperates with Air China in Star Alliance, Air China's route network from Beijing also creates indirect connectivity. In this context Beijing acts as a stopover between Denmark and other destinations in China and Southeast Asia. The direct connections between Copenhagen and Frankfurt or Amsterdam are also included in the measurement of Denmark's direct connectivity.

Any route originating in Denmark therefore creates connectivity in itself and via the overseas airport's flight connections if transfer is possible through the airline's alliance. Connections where passengers self-transfer in a foreign airport are not included in the connectivity index but they also contribute to connectivity. This is one of the reasons why the routes provided by network carriers contribute to connectivity to a greater extent than those operated by companies providing only point-to-point traffic.

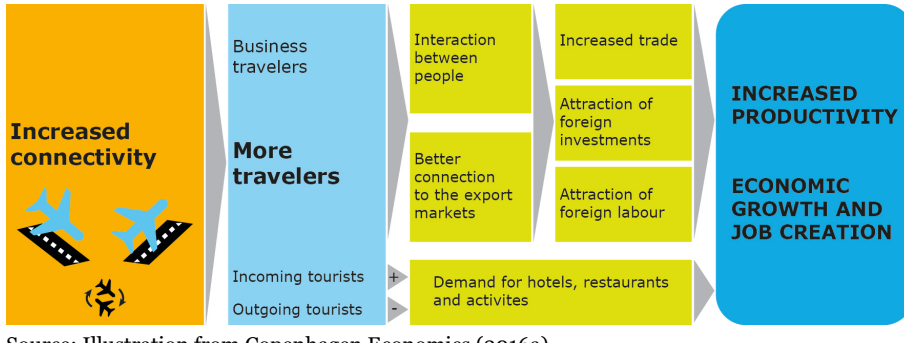
Figure 2.3 | Connectivity between Copenhagen and Beijing



Source: Illustration from Copenhagen Economics (2016a)

The level of domestic and international connectivity is vitally important for Denmark because it is about knowledge sharing, access to markets, regions and countries for Danish companies and Denmark's accessibility for foreign companies, business travellers, tourists and investors. In all, connectivity affects Denmark's ability to interact with the rest of the world and thus the degree of globalisation, whereby increased connectivity contributes to higher productivity, economic growth and job creation in Denmark.

Figure 2.4 | Effects of increased connectivity



Source: Illustration from Copenhagen Economics (2016a)

The positive relationship between connectivity and economic prosperity has been demonstrated in a number of analyses and in scientific research. InterVistas (2015) showed that there is a positive relationship between the level of connectivity and per capita GDP. This analysis estimates that a 1 % increase in connectivity corresponds, on average, to a 0.05 % increase in per capita GDP. This is the mean estimate and the lower part of the interval shows an effect corresponding to 0.025 %. In spite of the fact that there is a considerable level of uncertainty associated with the analysis as a whole, it nevertheless demonstrates that, even with the 0.025 % estimate, connectivity can support a significant level of value creation for society, cf. figure 2.2.

Based on the above-mentioned estimate, Copenhagen Economics (2016a) and InterVistas (2015) have calculated the value of connectivity to Denmark. The method is also used by ACI, the international airports' association, and the European Commission in their aviation strategy from 2015 cf. European Commission (2015).

Tourism

Tourism is an international growth industry and one that is important to Denmark. Compared to the limited size of Denmark, the country is a large tourism country and tourism contributes to creating growth and jobs throughout Denmark.

In 2014 Danish and foreign tourists accounted for a turnover of almost DKK 95 billion, thereby creating the basis for about 115,000 full-time jobs across Denmark.

In the 2016 national strategy for Danish tourism, the targets set for Denmark are, firstly, that the number of tourists, measured by numbers of overnight stays, should increase by one third to about 17 million overnight stays and, secondly, that the turnover attributable to tourism should reach DKK 140 billion by 2025.

Good and easy access to Denmark is important for both holiday and business tourists choosing to come here. Flight connections are especially important as far as attracting tourists from remote or non-mainland markets such as China, United States and the UK. In all, about four in ten foreign tourists visiting Denmark arrive by air and, in the case of Copenhagen, almost 70 % of all foreign tourists visiting the city arrive by air.

According to the tourism development company, Dansk Erhvervs- og Mødeturisme, infrastructure, including air routes, is one of the most im-

portant competition parameters as far as business tourism is concerned. It is also one of the most significant criteria as regards choice of venue among customers such as meetings agents and decision-makers in larger companies and international associations.

Good flight connectivity is a position of strength which must continue to be prioritised and developed if Denmark is to enjoy its share of the coming growth of global tourism, including city tourism. In this connection, low-cost carriers play a particularly central role because these companies especially service a leisure and tourism segment of the market which network carriers would not necessarily have serviced in the absence of low-cost carriers.

In the long run, increased traffic in the form of new routes and increased frequency on existing routes can have a positive effect on value creation in and around the aviation sector. Finally, there will be gains for passengers resulting from a greater supply of flight connections, albeit this will also depend on the price level. The magnitudes of the different effects depend in large measure on the traffic segment concerned i.e. intercontinental, European or domestic air travel and on whether the traffic is provided by a typical network carrier or a typical low-cost airline.

3. Trends and development

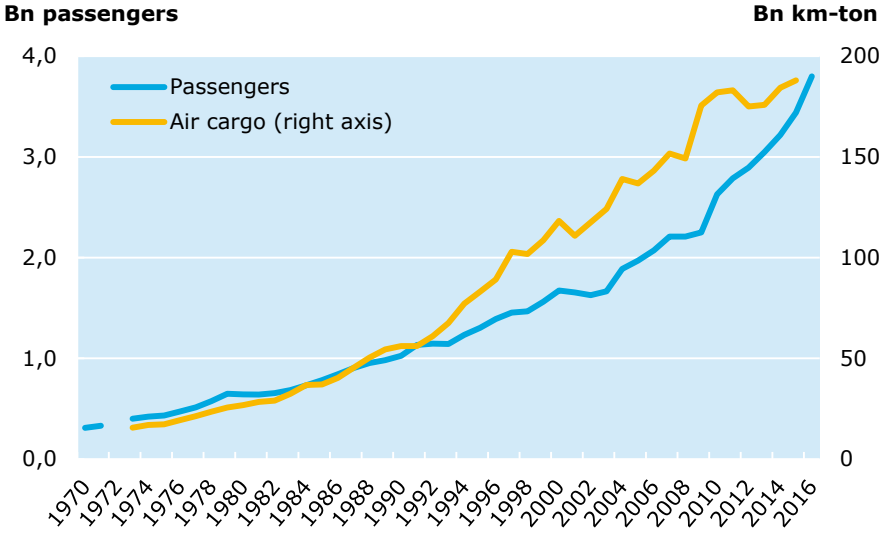
The Danish aviation sector and domestic and international connectivity in Denmark are heavily influenced by global developments. This not only concerns developments within the global air transport industry but also in equal measure, the development of economic trends, the price of oil and geopolitical fluctuations.

3.1. The global market for passengers and air cargo

Since 1970, the global aviation industry has undergone significant development and most state monopolies have been dissolved in favour of increased competition and a more efficient and liberalised market.

The real price of commercial air transport has been reduced globally by 60 % compared to the price level in 1970 cf. IATA (2013). Intense competition has brought about significant increases in cost-effectiveness in the industry and these have resulted in lower prices to the benefit of air travellers and cargo companies.

Figure 3.1 | Development of global cargo and passenger air traffic

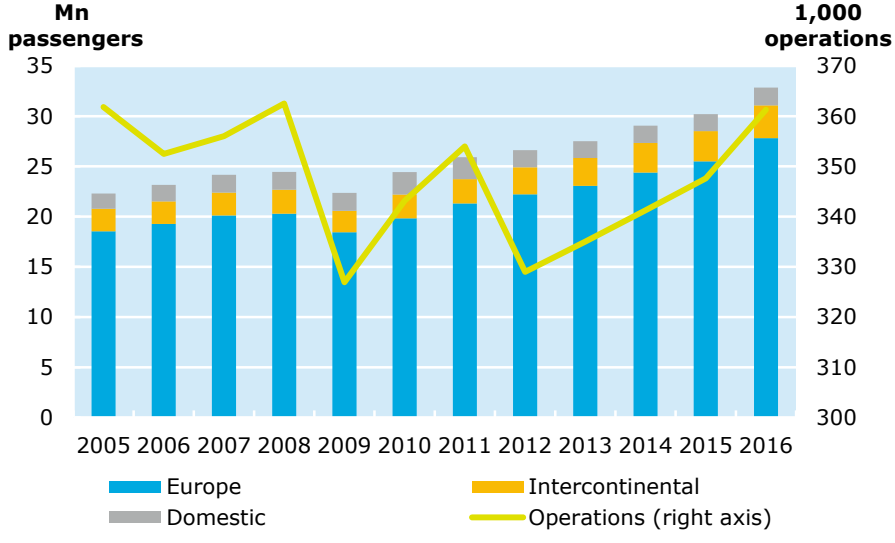


Source: World Bank based on data from ICAO

Due to, among other things, the fall in price, global demand for air transport has grown considerably since 1970 as shown in figure 3.1. Between 1970 and 2016 there has been a more than tenfold increase in both the amount of air cargo and the number of air passengers.

Danish passenger traffic has also undergone considerable development and passenger numbers have increased from about 22 million in 2005 to more than 32 million in 2016. Passengers fly mainly to and from the rest of Europe, although the highest passenger growth has been in intercontinental traffic.

Figure 3.2 | Developments in passenger numbers and operations in Danish aviation



Note: The number of passengers and operations includes both charter and scheduled traffic
Source: Data from Danish Transport, Construction and Housing Authority

Passenger numbers in the Danish aviation sector have continued to grow in spite of the fact that the number of operations i.e. take-offs and landings, has fluctuated during this period and, in 2016, the number of operations was about the same as it was in 2005. One explanation is the fact that airlines increasingly are using larger and more filled aircrafts so that more passengers were transported in 2016. The drop in the number of operations in 2012 can be attributed to Cimber-Sterling's bankruptcy whilst the drop in 2009 can be attributed to the financial crisis.

Preliminary data shows that, worldwide, the number of air passengers reached 3.8 billion in 2016 and this, across the entire aviation sector, is expected to double in the next 20 years. ACI, the airports' international association, expects that passenger numbers will double by 2029 whilst IATA, which represents 265 airlines worldwide, predicts that this will happen in 2035. The two major aircraft manufacturers, Airbus and Boeing, have both made similar forecasts of global growth in the aviation sector.

The increase in passenger numbers in the aviation market is mainly attributable to expected increased demand in Asia and the Pacific region and IATA expects that half of the total number of new passengers in the next 20 years will come from this part of the world. Although the growth in passenger demand in Europe is expected to be relatively modest compared to demand on other continents, IATA has predicted 570 million more passengers in Europe by 2035.

The market for air cargo is also expected to grow in the future and ACI expects that by 2040 the quantity of air cargo will grow, on average, by about 2.3 % annually.

One of the greatest threats to the expected growth in both passenger and cargo numbers is geopolitical uncertainty, which, as experience has shown, can result in considerable instability in air traffic operations. This applies to conflicts both within and between states and can affect passenger demand, landing and overflying agreements, and lead to higher security costs to airports and airlines. All of which, in the end, result in higher ticket prices.

Turkish Airlines in Aalborg Airport

In 2016, terrorism and domestic political conditions in Turkey resulted in a lower demand for travel to Istanbul. As consequence Turkish Airlines, Turkey's national carrier, reduced the company's traffic program. Among other things, this has led to the temporary closure of the direct connection between Aalborg and Istanbul.

Since Turkish Airlines operates a large hub at Istanbul's Atatürk airport, this means that passengers and the business community not only lose the direct connection to Istanbul but the possibilities for onward travel from Istanbul via the network operated by Turkish Airlines and its partners in Star Alliance are also reduced.

Similarly to geopolitical instabilities, trade-political trends can also significantly affect the development of the air cargo market. The breakdown of trade barriers and the establishment of free trade agreements would be expected to lead to increasing quantities of air cargo whilst the opposite applies if world trade becomes subject to the effects of protectionism.

3.2. Point-to-point traffic and new business models

Liberalisation of the European aviation market has given rise to the low-cost carrier's business model which differs from the business model of traditional network carriers in several ways.

Two basic airline business models

Network carriers

The business model of network carriers is built up on one or a few home bases in hub airports in which the airline mainly operates high frequency routes to the main airports of other major cities.

Through their own route network or in alliances with other airlines, network carriers create a high amount of connectivity. Network carriers focus on optimising the economic performance of the network as a whole. This means that some regional routes can be operated unprofitably as long as the transfer traffic contributes positively as feeder traffic to a profitable long-distance route.

Low-cost carriers

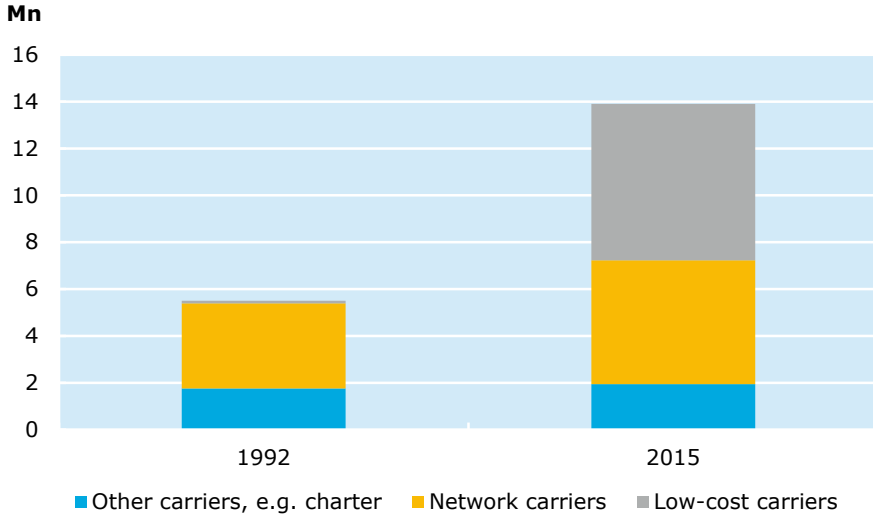
The business model used by low-cost carriers is most often based on direct (point-to-point) connections and less frequently operated routes to a mixture of primary and secondary airports.

These airlines operate from a lot of bases and the overall traffic supply is less bound to a particular airport. Since low-cost carriers focus on optimising the economic viability of individual routes, both routes, and, to a lesser extent, bases, can be reassigned according to current demand and cost levels.

Figure 3.3 shows that in 1992 most of the weekly seating capacity in Europe was provided by network carriers. At that time, low-cost carriers were all but non-existent. Since then, however, the situation has changed considerably and today, low-cost carriers account for about 26 % more weekly seating ca-

pacity in Europe than network carriers. The trend towards low-cost carriers growing at a faster pace than network carriers is expected to continue in the years to come.

Figure 3.3 | Distribution of weekly seating capacity in Europe



Source: Data from "An aviation strategy for Europe - staff working document"

Developments in Europe in recent years have shown that the division of airlines into low-cost carriers and network carriers respectively is not static. There is an ongoing and converging trend whereby the business models of low-cost carriers and network carriers have become similar in a number of areas. For example, network carriers, to a greater extent, outsource the operation of particular routes or route segments whilst at the same time increasing their focus on maximising the economic viability of individual routes rather than that of the network as a whole. The ever-increasing low-cost carrier traffic and competition from Middle Eastern airlines is equally forcing traditional network carriers to provide point-to-point operations.

As far as low-cost carriers are concerned, the trend is towards greater presence in primary airports, and an increasing focus on business travellers as a passenger segment. At the same time, a number of low-cost carriers are considering the possibilities of entering into interline agreements whereby one low-cost carrier would deliver passengers to another carrier's long-distance routes.

This convergence has also created hybrid carriers which are difficult to classify as either network or low-cost carriers. This applies to Air Berlin and Norwegian, for example, both of which started as low-cost carriers but which now, to a greater or lesser extent, provide network traffic since they both provide long-distance routes based on, among other things, transfer passenger traffic. Through its membership of the Oneworld Alliance, Air Berlin has also entered into interline agreements with other carriers such as British Airways and Etihad Airways.

Virtual airlines

Today, to a large extent, airlines outsource ancillary operational functions such as passenger check-in, baggage handling and maintenance facilities. At the same time, it has become common for airlines to lease their aircraft rather than buy them. It is therefore possible to talk about virtual airlines which only provide ticket sales and organisation of the traffic programme whilst buying in other services from subcontractors.

This provides the airlines with a greater degree of flexibility in being able to more rapidly adapt their production systems in response to fluctuations in demand. However, at the same it is increasing opportunities for picking and choosing the regulations best suited to their operations and non-typical employment arrangements.

The future growth of the European aviation market is expected to be driven by a continuing growth among low-cost carriers with focus on point-to-point traffic. Apart from being merely a continuation of the historical trend it is also these airlines which have placed the biggest orders for new aircraft. Furthermore, low-cost carriers are extending their operations into new markets and to an increasing extent operate in the big hub airports.

3.3. Hub concentration

In parallel with the growing market for point-to-point traffic led especially by low-cost carriers, there is increasing concentration and consolidation between existing hub airports in Europe.

At the same time, competition for intercontinental traffic is increasing from hubs and network carriers in the Middle East. This development is challenging the smaller hub airports in Europe, such as Copenhagen Airport, which do not enjoy the same geographical advantages as, for example, Helsinki in

regard to traffic to Asian destinations or Reykjavik in relation to North America.

In spite of increasing competition from the Middle East and Asia, the largest European airports still head the global rankings in terms of hub connectivity. An analysis published by ACI in 2016, for example, shows that in terms of connectivity, six of the world's ten biggest hubs are in Europe, and that the combined connectivity in Frankfurt, Amsterdam Schiphol and Paris Charles de Gaulle is significantly higher than the corresponding connectivity in the three largest hubs in North America, the Middle East and Asia respectively.

Hubs and network carriers are closely related

The dominant position of Europe's biggest hubs is due, among other things, to increasing concentration of transfer traffic into so-called "mega hubs". These hubs have been created from the operational bases of the three largest airline conglomerates in Europe, Lufthansa, Air France-KLM, and IAG, which includes British Airways, and their bases in Frankfurt, Paris Charles de Gaulle, London Heathrow and Amsterdam Schiphol.

These three airline conglomerates are also the dominant partners in the three global network carrier alliances, Star Alliance, SkyTeam and OneWorld.

As far as Denmark is concerned, a concentration of hub traffic in Europe has had two opposing effects on overall international connectivity. On the one hand, this concentration reduces the basis for direct long-distance routes from Copenhagen Airport, which has a negative effect on direct connectivity. One the other hand, this concentration improves indirect connectivity because Denmark will be connected with a greater number of destinations with only one stopover.

Furthermore, the need for high frequency routes to the big European hubs will increase, which means that direct European connectivity will also increase. Overall, the formation of "mega hubs" is considered to improve international connectivity to and from Denmark.

The concentration of hub traffic also affects connectivity through the increased possibility of feeder traffic from regional airports. This has helped to

create the basis of direct connections between Aalborg Airport and Billund Airport and the “mega hubs”, for example, in Amsterdam and London, thus increasing West Denmark’s connectivity to large parts of the world with just one stopover.

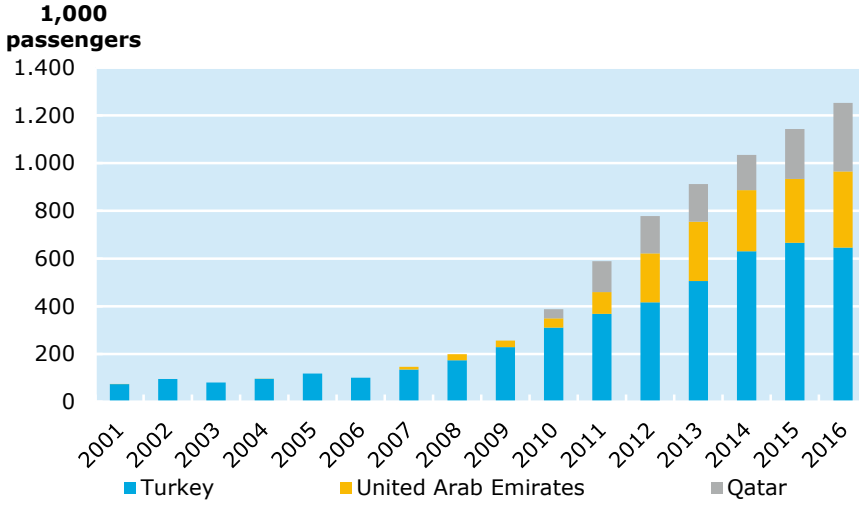
Europe, therefore, continues to be a central hub for air traffic. But in recent years this position has been challenged by hubs in other regions, particularly those in the Middle East which, among other things, are geographically well-placed, since most of the world's population is within 8 hours flying time. These hubs also enjoy advantageous framework conditions which reduce the unit costs for the airlines combined with a focus on the importance of aviation to the economy.

Among the ten international airports with the greatest growth in hub connectivity since 2014, four are situated in Asia, three in the Middle East and one in Europe, North America and Africa, respectively. In just a few years, the airports in Dubai, Doha and Abu Dhabi have established themselves as the 11th, 13th and 24th biggest airports in the world in terms of hub connectivity. Istanbul's Atatürk airport, which is geographically is situated in Europe, has also undergone similar development to the major Middle East airports and in 2016, Istanbul Atatürk Airport ranked 6th highest in the world in terms of hub connectivity.

A significant feature of the development of airports in the Middle East and Istanbul is that, to a large extent, they reflect the development of their national airlines. Turkish Airlines, for example, has grown on the basis of both local and transfer traffic whilst the growth of Qatar Airways, Emirates and Etihad Airways is essentially due to transfer traffic. This means that Qatar and the United Arab Emirates have created levels of international connectivity which far exceed their local populations and the domestic demand.

The importance to Denmark of the development in the Middle East and Turkey can be clearly seen in the increase in numbers of passengers travelling to and from hub airports in Turkey, United Arab Emirates and Qatar.

Figure 3.4 | Scheduled traffic between Denmark and Turkey, United Arab Emirates and Qatar



Source: Data from the Danish Transport, Construction and Housing Authority

This development of the airlines and hub airports in the Middle East and Turkey has been one of the reasons for Denmark's growing international connectivity. QVARTZ and Copenhagen Economics (2016) have shown that, between 2006 and 2016, the Middle East and Turkey contributed with one third of the growth of the indirect connectivity of Copenhagen Airport. This is mainly due to better connections to destinations in South and Southeast Asia, East Africa, Australia and New Zealand. Turkish Airlines' route to and from Billund Airport also contribute to increased international connectivity in West Denmark.

The development of the aviation sector in the Middle East and Turkey is neither entirely positive nor entirely negative as far as Denmark's combined international connectivity is concerned. On the one hand, Denmark is connected with a single stopover to destinations which are unlikely ever to be served by direct connections. On the other hand, tough competition reduces demand on long and short distance routes from Denmark and this can lead to route closures.

Increasing cargo volume to and from the Middle East and Turkey

The growing importance of hub airports in the Middle East and Turkey does not only affect passenger traffic. The same development can also be seen in the amount of air cargo.

Data from the Danish Transport, Construction and Housing Authority shows that, in 2016, more than 32,000 tons of air cargo were transported between Danish airports and the airports in Istanbul, Doha, Dubai and Abu Dhabi. The Middle East and Turkey accounted for more than 12 % of air cargo to and from Denmark in 2016.

3.4. Lower oil prices and improved fuel efficiency in the aviation sector

According to IATA (2016), between 1992 and 2016 the world's airlines produced a positive net return for the first time in 2015 and 2016. To a large extent this has been due to improved fuel efficiency, focus on operational improvements and an increase in market penetration by low-cost carriers which are more profitable than the original network carriers.

Fuel efficiency is vital to all airlines. The cost of fuel can account for as much as 45 % of an airline's total cost per seat kilometre. The positive development in fuel economy in recent years has mainly been due to the drop in oil prices but technological improvements aimed at reducing fuel consumption have also played an important role.

Lower oil prices in recent years have had a positive effect on the airlines' economy. Increased competition between airlines has at the same time meant that the lower costs have resulted in cheaper tickets. This has increased passenger demand and has led to an increase in the number and frequency of routes, both of which have contributed to greater connectivity.

According to QVARTZ and Copenhagen Economics (2016) lower oil prices have meant that older and less fuel-efficient aircraft are still in operation rather than being retired from service. This has meant that capacity in the aviation market has increased significantly in recent years since new aircraft are being ordered and delivered as a result of economic improvements among the airlines.

In the coming years airlines are expected to maintain and utilise the extra capacity from new investments. From a connectivity point of view, the relatively low oil prices have resulted in a long term positive effect, regardless of any future increase in the price of oil. Higher oil prices would nevertheless be expected to increase ticket prices for passengers although the airlines will continue to be able to utilise existing capacity to provide the greatest number of routes and the highest frequencies.

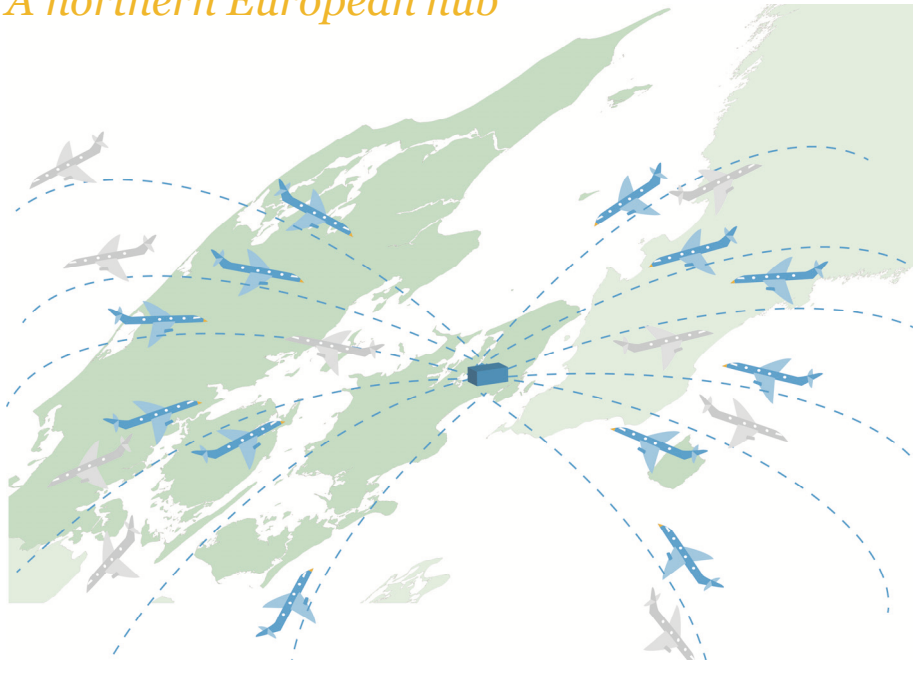
In the same way that the cost of fuel is vital for the aviation market, so too is the technological development of aircraft types. Currently, aircraft manufacturers are working to produce faster and more environmentally-friendly aircraft. Of particular interest, from a connectivity point of view, are developments concerned with aircraft size, range and fuel economy.

Deployment of the Airbus 380, the world's biggest passenger aircraft, on the route between Copenhagen and Dubai is a major step in the direction of using larger aircraft. The use of very large aircraft is linked to the formation of "mega hubs" and supports towards fewer but bigger hub airports and where hub airports connect each continent and providing passengers with transfer possibilities at both ends of intercontinental routes.

In addition to the development of larger aircraft, "narrow body" aircraft now have greater range so that, at relatively lower cost and with lower passenger demand, they can be operated on intercontinental routes. It is expected that this will result in more point-to-point intercontinental traffic.

Copenhagen Airport

A northern European hub



4. Copenhagen Airport – a good starting point

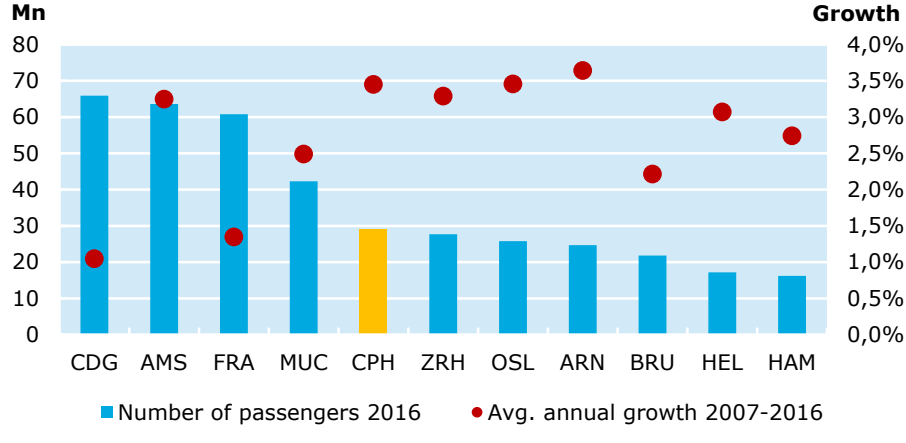
Copenhagen Airport is crucially important to Denmark's national and international connectivity by air transport. Hence, the largest airport in the Nordic countries accounts for about 74 % of Denmark's total connectivity. Copenhagen Airport is therefore of great importance in determining the socio-economic gains that Denmark accrues from the aviation sector. And since the majority of Denmark's domestic flights depart from or arrive at Copenhagen Airport, the airport also plays an essential role as far as national cohesion is concerned.

It is vital, therefore, that Copenhagen Airport is strengthened and is competitive and attractive in relation to attract new routes to Denmark and to support a coherent domestic air traffic.

4.1. High growth in passenger numbers

In 2016 the total number of incoming and outgoing passengers at Copenhagen Airport reached 29 million, accounting for 84 % of the total number of airline passengers in Denmark. As Figure 4.1 shows, compared with ten other European airports, Copenhagen Airport's passenger numbers are about in the middle of the range.

Figure 4.1 | Passenger numbers and growth



Source: Anna Aero European traffic data and Eurostat

This diagram also shows that Copenhagen Airport's passenger numbers have grown by 3.4 % annually between 2007 and 2016, meaning that Copenhagen Airport has experienced the third highest growth in passenger numbers, exceeded only by Stockholm Arlanda and Oslo Gardermoen. This is largely due to the fact that passenger numbers in Copenhagen Airport increased by 9.1% between 2015 and 2016.

Benchmark for Copenhagen's Airport

In order to benchmark Copenhagen Airport, ten out of a group of sixteen European airports in which Copenhagen Airport considers itself to be most comparable with, have been selected.

Based on criteria such as geographical location, passenger numbers, type of airport i.e. regional airport or hub, the following ten airports were selected.

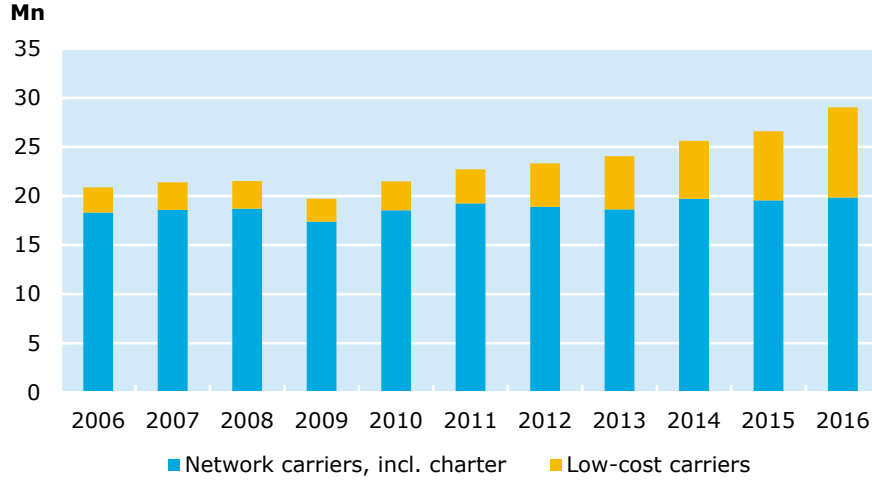
Hamborg (HAM)	Amsterdam Schiphol (AMS)
Stockholm Arlanda (ARN)	München Franz Josef Strauß (MUC)
Oslo Gardemoen (OSL)	Zürich (ZHR)
Frankfurt am Main (FRA)	Bruxelles Zaventem (BRU)
Paris Charles De Gaulle (CDG)	Helsinki (HEL)

As shown in figure 4.2, passenger growth at Copenhagen Airport during the past ten years has, to a large extent, been driven by low-cost carriers. Thus the share of passengers carried by low-cost carriers grew from 12 % in 2006 to 32 % in 2016. This corresponds to a 3.3 million increase in the number of outbound passengers. By comparison, the number of outbound passengers travelling with network carriers, including charter traffic, grew by 0.7 million in the same period.

The structural change in Copenhagen Airport toward a greater proportion of low-cost airlines reflects a similar development throughout Europe, see also chapter 3. Compared with the ten selected European airports, the low-cost carriers' market share in Copenhagen Airport has experienced the third highest growth since 2005.

The growth of low-cost carriers' market share is mainly due to Norwegian, EasyJet and Ryanair which, together, accounted for more than 90 % of all low-cost carrier passenger traffic in 2016. In the past two years, Ryanair in particular has grown significantly in Copenhagen Airport and, in 2016, Ryanair accounted for about 50 % of all new outbound passengers. The corresponding figure for 2015 was even higher as almost three out of every four new outbound passengers flew with Ryanair. Ryanair's growth from 2015 to 2016 can be attributed to an almost fivefold increase in the airline's weekly seating capacity.

Figure 4.2 | Passenger distribution in Copenhagen Airport



Note: In this diagram, Norwegian is classified as a low-cost carrier
Source: Data from the Danish Transport-, Construction and Housing Authority

Copenhagen Airport is one of the ten European airports showing the greatest growth in the market share of low-cost carrier and is surpassed only by Oslo Gardermoen and Hamburg airport. Here, the growth in passenger numbers is, to a large extent, driven by Norwegian and GermanWings respectively. These two airlines differ from, for example, Ryanair and EasyJet in that they both offer transfer products, and GermanWings has also code sharing agreements with a number of network carriers such as Lufthansa and United Airlines, meaning that new routes and higher route frequencies contribute towards a greater amount of connectivity. As described in Chapter 3, the aviation sector is evolving and the difference between network carriers and low-cost carriers is not as distinct as it once used to be.

Code sharing agreements increase connectivity

In practice, code sharing agreements mean that a route operated by one airline can be marketed as a route for one or several other airlines. This is a key feature of the larger airline alliances such as Star Alliance which SAS is a member of. This makes it possible for SAS, for example, to sell tickets for Singapore Airlines' flights from Copenhagen Airport in its own name and with its own flight numbers.

The strong growth in low-cost carrier traffic in Copenhagen Airport in recent years is due, among other things, to the fact that the airport has a separate low-cost carrier passenger terminal. This, and the fact that the airport is only 10 kilometres away from the centre of Copenhagen, has helped create an attractive low price product. Typically, similar conditions for low-cost carriers are reserved for secondary airports such as Frankfurt Hahn, Paris Beauvais and Brussels Charleroi.

Low-cost carrier terminal at Copenhagen Airport

The GO Terminal at Copenhagen Airport is a separate terminal targeted directly at low-cost carriers and was opened in 2010. The low-cost carriers that use the GO Terminal pay about 25 % less per local outbound passenger compared with airlines using the airport's other terminal. One of the conditions imposed on low-cost carriers using the GO Terminal is that the maximum turn-around time does not exceed 30 minutes.

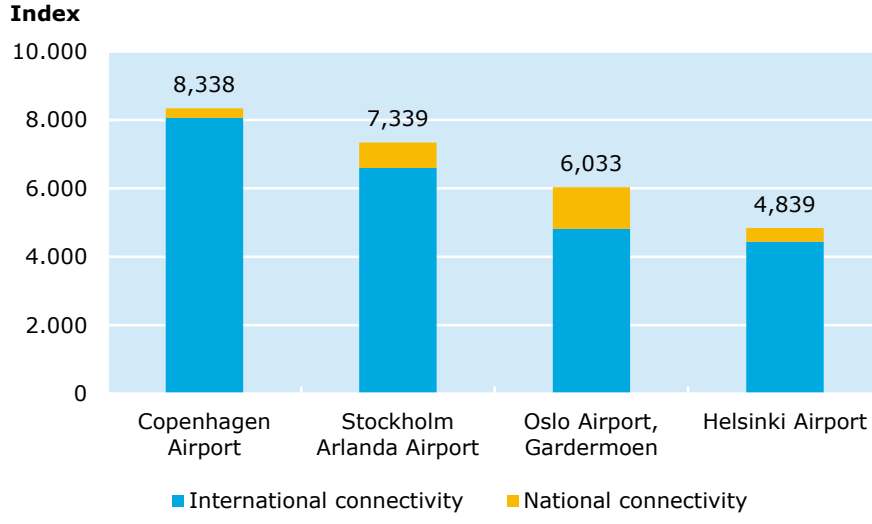
Increasing competition from low-cost carriers has helped expand the aviation market through their lower ticket prices and a collectively greater supply of routes and daily departures. This benefits both Danish and foreign passengers travelling to and from Copenhagen Airport. The transition to more low-cost carrier traffic also marks a structural change in Denmark's connectivity because low-cost carriers and network carriers operate according to different business models.

4.2. Highest level of connectivity in the Nordic countries

In terms of overall connectivity, i.e. both domestic and international, Copenhagen Airport is the biggest airport in the Nordic countries. This is in spite of the fact that the market for domestic air traffic in Denmark is considerably

less than it is in, especially, Sweden and Norway. Hence, Denmark's greater overall connectivity is due to even greater international connectivity.

Figure 4.3 | Connectivity in selected Nordic airports in 2016



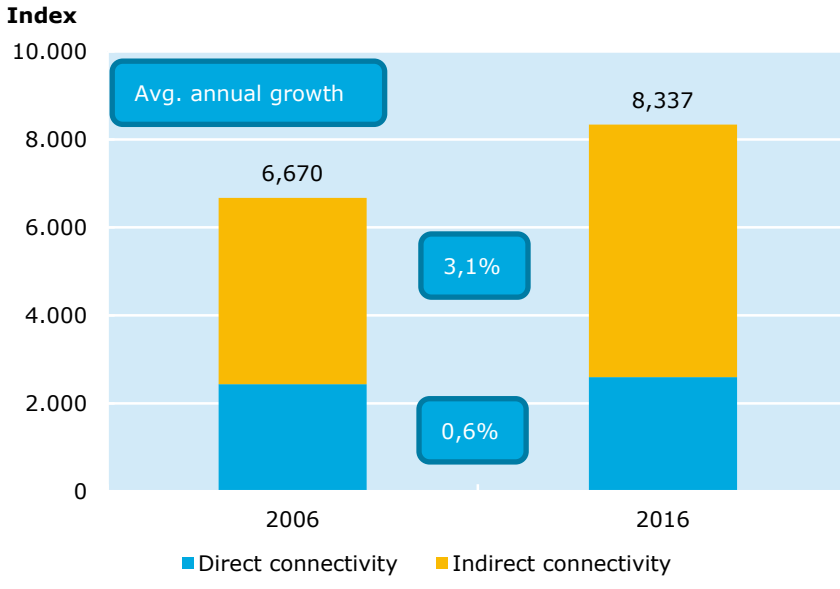
Note: The connectivity index counts the number of direct and indirect connections with one stopover, such flights being quality-weighted relative to the travel time with a direct connection
Source: QVARTZ and Copenhagen Economics (2016)

The high overall connectivity in Copenhagen Airport is especially due to the fact that SAS, as Scandinavian network carrier, has historically chosen Copenhagen Airport as its primary hub in Scandinavia. In 2016, SAS accounted for 36 % of passengers and 41 % of departures from Copenhagen Airport.

Looking at the development and distribution of the overall connectivity in Copenhagen Airport, there were an average of 2,596 weekly arrivals and departures in 2016. This compares with 2,435 in 2006, which shows that the frequency of flights increased relatively little between 2006 and 2016. This takes in account an increase of 380 in the number of weekly flights from low-cost carriers and 219 fewer weekly flights from network carriers. Thus, direct connectivity alone has grown by 0.6 % per year since 2006.

The modest growth in direct connectivity relative to the higher passenger growth is due, among other things, to the emergence of low-cost carrier traffic.

Figure 4.4 | Composition of connectivity in Copenhagen Airport



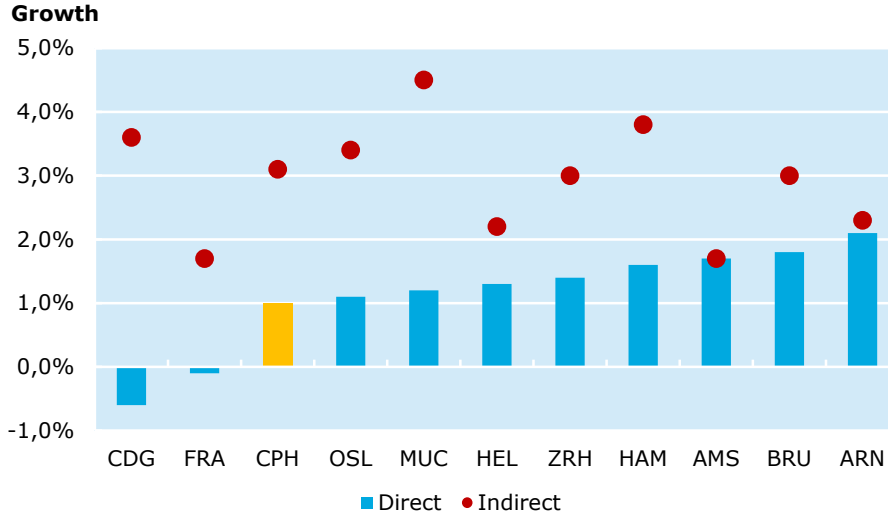
Note: The connectivity index counts the number of direct and indirect connections with one stopover, such flights being quality-weighted relative to the travel time with a direct connection
Source: QVARTZ and Copenhagen Economics (2016)

Since 2006, overall indirect connectivity, measured as connectivity via one stopover, has grown by 3.1 % per year. Figure 4.5 shows that this can be attributed primarily to a positive development in indirect international connectivity which has had a corresponding growth in Copenhagen Airport. This puts the airport midfield amongst the ten other European airports and, from a Nordic perspective, ahead of Stockholm Arlanda and Helsinki.

Copenhagen Airport's growth in overall international connectivity is thus driven by the growth in indirect connectivity whilst the growth in direct connectivity has stayed relatively low compared with the other European airports. Additionally, Frankfurt and Paris Charles De Gaulle are both subject to capacity constraints.

The positive development in overall international connectivity can be explained by the combined effect of Copenhagen Airport's good direct connections to big hubs in Europe, the Middle East and North America, and the fact that a number of these hubs have expanded their route networks considerably between 2006 and 2016.

Figure 4.5 | Development of international connectivity between 2006 and 2016



Note: The connectivity index counts the number of direct and indirect connections with one stopover, such flights being quality-weighted relative to the travel time with a direct connection.
Source: QVARTZ and Copenhagen Economics (2016)

From the point of view of connectivity and thus, the socioeconomic perspective, it is essential for Denmark that Copenhagen Airport provides direct flights to hubs around the world, making it possible for passengers to travel onward to destinations not served directly from Copenhagen Airport.

New potential intercontinental destinations

Copenhagen Economics (2016a) has identified the largest unserved intercontinental destinations with commercial potential based on an evaluation of passenger demand and willingness to pay. This evaluation has been based on the 13 destinations with the greatest number of indirect passengers between Copenhagen Airport and the airports concerned in 2015.

The list of the largest unserved intercontinental airports includes Hong Kong, Seoul, Manila, Johannesburg, Delhi (starting in September 2017), Colombo, Ho Chi Minh City, Amman, Mumbai and Seattle. A direct connection with any of these intercontinental destinations together with the

local network carrier or with a company in its alliance would increase Denmark's connectivity.

Copenhagen Economics (2016a) has estimated that Denmark's connectivity would increase between 0.5 % and 0.7 % by opening one of the five intercontinental routes with the greatest commercial potential. Based on InterVistas (2016) by presuming that a 1 % increase in connectivity results in a 0.025 % increase in per capita GDP, the increase in connectivity from one of the five destinations would form the basis for a potential increase in GDP of DKK 250-375 million. The size of the GDP increase is subject to considerable uncertainty and, at the end of the day, the realisation of this potential would depend upon, among other things, the building-up of new trade relations and knowledge-exchange compared with the situation without one of these direct connections.

Serving the same destinations by other airlines would also contribute to increased connectivity to Denmark, albeit at a lower level. At the same time, this effect on connectivity will be reduced the better Copenhagen Airport is already connected to the same destination with one stopover at another airport.

Recently, Air India has announced the opening of a route from Delhi to Stockholm Arlanda and Copenhagen Airport with Air India alternating the route between the two Scandinavian destinations during the week.

The aviation market is moving increasingly in the direction of point-to-point traffic. At the same time, airlines such as Norwegian are offering intercontinental connections using smaller bases in regions like the United States and most recently in Argentina, with weekly flights to different European airports.

The new pattern of air transport means that where once, establishing and maintaining intercontinental routes depended on passenger demand being big enough to support several weekly connections, international routes can now be served with fewer weekly departures. This development in the aviation market has provided Copenhagen Airport with the possibilities of intercontinental routes which formerly would not have been commercially viable.

4.3. A challenged hub

As a hub, Copenhagen Airport offers a greater number of routes, especially intercontinental routes, because SAS and its partners in the Star Alliance

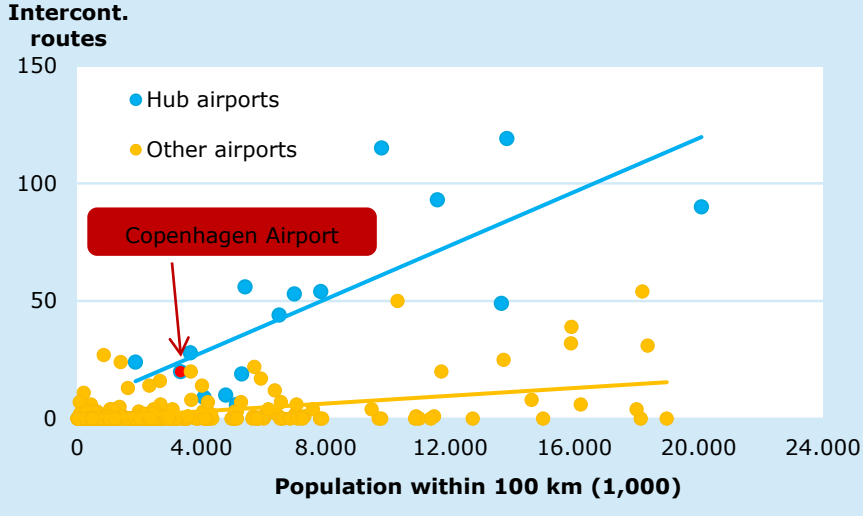
bring passengers to the airport for onward flight connections to destinations within SAS's or Star Alliance's network. This generates a commercial basis for more routes and higher frequencies and hence greater connectivity to Denmark.

A hub means greater connectivity

Compared with airports that do not act as hubs, hub airports are characterised by high levels of transfer traffic which create a basis for a high number of routes and higher frequencies together with a larger supply of intercontinental routes.

The diagram below shows that a number of airports have a significantly higher number of intercontinental routes compared with other airports with similar passenger catchment areas. This is due to the fact that these airports act as hubs for one or more airlines with transfer traffic, thereby creating a better basis for establishing even more routes.

Amsterdam and Birmingham for example have about the same number of people living within 100 km but because Amsterdam is a hub for KLM-Air France, this airport has considerably more intercontinental routes.



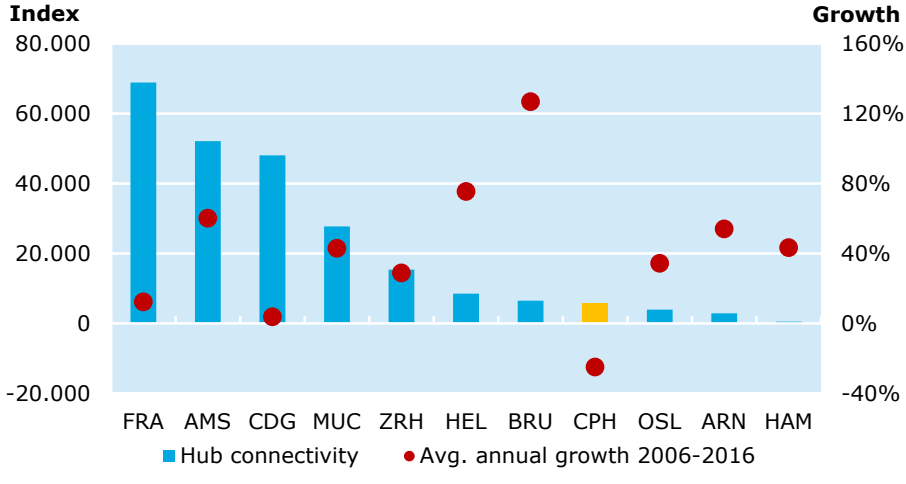
Source: Economic importance of the hub function in Schiphol (2015)

Copenhagen Airport is in 8th position among the other ten European benchmark airports as regards the quality of transfer possibilities. This means that connectivity from the hub is still greater than that in Oslo

Gardermoen and Stockholm Arlanda, and Hamburg, although Hamburg airport does not operate as a hub.

Figure 4.6 shows that Copenhagen Airport is the only one of the benchmark airports to have experienced an actual reduction in the quality of transfer possibilities since 2006. In the same period, the other airports in the benchmark group have all experienced either an increase or a consolidation in their role as hubs and the hub connectivity of the other Nordic airports has increased by 35-75 %.

Figure 4.6 | Quality of the hub (connectivity via the hub)



Note: The index is a measure of the extent to which the airports connects other airports based on actual connection possibilities within the three largest alliances.
Source: QVARTZ and Copenhagen Economics (2016)

The negative growth in the quality of the hub in Copenhagen Airport can partly be explained by the developments which have taken place in SAS. In addition, other network carriers operating at the airport have cut back on their weekly frequencies by about 10 % since 2006.

The size and quality development of the hub are closely connected between the individual airport and the local network carrier. For example, the development of the hubs in Frankfurt, Amsterdam, Paris and Munich depends on developments in Lufthansa and Air France-KLM. Similarly, Finnair is essential to the hub in Helsinki. Growth in the quality of the hubs in Stockholm Arlanda and Oslo Gardermoen is mainly due to SAS's increased interconti-

nental traffic to and from these airports, as well as the fact that Norwegian has established a number of long distance routes.

Benefits from the hub in Copenhagen Airport

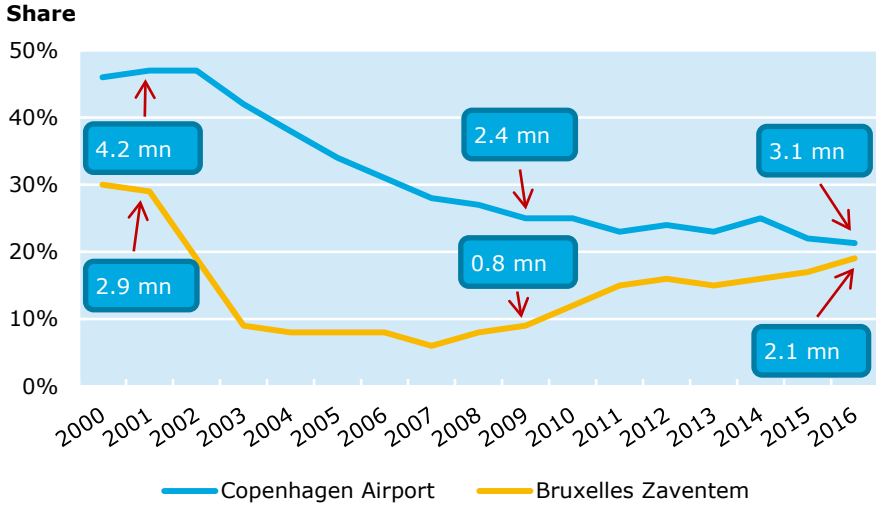
Copenhagen Economics (2016) has calculated the marginal increase in connectivity generated today as a result of SAS having created a hub in Copenhagen Airport. This marginal connectivity is calculated as the connectivity Denmark would lose in the event that SAS closed four intercontinental and eight European routes. On this basis the marginal loss of connectivity amounts to about 5 % of Denmark's overall connectivity.

Based on InterVistas (2016) by presuming that a 1 % drop in connectivity corresponds to a 0.025 % reduction of per capita GDP, the reduction in the benefit generated by the hub would correspond to a potential reduction in GDP of DKK three billion. This calculation assumes that other airlines do not replace these routes. Neither does it take into account any possible negative effects on SAS's alliance partners which might depend on the passengers from SAS.

A rationalisation of the network might also result in a reduction in the number of workplaces in the aviation sector because SAS's activities account for that part of the traffic which generates relatively more jobs per passenger than other airlines with or without a base in Copenhagen. It has been estimated that the number of people employed in the aviation sector would fall by about 600 although this might, to some extent, be offset by increased employment in other parts of the aviation sector or in other sectors.

Figure 4.7 shows how transfer traffic in Copenhagen Airport has decreased between 2000 and 2016. This development shows a drop in transfer traffic up to and including 2009. Following this, the actual number of transfer passengers has increased from 2.4 million in 2009 to 3.1 million in 2016. During the same period the total number of passengers has increased at a greater rate, so that the proportion of transfer passengers relative to the total number of passengers has declined.

Figure 4.7 | Development of transfer traffic between 2000 and 2016



Source: Copenhagen Economics (2016a), transfer passenger statistics from Copenhagen Airport and Brussels Airport (internet home page information), Eurostat and the Danish Transport, Construction and Housing Authority

Norwegian's importance to Copenhagen Airport

The development of Norwegian from a low-cost carrier focusing on point-to-point connections to a hybrid airline also providing network traffic has benefitted Copenhagen Airport. From providing no transfer passengers prior to 2010, Norwegian's activities in Copenhagen Airport now generate a significant number of transfer passengers. This creates more routes and thereby benefitting Denmark more than might otherwise have been expected from the size of the population within the airport's catchment area.

Figure 4.7 also shows the development in the proportion of transfer passengers in Brussels Zaventem airport. This shows that in 2016, the proportion of transfer passengers in Copenhagen Airport and Brussels Zaventem were at about the same level. However from 2000 onwards, the development of transfer traffic in the two airports differs considerably.

In 2001, Belgium's national airline Sabena went into bankruptcy. This had a profound effect on transfer traffic at Brussels Zaventem and the number of

transfer passengers fell dramatically in just two years, from a proportion of 29 % to just 9 %. At the same time direct connectivity remained 31 % lower five years after Sabena's bankruptcy.

Compared to Brussels Zaventem's having to deal with the sudden de-hubbing effect of Sabena's bankruptcy, Copenhagen Airport has adjusted more gradually and the negative effects have been smoothed out. This is not only due to the fact that Copenhagen Airport is less dependent on SAS but also, and to the same extent, the fact that the value of the hub has been in a more steady decline, see Figure 4.6.

”De-hubbing” in Zürich Airport

Like Brussels Zaventem airport, Zürich Airport also lived through the bankruptcy of the country's national airline which occurred in 2001. Even though Swissair was taken over by Crossair, later renamed SWISS, the number of weekly flights in Zürich Airport was still 25 % lower five years after Swissair's bankruptcy.

In 2007 Lufthansa took over the ownership of SWISS and SWISS's route network was subsequently rationalised and incorporated into Lufthansa's hub strategy.

The weakening of the hub in Copenhagen Airport must also be considered in relation to the way in which the European aviation market is trending towards more point-to-point traffic. It can also be partly explained by the fact that Copenhagen Airport has lost transfer shares to other European hubs, which is, in part, due to an increase in the number of direct departures from Billund Airport and Aalborg Airport to other European hubs.

4.4. Development in Copenhagen Airports A/S

Parallel to the increased number of passengers passing through Copenhagen Airport, the turnover of Copenhagen Airports A/S (Københavns Lufthavne A/S) has increased from DKK 2.7 billion in 2005 to DKK 4.4 billion in 2016.

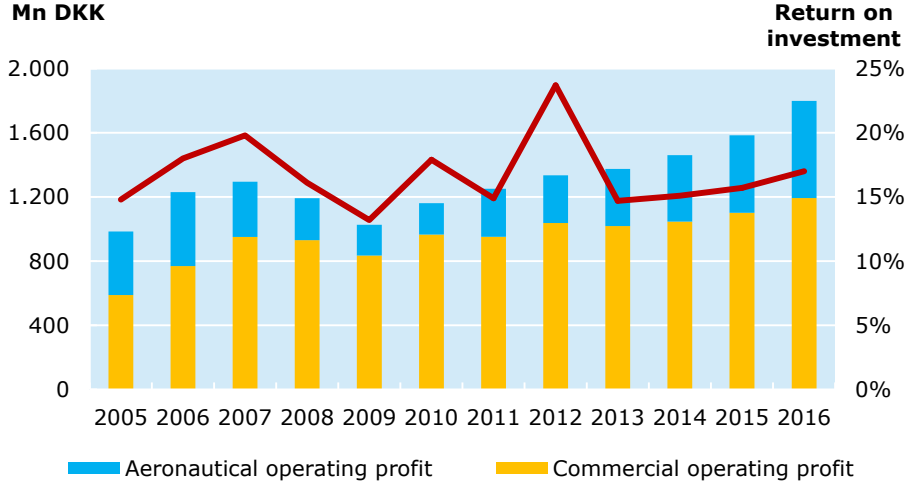
Copenhagen Airports A/S

Copenhagen Airports A/S owns Copenhagen Airport and Roskilde Airport. The company consists of two business areas one of which is the aer-

onautical section, which deals with aviation traffic, and a non-aeronautical section which is concerned with commercial activities such as shopping, parking, catering etc. Roskilde Airport is used primarily as a training site, business aviation airport and as a locality for aviation-related events.

In 2016 the aeronautical business contributed DKK 2.6 billion to the total turnover of Copenhagen Airports A/S and the commercial side of the business contributed DKK 1.8 billion. This corresponds to a turnover of DKK 90 per passenger which is paid by the airlines and DKK 63 per passenger from the turnover in shops, parking etc. This includes the turnover from air cargo operations. Although most of the company's turnover comes from the airlines it is ultimately the passengers and cargo customers who bear the costs through ticket and cargo prices.

Figure 4.8 | Operating profit and return on investment in Copenhagen Airports A/S



Note: Fluctuations in return on investment in 2007, 2010 and 2012 are due to revenue from international and extraordinary activities which are not included in either the aeronautical or commercial businesses.
Source: Stated in current prices based on Annual Reports from Copenhagen Airports A/S

Figure 4.8 shows that the combined operating profit from the aeronautical and commercial businesses has grown from just under DKK 1.0 billion in 2005 to about DKK 1.8 billion in 2016. This represents an annual growth

rate of almost 6 % with an increase in return on investment from 15 % in 2005 to 17 % in 2016.

Most of Copenhagen Airports' operating profit derives from the company's commercial business, particularly from the revenue from the shopping mall and from parking. However, since 2010, the operating profit from the aeronautical business has grown significantly with an average annual growth rate of 21 % between 2010 and 2016. In 2016, the aeronautical business returned a profit of about DKK 600 million.

The ownership of Copenhagen Airports A/S

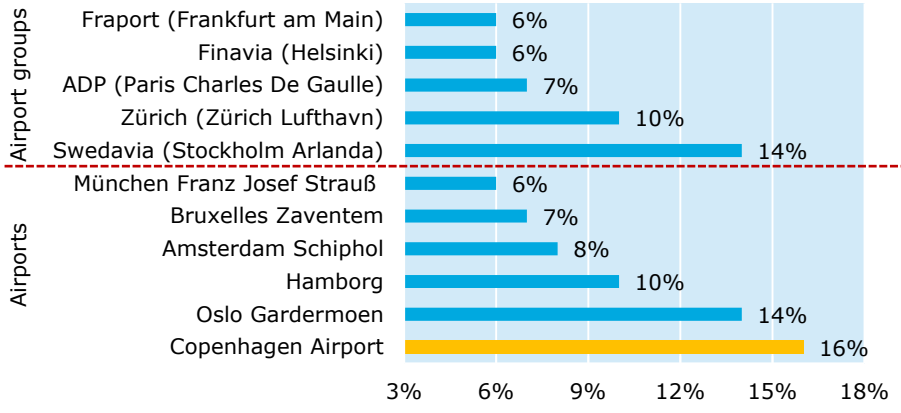
The principal shareholder in Copenhagen Airports A/S is Copenhagen Airports Denmark (CAD) which owns 57.7% of the company. CAD consists of Ontario Teachers' Pension Plan and Macquarie European Infrastructure Fund III.

In 2000 the Danish State sold 17 % of its shares, which made the State a minority shareholder in Copenhagen Airports A/S. As of December 31, 2016 the Danish State owned 39.2% of the company's shares. The remaining 3.1% are owned by Danish and foreign private and institutional investors.

Compared with the other ten benchmark European airports and their airport groups, Copenhagen Airport has a relatively high return on investment as illustrated in Figure 4.9.

Further economic analysis of the benchmark airports shows that Copenhagen Airport provides a moderate turnover per passenger combined with the lowest operating costs per passenger. The latter is due, among other things, to ongoing efficiency improvements which have resulted in the aeronautical operating costs per passenger staying at about same level in 2016 as they were in 2005.

Figure 4.9 | Return on investment between airports and airport groups



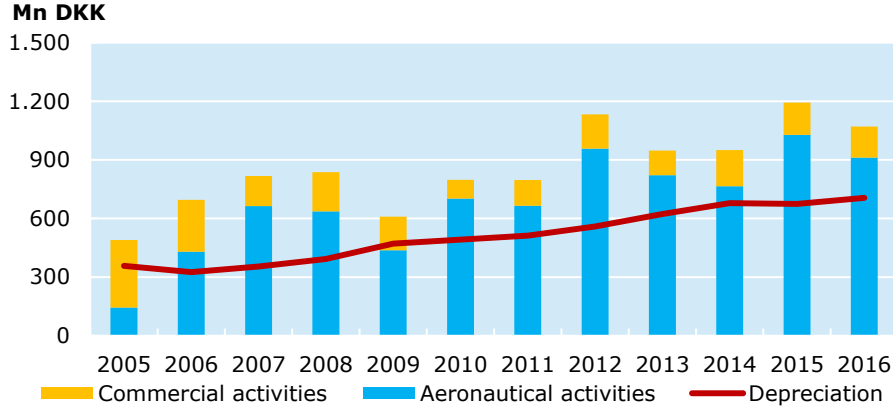
Note: The data for Oslo, Munich and Hamburg is for 2014. The rate of return for airport groups represents the airport groups as a whole and not the individual airports within each group. In Copenhagen Airport, Roskilde Airport is also included but the activities are considered to be relatively low compared with the activities in Copenhagen Airport. Also note that there may be differences in the calculation of the asset base between airports which might affect comparability.
Source: QVARTZ and Copenhagen Economics (2016)

The increasing number of passengers in Copenhagen Airport has resulted in a relatively high level of investment, mostly in the aeronautical area, i.e. in expanding of aviation-related activities. Among other things, this includes an expansion of the security check area and increasing number of aircraft stands.

Figure 4.10 shows the airport's capital expenditure in the company's aeronautical and commercial businesses between 2005 and 2016. During this period, approximately four out of every five Danish Kroner were invested in the aeronautical business. The increasing asset base has been accompanied by a corresponding increase in annual depreciation growing from approximately DKK 360 million in 2005 to about DKK 700 million in 2016.

With Copenhagen Airport's launch of an expansion plan to enable the airport to handle a minimum of 40 million passengers a year, the airport is expected to continue to invest at a similar level for number of years.

Figure 4.10 | Investments and depreciation in Copenhagen Airports A/S



Note: Capital expenditures include activated interests.
Source: Stated in current prices based the Annual Reports from Copenhagen Airports A/S

Investment package for Copenhagen Airport

Copenhagen Airport has launched an investment package which, among other things, includes an acceleration of the overall investment plan. Thus, the airport expects to increase the annual investment level from DKK 1.1 billion in 2016 to DKK 1.3 billion annually. The additional of DKK 200 million will be used to accelerate the construction of new capacity aimed at both aircraft and passengers.

5. The road to more passengers in Copenhagen Airport

Air traffic to and from Copenhagen Airport has grown over the years. Similarly, the market for aviation in Europe as a whole is expected to continue to grow as new types of aircraft and new markets present opportunities for more intercontinental routes and, therefore, more passengers.

About a fifth of the passengers using Copenhagen Airport are transfer passengers, which only use the airport as a place to wait in between flight connections. The remaining four fifths use not only the airports own infrastructure, such as the arrival area and the terminals but also the infrastructure between the airport and their homes, their workplace and so on. An increasing number of passengers, therefore, mean that there is a need to expand the surrounding infrastructure so that passengers can travel efficiently to and from the airport.

Today, it is crucial for both the competitiveness of Copenhagen Airport and the attractiveness of Denmark that the infrastructure around the airport has the necessary level of quality and capacity. Of equal importance is that the infrastructure creates a basis for a continued increase in Denmark's national and international connectivity. This supports the Danish business sector, provides the opportunity to bring more tourists to Denmark and ensures Danes easy access to the rest of the world.

5.1. Passenger catchment area and adjacent infrastructure

The first or last part of a passenger's journey involves transport to or from Copenhagen Airport. In this respect, predictability and short travel times are vital if the passenger is to experience this part of the journey as easily accessible and not as an obstacle for using the airport.

Copenhagen Airport's present catchment area comprises about 4.3 million people, most of whom live in Zeeland, Southern Sweden, Funen and parts of Jutland. Within this area, travel time to the airport is about 2 hours or less. The large catchment area and unique geographic position only 8 kilometres from the center of Copenhagen, provide a basis for the airport to attract

high-frequency and attractive flight connections to all of Europe and to central destinations on other continents.

Figure 5.1 | Passenger catchment area with rail or road connection to Copenhagen Airport

Note: Travel times are based on the shortest travel time by either train or car from the primary city in each municipality to Copenhagen Airport.
Source: Illustration from the Danish Transport, Construction and Housing Authority

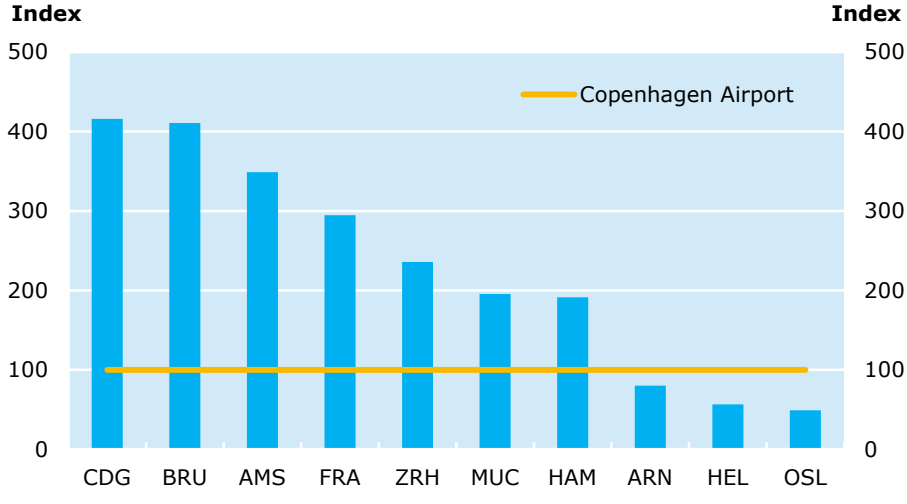
Copenhagen Airport's good geographic location is supported by motorways, national and metropolitan rail connections, and the Oresund Bridge to Sweden. This means that the airport is only about 12 minutes from the center of Copenhagen and about 20 minutes from Malmo in Sweden.

QVARTZ and Copenhagen Economics (2016) show that the passenger catchment area, independent of airline business model, is a deciding factor for airlines when placing new flight connections. This is because the airlines'

decision-making process, first and foremost, is based on an analysis of the market at a new destination. The passenger catchment area, demand and existing competition are all included in such analyses and are key factors in assessing the feasibility of a new route.

Figure 5.2 shows that Copenhagen Airport's passenger catchment area is the largest of any in the Nordic region, albeit considerably smaller than that of the other seven European airports included in the comparison. The survey is based on the size of the population within 100 kilometres of the airport so the comparison does not take into account the quality of the infrastructure to and from the airports.

Table 5.2 | Population within 100 kilometers



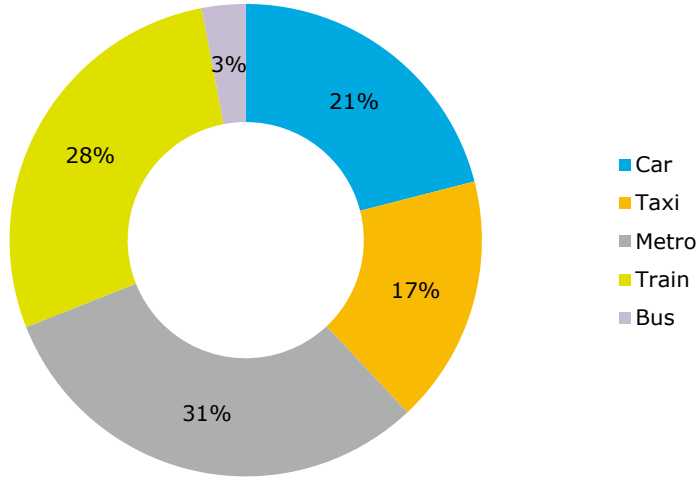
Source: SEO Economic Research (2015) based on data for 2011

An efficient and expanded infrastructure means that Copenhagen Airport is able to realise the potential of the airport's passenger catchment area in both Denmark and Sweden to maximise both the number of passengers and the number of flight connections. This particularly applies to the public transport infrastructure which transported 62 % of passengers arriving in Copenhagen Airport in 2016.

Figure 5.3 shows that most passengers arriving at Copenhagen Airport travelled by metro or train, while 3 % arrived by bus. This distribution of airport feeder traffic is a clear benefit to society because unlike road infrastructure,

public transport can handle a larger number of passengers in the same length of time. This eases pressure on the required capacity of road infrastructure compared to if most passengers arrived by car or taxi.

Figure 5.3 | Distribution of feeder traffic to Copenhagen Airport in 2016



Source: Annual Report from Copenhagen Airports A/S (2016)

The metro station in Copenhagen Airport was opened in 2007 and, since 2010, the ratio of airport feeder traffic by car and that by public transport has been relatively constant. It is considered likely, therefore, that a significant part of the future increase in the number of passengers in Copenhagen Airport will also travel by rail or metro. It is therefore vital that this part of the infrastructure does not become a barrier to the airport realising its potential in terms of passenger growth.

Based on the distribution in 2016, and an increase in the number of air passengers in Copenhagen Airport to 40 million per year within 10 years, the number of train and metro passengers will grow from about 13.5 million to 18.6 million per year. Even if most of the passengers travel by public transport, there will also be a corresponding rise in the number of vehicles on the roads to and from the airport. Using the same distribution as in 2016, the number of passengers travelling by car or taxi will grow from 8.7 million to 12.0 million.

Identity checks and border control of travellers to Sweden

Between 4 January 2016 and 4 May 2017, identity checks were introduced for all train passengers travelling to Sweden from the platform in Copenhagen Airport. This meant that one of the measures DSB had to implement was to halve the number of train departures to the airport, leading to a change in the distribution of feeder traffic to the airport in 2016 and thus a deviation from the normal situation.

For passengers to Sweden, the ID checks and change of train in Copenhagen Airport meant fewer departures, a considerably longer journey-time, more delays and cancellations and, as a result, a noticeable drop in the number of passengers using the train to Sweden. Today, the border checks are carried out in the train at Hyllie Station in Sweden.

The surrounding infrastructure is important to Copenhagen Airport if it is to continue to grow to the benefit of passengers and of Denmark as a whole. The present infrastructure is assessed to place a number of restrictions on continued passenger growth in the airport. There is a particular need to expand Copenhagen Airport Station. If this is decided, building passenger platforms along the existing freight train tracks will increase the capacity.

As far as the remaining infrastructure surrounding Copenhagen Airport, both the Oresund Motorway and its interchanges and the railway line can impose capacity limits on arriving and departing feeder traffic in the long term.

During the coming years, a number of investments have been planned to meet passenger needs and increase the catchment area of Copenhagen Airport. As soon as this planned infrastructure has been established, it will have a significant effect on Copenhagen Airport's catchment area and the international connectivity of Denmark and the Oresund Region. This applies particularly to the expansion of public transport system as follows:

- The current extension of Copenhagen's metro. Together with the existing metro, this will make it even more attractive to use the metro or another means of public transport when travelling to and from the airport. The Cityring metro line is scheduled to open in 2019, the Nordhavn metro line will open in 2020 and the Sydhavn metro line in 2023.

- A new high-speed railway link between Copenhagen and Ringsted via Køge, opening in 2018.
- Investments in the railwaycorridor from Copenhagen to the Femern Belt connection. Following the opening of the Femern Belt tunnel and completion of the Danish and German hinterlands and railway upgrades, the journey time from Hamburg to Copenhagen will be about 2 ½ hours. The Femern Belt tunnel is expected to open in 2028, by which time, at the latest, upgrading of the Danish and German railways will also have been completed.

These investments, together with the planned development of Ny Ellebjerg Station as a new hub in the metropolitan area, will mean that service can be improved with more direct trains to the airport. This will ensure that 1 million more passengers can have a travel time to Copenhagen Airport of only two hours or less.

The need for an expansion of Copenhagen Airport Station

The Oresund line, the railway link which connects Copenhagen Airport and Sweden with southbound and westbound tracks, is classified as overburdened infrastructure by Rail Net Denmark. The Oresund line thus has insufficient capacity to handle the passenger and freight trains which normally use the track. This has resulted in poor regularity and means that the Oresund line can be a bottleneck as regards Copenhagen Airport's goal of achieving minimum 40 million passengers per year.

Apart from the needs of Copenhagen Airport itself, forecasts indicate that, in future, the number of freight trains using the Oresund line will increase. This could mean that the number of passenger trains using the same track might have to be reduced, so rail capacity, especially the capacity of Copenhagen Airport Station, will have to be increased to meet this challenge.

It is expected that expanding Copenhagen Airport Station along the present freight track and the establishment of so-called directional operations should solve this capacity challenge. At the same time, the expansion should make rail traffic more robust in the event of a reintroduction of identity checks and will allow for more direct trains to Copenhagen Airport from the rest of Denmark. It is estimated that this investment will cost about DKK 1.6 billion.

The railway network in southern Sweden will also be expanded, including an upgrade of the West Coast line between Malmo and Gothenborg. This will further increase Copenhagen Airport's passenger catchment area.

Figure 5.4 | Copenhagen Airport's potential passenger catchment area in 2035

Note: Travel times are based on the shortest travel time with either rail or road transport from the primary city in each municipality to and from Copenhagen Airport
Source: Illustration from the Danish Transport, Construction and Housing Authority

INITIATIVE (1) Together with Copenhagen Airport, the Government will investigate the possibility of expanding Copenhagen Airport Station with a view to having more direct trains to the airport and achieving more robust train traffic to Sweden in the event of a reintroduction of Swedish ID control.

5.2. Expansion plan to 40 million passengers

In 2016, after several years work, Copenhagen Airport published its plan for an expansion of the airport to enable it to handle a minimum of 40 million passengers per year. This plan includes considerable investment in infrastructure, including investments in terminals and aircraft stands. The airport estimates that the investment could be as much as DKK 20 billion. The expansion of Copenhagen Airport can create the basis for greater passenger and socioeconomic benefits for Denmark.

As shown in figure 5.5, the plan submitted by Copenhagen Airport includes an expansion of the area with aircraft stands, which will require the closure of the cross-wind runway.

Figure 5.5 | Illustration of the expansion plan

Source: Illustration from Copenhagen Airport - Initial Report (2016).

Some parts of Copenhagen Airport's expansion plan, including the building of a number of extensions, are already underway. This includes a new 'Finger E' for aircraft stands and a doubling of the area of Terminal 2. If the airport is to proceed with its expansion of the terminal and the provision of aircraft stands where the cross-wind runway is currently situated, it will require a revision of the law governing the expansion of Copenhagen Airport. This means that the Danish Parliament will ultimately have to decide whether it considers the change of the physical environment of the airport appropriate, just as it will also require an EIA (Environmental Impact Assessment) report and a revision of the planning regulations.

The formal regulatory procedure concerning a possible closure of the cross-wind runway was initiated when Copenhagen Airport published the extension plan, "Update of Legislation and Plans for Extension of Copenhagen Airport" in which they applied for a change to the Expansion Act.

Earlier considerations regarding expansion of Copenhagen Airport

At the end of the 1960s and the beginning of the 1970s it was generally assumed that the long-term capacity could not be provided for the expected air traffic at Copenhagen Airport. It was therefore decided that no new construction work should be started in Kastrup. Instead of extending Copenhagen Airport, plans should be made for building a completely new airport on the island of Saltholm. At that time the airport was in the process of taking on its current form with two parallel main runways and one cross-wind runway (12/30). One of the two main runways was already under construction, including the tunnelling under Englandsvej and other technical preparations needed to enable Boeing 747s to use Copenhagen Airport.

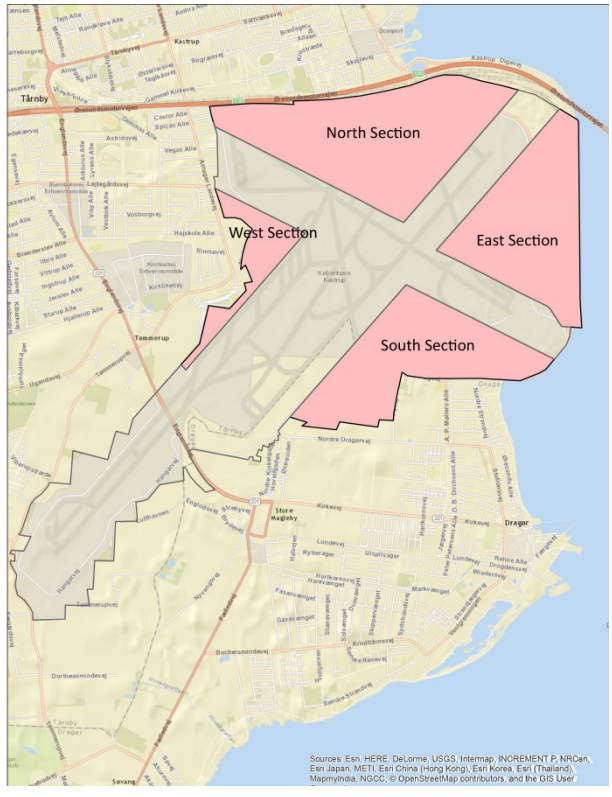
In 1980 this strategy was formally changed and the decision was made to concentrate on the expansion of the existing airport in Kastrup once again. At this time expansion efforts were lagging behind because of uncertainty about the airport's future. In this connection, The Expansion Act of 1980 stated that expansion of the airport should largely be carried out within the existing perimeters of the airport and that the cross-wind runway should be displaced and besides the main runways, the airport should be divided into four sectors.

Current legislation concerning the expansion of Copenhagen Airport from 1992 sets out the overall framework for land use by dividing the airport into four sectors, named according to their location relative to the intersecting runways. This is illustrated in Figure 5.6.

The North sector is used for passenger-related activities such a terminals, parking, car hire, shops etc., while, in the East sector, there is a relatively large unused area for which Copenhagen Airports has recently published plans for establishing an "Airport Business Park". The South sector is mostly used for hangars, maintenance facilities and offices associated with the run-

ning of the airport. The final section, the West section, is the smallest in terms of area and is used for maintenance facilities etc.

Figure 5.6 | Division of Copenhagen Airport into four sectors



Source: Illustration from the Danish Transport, Construction and Housing Authority

While there is general support for an expansion of Copenhagen Airport in the aviation industry, the plans for closing the cross-wind runway have given rise to considerable debate. This debate mainly concerns the extent to which the closure would have a negative effect on air traffic and if there are any alternatives to a total closure of this runway.

According to the report of an investigation carried out by Copenhagen Airport, closing the cross-wind runway would only have a direct effect on 0.4 % of the air traffic in the form of delays and cancellations in certain weather conditions. The airport also finds that neither developments in weather conditions nor developments in airline fleets will have any significant effect on

the airport without the runway, just as punctuality will only be marginally affected. This means that the airport will retain its position as being among the world's most punctual airports and flight safety will remain unchanged.

The use of the cross-wind runway in Copenhagen Airport

Copenhagen Airport's cross-wind runway is used when strong cross-winds, poor braking conditions, icy surfaces or maintenance work prevent the use of the two parallel main runways. The cross-wind runway thus ensures that, on days or times when there are strong crosswinds, the airport does not have to close for air traffic, either completely or partially. This is why, today, Copenhagen Airport is renowned for staying open round the clock throughout the year.

The cross-wind runway also provides operational advantages for the airlines which, in their daily operations, can use the runway either to save time or to save their passengers from the discomfort caused by cross-winds which, while strong are nevertheless still below the prescribed limits. The cross-wind runway also increases the airport's take-off and landing capacity.

By contrast, however, many airlines have expressed the opinion that the closure will have a significant negative effect on their operations in Copenhagen Airport. Ryanair, the fastest-growing airline in Copenhagen Airport, believes that a closure of the cross-wind runway will cause periodic closures for commercial jet traffic for up to 25 days per year.

These airlines therefore request that Copenhagen Airport investigates alternatives to a total closure of the cross-wind runway. Due to this, the airport has examined the possibilities of displacing and shortening the runway. The airlines have indicated that there is a need for a runway with a landing length of about 2,000 metres.

The first step in processing Copenhagen Airport's application for its expansion plan, including the closure of the cross-wind runway, is that the Danish Transport, Construction and Housing Authority carries out an evaluation of the traffic-related and economic consequences. This evaluation is already underway and is being carried out in parallel with Copenhagen Airport's investigation into the options available for retaining a functional cross runway. A decision will be made subsequently as to whether or not there is a basis for

continuing with a revision of the Expansion Act, including a decision as to whether there is a need for further analyses.

INITIATIVE (2) The Government supports Copenhagen Airport's vision of an expansion to serve at least 40 million passengers annually. To facilitate the expansion, the Government will ensure that the necessary administrative processes are managed as efficient as possible by the relevant authorities.

INITIATIVE (3) The Government finds it important that, in cooperation with the airlines, Copenhagen Airport finds the best solution as regards the cross-wind runway. It is vital that the attractiveness of the airport does not risk being impaired by the closure of the cross-wind runway.

5.3. Commercial degree of freedom for the benefit of air traffic

The areas of Copenhagen Airport are attractive locations for many companies but the framework of the current expansion legislation imposes a number of restrictions in the use of these areas, including the location of commercial activities. These restrictions are specified in the form of national planning directives, municipal planning directives and local planning directives.

Commercial activities in Copenhagen Airport, in the form of parking, shopping, rental space, etc., do not only benefit the airport's earnings but also provide the basis for creating a more attractive airport for both passengers and airlines.

While there is a relatively wide range of options for commercial activities in the North sector, the other sectors of the airport are more closely associated with the operation and main purpose of an airport. The potential for commercial activities is particularly related to the East sector, where there are a number of unused areas, in reference to which Copenhagen Airport has recently published its plans for an "Airport Business Park" in the area between Kystvejen and the Oresund.

In order for Copenhagen Airport to be able to make the best possible use of unused areas such as those in the East sector for commercial activities, these areas will have to be opened up for a change in land use regulation. This can be done by changing the current frameworks regarding land use by, for example, permitting a less strictly association to the operation of the airport. This would permit the location of companies who would benefit from being located close to an international airport but which do not meet the requirement of being directly linked to the running of the airport.

In the future, a key competition parameter for Copenhagen Airport will be the possibility of generating commercial activities around the airport. This will create both a greater demand for flight connections and, by increasing the airport's earnings, enable further investments in air traffic. The Government wishes to give its backing to the utilisation of areas within the airport for commercial activities. This, however, is subject to the conditions that:

1. Copenhagen Airport must always be able to offer the capacity necessary to fulfil the needs of its core activity, i.e. air traffic.
2. Part of Copenhagen Airport's earnings from commercial activities must be used to directly finance the airport's aviation traffic costs. In this way, commercial activities will make it cheaper for airlines to operate at the airport.

All in all, it is considered that a greater degree of freedom to establish more commercial activities, subject to the above-mentioned conditions, will not only increase income opportunities for Copenhagen Airport but will also create a basis for more flight connections and increased national and international connectivity to Denmark. The work aimed at expanding the degree of freedom for commercial activities will be carried out in parallel with the current process of revising the expansion legislation governing Copenhagen Airport.

INITIATIVE (4) The Government will work to ensure that the requirement that activities in the Copenhagen Airport area must be related to aviation or the operation of the airport is relaxed to the extent that it is not deemed to limit the possibility of operating air traffic now or in future.

INITIATIVE (5) The Government will investigate whether there is a basis for changing other parameters relating to the Copenhagen Airport area so as to provide better planning opportunities for the airport.

5.4. Optimum utilisation of airspace

To maintain and develop Denmark's connectivity, it is vital to ensure that Danish airports have the capacity required to handle the airlines' traffic. It is therefore essential to focus on efficient air traffic operations by creating meaningful cooperation regarding the use of airspace.

Table 5.7 | The various Scandinavian Flight Information Regions (FIRs)

Source: Illustration from Naviair for 2016

To support direct air routes, which benefit both the environment and airlines' economy, it is necessary for cooperation across airspace boundaries, as in, for example, the EU's Single European Sky initiative. In this respect, and with support from the EU, Denmark and Sweden are cooperating within a common functional airspace block, DK-SE FAB, which covers airspace over all of Denmark and Sweden.

There is also more centralised cooperation concerning the airspace in the Oresund region. This cooperation has especially been triggered by the fact that the new pan-European airport approach procedures cannot be incorporated into the current airspace around Copenhagen Airport. Denmark and Sweden have therefore initiated a collaboration to explore possibilities for establishing a basis for optimising traffic flow to and from Copenhagen, Malmo and some smaller airports in southern Sweden.

INITIATIVE (6) Together with the Swedish authorities, the Government will work to ensure more efficient possibilities for approaches and landings in the airports in the Oresund region.

6. Regulating for the benefit of connectivity

Copenhagen Airport has a geographical monopoly on aviation. The airport is therefore subject to a regulation to ensure that the airport has an incentive to fulfil Denmark's interest in a continuing and highest possible level of national and international connectivity through a socioeconomically appropriate level of charges, service and capacity.

It is crucial that the regulation of Copenhagen Airport follows the development of the aviation market and strikes the right balance between an economic incentive to operate an efficient airport with a high level of investment and competitive charges and service levels for passengers and airlines.

It is assessed that there is a need for an adjustment of the current regulation of Copenhagen Airport. The regulation must to a greater extent ensure a more equal and transparent determination of the level of charges, service and capacity between the airport and the airlines. This will provide the basis for a continued growth in national and international connectivity to Denmark and will have positive effects not only on connectivity to and from Copenhagen Airport, but also on the conditions for operating domestic air traffic in Denmark.

6.1. An equal and transparent regulatory model

Copenhagen Airport has a unique status in the Danish aviation legislation as special conditions have been established for airports *of vital importance for Denmark's national and international traffic links*.

Copenhagen Airport is the only airport currently covered by this special status. This means that the Minister of Transport, Building and Housing can determine regulations concerning payment for the use of a public airfield, in this case Copenhagen Airport. This provision has been implemented in practice through a regulatory model which dictates that charges paid by airlines should, as far as possible, be determined through negotiation between the airport and the airlines. If it is not possible to reach an agreement between the parties, a fall back occurs whereby the authorities determine a revenue cap for the airport's aeronautical business.

Ownership of airports in Denmark and Europe

The ownership of airports in Europe ranges from 100 % publicly-owned airports to 100 % privately-owned airports. While the Danish State is a minority shareholder in Copenhagen Airport, regional airports in Denmark are owned primarily by municipalities, although Bornholm Airport is also owned by the Danish State. The purpose of ownership of these regional airports is to create the basis for increased activities in the local area and ensure coherence with other parts of Denmark.

In the Nordic countries, airports in Sweden, Norway and Finland are still owned by the state, and are organised in the airport groups Swedavia, Avinor and Finavia. This also includes the major airports in Stockholm, Oslo and Helsinki, whose activities are used to support regional airports.

In other parts of Europe, whole or partial private ownership of airports is more widespread. An analysis from ACI (2016b) shows that about 40 % of European airports have a certain degree of private ownership. Of the nearby hub airports, London Heathrow is 100 % privately owned, while Frankfurt, Munich, Amsterdam and Paris Charles De Gaulle still have a private ownership of less than 50 %.

The objective of the Copenhagen Airport regulatory model is not that the authorities determine the charges. Instead, the model must support negotiations to achieve socioeconomically appropriate results, both in terms of investment level and price level. Regardless of whether the charges are fixed by negotiation or by fall back, they must be cost-related, non-discriminatory and transparent so the same charges apply to all airlines. However, there is, for example, a lower cost-related charge applied to airlines which use the cheaper GO terminal. Additionally, discounts can be granted for starting up new routes.

In a regulatory context, this is an incentive-based model as opposed to a "rest-in-itself" model. This means that, within the revenue framework, Copenhagen Airport can increase its financial return through such measures as cost-cutting, attracting more passengers or increasing earnings from the commercial business.

Possibility of increased competition (Terminal A case)

An alternative to a regulatory model for Copenhagen Airport is to generate a greater degree of competition for, in particular, local departing and arriving passengers. This would reduce the airport's ability to act as a geographical monopoly as far as passengers are concerned.

In 2008, a third party announced a bid for an expansion of terminal capacity at Copenhagen Airport. Airport Terminal A ApS applied to rent an area of Copenhagen Airports A/S, in which they were planning to operate a competing low-cost terminal (Terminal A). Copenhagen Airports A/S rejected the application.

With this in mind, the competition authorities requested the Ministry of Transport, Construction and Housing to assess if the refusal from Copenhagen Airports A/S to grant Terminal A access to the particular site was a direct or necessary consequence of the public regulation. In July 2015, the Ministry concluded that aviation legislation, including the regulation on charges (BL 9-15), prevented the establishment and operation of the competing passenger terminal Terminal A. It was also concluded that the Danish regulation was in line with EU legal regulation.

The Danish High Court presented its ruling in the case of Terminal A in September 2015. The High Court agreed with the Ministry that it is not possible to establish a Terminal A project under the current regulation. The High Court therefore agreed with the Ministry that the rejection of Copenhagen Airports A/S was a necessary consequence of public regulation. The rejection was also deemed necessary to ensure the fulfilment of the special task assigned to Copenhagen Airport.

If Copenhagen Airport and the airlines are unable to agree on the level of charges, service and capacity, a fall back occurs which, along with the general level of competition pressure in the aviation market, defines the room for negotiation between the airport and the airlines. The pressure of competition on Copenhagen Airport from other airports encourages the airport to set the level of charges competitively and to adopt a level of investment that supports competitiveness with the other airports. Against this, however, Copenhagen Airport has a geographic monopoly on air traffic, both as regards to the passenger catchment area and as far as most passengers travelling to and from Denmark. Without a regulatory model, therefore, the airport can set a level of charges that is higher than would otherwise be the case with a real competition for these passengers.

"Fall back" for regulating charges in Copenhagen Airport

If Copenhagen Airport and the airlines are unable to reach an agreement, the Danish Transport, Construction and Housing Authority will set a revenue cap stating the maximum amount that the airport may use as the basis for determining individual charges. In practice, the revenue can differ from the revenue cap if the assumptions develop differently than those previously assumed, for example, with regards to the number of passengers. The current fall back sets the revenue cap for a four-year period.

The basic idea behind fall back is that the charges should compensate Copenhagen Airport for the airport's operating expenses, depreciation on investments and provide a reasonable return on invested capital. This is in line with similar regulatory models in other sectors. In addition, when calculating the level of charges, there is a cross-subsidisation from the commercial business at the airport, i.e. revenue from shopping, parking, etc.

The negotiation between Copenhagen Airport and the airlines is based on a predetermined model in the event that the parties fail to reach an agreement on charges. Even if fall back is not put in used, it is, to a certain extent, still a deciding factor as far as the outcome of the negotiations is concerned because the parties continuously assess whether fall back would be more attractive.

Under both the negotiated agreement and fall back it is up to Copenhagen Airport and the airlines to agree on the individual charges. Fall back has not yet been put in use as the charges were negotiated for the period 2010-2014 and for the current period 2015-2019. The charges in 2009-2010 were set by the Danish Transport, Construction and Housing Authority.

The regulatory model is not only about the charges that airlines must pay to Copenhagen Airport. Just as importantly, it also concerns an agreement on the levels of service and capacity which the airport must provide to the airlines. This will be discussed in more detail in the next chapter.

A key element in fall back is that part of the earnings from Copenhagen Airport's commercial business shall contribute directly to the aviation traffic. The current regulatory model includes that the commercial business shall

contribute between 10-50 % of the remaining commercial excess return after the airport has secured a reasonable return.

The calculation of "reasonable return" and an excess return

The total return in Copenhagen Airport can be divided into a "reasonable return" and an excess return on aviation and commercial activities.

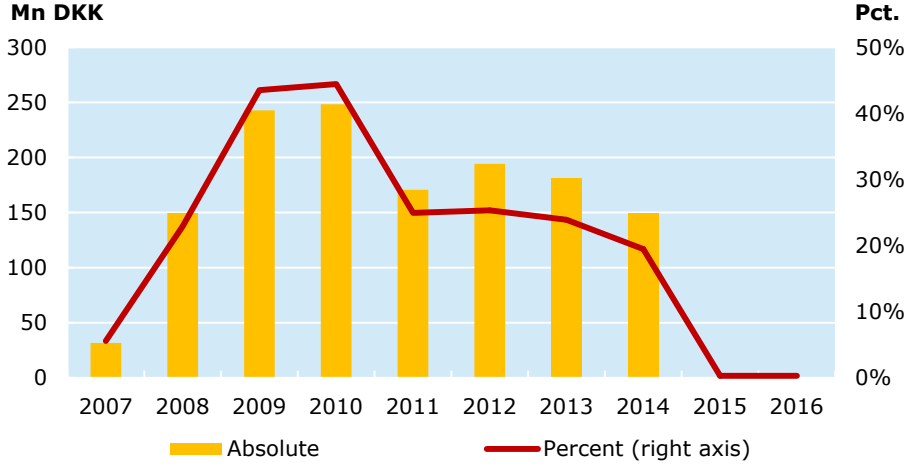
- Reasonable return: The return that investors can expect from a similar investment with the same risk as at Copenhagen Airport.
- Excess return: The remaining part of the return, which is above the reasonable return corresponding to an estimate of the economic benefit gained by a monopoly.

The Danish Transport, Construction and Housing Authority prepares an estimate for the reasonable return for use in the charges negotiations between the airport and the airlines.

The contribution from commercial activities to a lower level of charges is called cross-subsidisation and is calculated as a percentage of the commercial excess return. The objective of this cross-subsidy is that airlines shall pay less for their use of the airport, i.e. landing and take-off, baggage handling, security, etc. than would be the case if charges should cover costs and provide a reasonable return to the airport. This type of regulation is common in the aviation sector and dictates that an airport's geographical monopoly, as far as passengers are concerned, should benefit the society through a lower level of charges than would otherwise be the case without any commercial activities.

Figure 6.1 shows an estimate of the development of the direct contribution from the commercial activities in Copenhagen Airport to air traffic in the form of cross-subsidisation. This figure shows that, particularly during the financial crisis and partly throughout the 2010-2014 charges period, the commercial activities contributed to a lower level of charges. Since then, however, the trend has been that the commercial activities do not contribute directly to the aeronautical business through, for example, a lower level of charges for airlines.

Figure 6.1 | Development of cross-subsidisation (estimate)



Note: Absolute cross-subsidisation corresponds to an estimate of the aeronautical deficit including a reasonable return. In percentage terms, cross-subsidisation is absolute cross-subsidisation as a proportion of the estimated excess return from commercial activities excluding hotel operations. Since it is an estimate, the figure illustrates the approximate development of cross-subsidisation.
Source: Estimated on the basis of annual reports from Copenhagen Airports A/S, Copenhagen Airport Hotels A/S, Copenhagen Airports Hotel- og Ejendomsselskab A/S and a rate of reasonable return from the Danish Transport, Construction and Housing Authority (average estimate).

The development of cross-subsidisation is attributable to the fact that Copenhagen Airport has accumulated an increase in aeronautical earnings from airlines' payment for use of the airport since the financial crisis in 2009. Here, the aeronautical profit margin, which was about 12 %, has since grown to about 23 % in 2016. This means that the earnings from the commercial activities, which have also been increasing during this period, are used less and less to directly support the aeronautical business. The estimate of cross-subsidisation thus shows that the direct contribution from the airport's commercial activities was actually DKK 0 in 2015 and 2016.

INITIATIVE (7) The Government will make an adjustment of the regulatory model for Copenhagen Airport. It must ensure more equal and transparent negotiations between Copenhagen Airport and the airlines. This involves more transparency regarding the determination of parameters in the model as well as a shorter fall back period. The adjustment of the regulatory model will form the basis for negotiations in 2018.

INITIATIVE (8) The Government will make an adjustment of the regulatory model so that a greater part of Copenhagen Airport's commercial revenue is used directly to cover the costs of air traffic.

6.2. The level of charges in Copenhagen Airport

Airlines pay a number of charges for their use of Copenhagen Airport's facilities. These charges finance the airport's provision of runways, terminals, etc. to the airlines and they are wholly or partially included in the final price paid by passengers or cargo customers.

QVARTZ and Copenhagen Economics (2016) have shown that, first and foremost, there must be both a market and a passenger demand in order for an airline to maintain an existing route or open a new route. But since the profitability of an individual route might depend on small margins,the level of charges is also important as far as Denmark's connectivity is concerned. This applies especially to short-haul routes, where other costs for fuel, personnel, maintenance etc. are relatively less compared to routes on longer-distances.

The significance of passenger charges for airlines

The largest part of the charges that an airline pays an airport is made by passenger charges. These charges are usually not included in an airline's calculation of the profitability of a particular route. This is because passenger charges are instead directly invoiced to the passenger via the tax shown on the ticket.

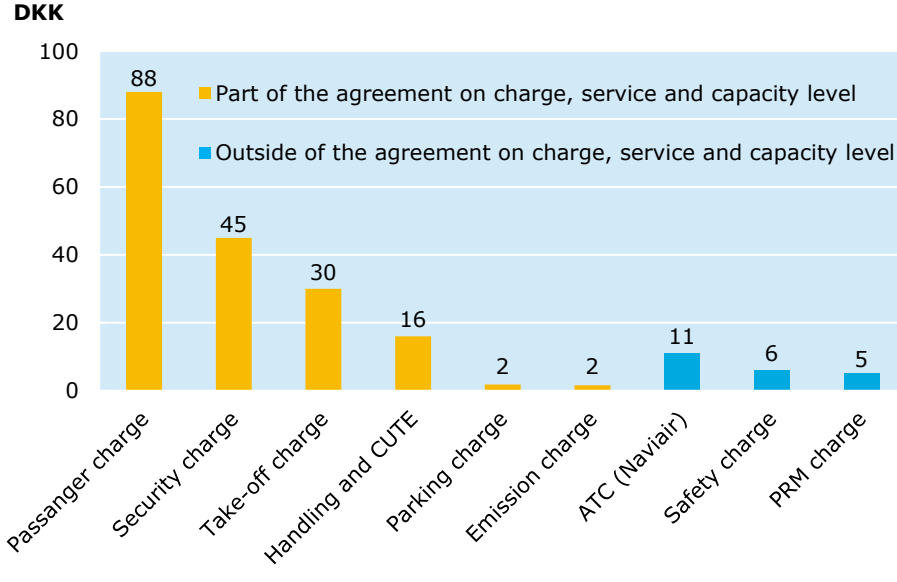
Therefore, when an airport's passenger charge is changed, the passenger will experience that ticket prices either rise or fall accordingly and this will affect the demand for airline tickets. The passenger charge therefore has an indirect impact on an individual route's turnover, increasing or decreasing the possibility that the airline can operate the route profitably.

QVARTZ and Copenhagen Economics (2016) have shown that, on average, passenger charges per route amount to between about 10-20 % of the ticket price in Copenhagen Airport. For domestic air traffic, which is characterised by shorter distances, the total level of charges might amount to 40 % of the ticket price paid by the passenger.

An airline pays an average of DKK 205 per outbound passenger at Copenhagen Airport. Of this amount, DKK 183 is charges which are set in the agreement on charges between the airports and the airlines. The remaining DKK 22 goes, among other things, to Naviair for air traffic control and as security contribution to the Danish Transport, Construction and Housing Authority.

Figure 6.2 shows the average charges per passenger, although in practice this actually varies according to operation and airline. This is because factors such as the proportion of transfer passengers on board the aircraft, aircraft size, occupancy rate and whether or not the airline uses the GO terminal at Copenhagen Airport all cause differences in the final level of charges.

Figure 6.2 | Average charge per outbound passenger in 2016



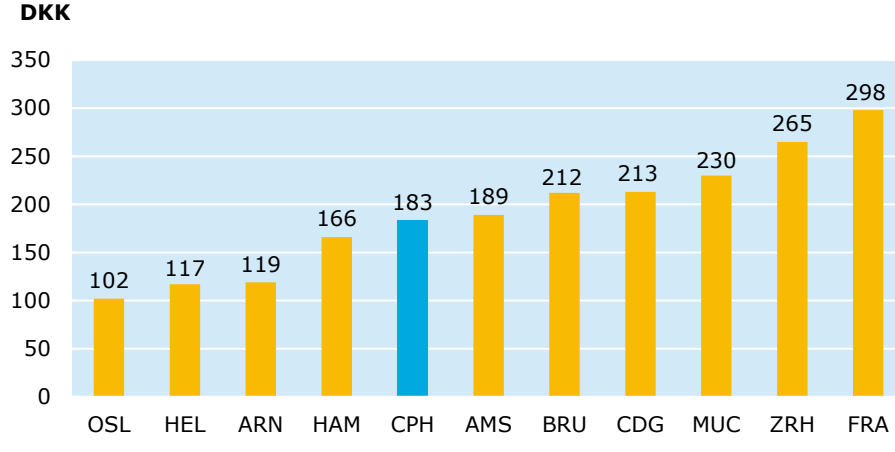
Note: Fees and charges are converted to an average per outbound passenger based on a representative sample of actual traffic at Copenhagen Airport in 2015. The statement is exclusive of start-up rebates and other incentive schemes. CUTE, Common Use Terminal Equipment, is a charge for the provision of software and computer network at the airport for use by air carriers. PRM, Persons with Reduced Mobility, is a cost-neutral disability service scheme paid by all outbound passengers.
Source: QVARTZ and Copenhagen Economics (2016)

Figure 6.3 shows that compared with the ten other European airports, Copenhagen Airport's DKK 183 tax per outbound passenger is at the lower middle end of the range. The level of charges is thus about the same as for

Amsterdam Schiphol but lower than airports such as Brussels and Frankfurt. From a Nordic perspective, the level of charges at Copenhagen Airport is 79 % higher than at Oslo Gardermoen and 56 % higher than Helsinki and Stockholm Arlanda.

Copenhagen Airport's relatively high level of charges compared with the other Nordic airports is partly explained by differences in business model, product and traffic composition. Thus, Copenhagen Airport operates with a larger share of international transfer traffic and a smaller proportion of domestic traffic than Stockholm Arlanda and Oslo Gardermoen which, all things being equal, is more costly. At the same time, the other Scandinavian airports are 100 % state-owned and part of a major national airport network in which the two major airports support the regional airports. In Copenhagen Airport, the Danish state is a minority shareholder and its airport network includes only Roskilde Airport.

Figure 6.3 | Average charge per outbound passenger in 2016



Note: Average level of charges based on Copenhagen Airport's traffic program and excluding charges outside the negotiation of levels of charges, service and capacity.
Source: QVARTZ and Copenhagen Economics (2016)

During recent years there has been a relative improvement in the level of charges in Copenhagen Airport compared with a group of 24 European airports. This comparison has been made by Leigh Fisher (2015) and shows that Copenhagen Airport has moved from being the 12th cheapest to the 6th cheapest airport. Oslo Gardermoen, Stockholm Arlanda, Helsinki, Warsaw and London Gatwick are cheaper than Copenhagen Airport.

As described at the beginning of this section, the total amount the airlines pay to Copenhagen Airport varies according to the given operation. This is due, among other things, to the fact that airlines that operate transfer traffic are offered a lower charge per transfer passenger while companies that meet a number of other specific operational requirements can use the GO terminal and thereby pay less per passenger.

QVARTZ and Copenhagen Economics (2016) have shown that Copenhagen Airport's level of charges divided into traffic segments places the airport at about the same level as in Figure 6.3 compared to the other airports.

Analysis of level of charges in Copenhagen Airport

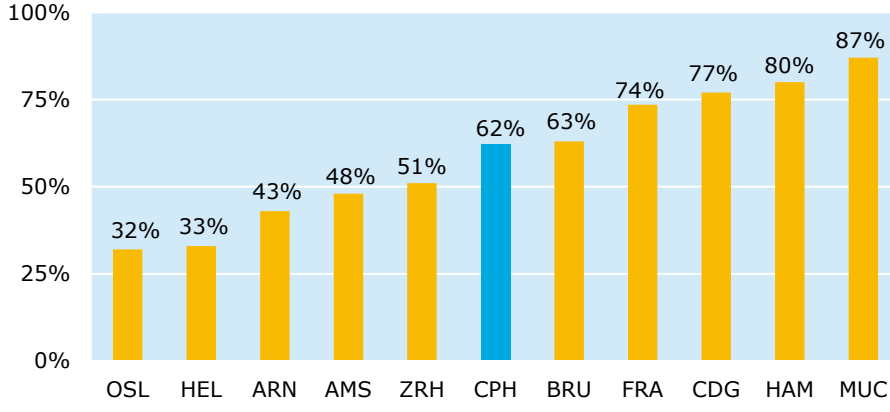
The level of charges was calculated in mid-2016 and was based on the actual traffic composition at Copenhagen Airport in 2015. The calculations were made by the consulting companies Copenhagen Economics and QVARTZ. The calculations are based on the level of charges known at that time and do not take into account any subsequent adjustments in the level of charges.

6.3. The level of charges for transfer passengers

In common with the ten other European airports, Copenhagen Airport offers a separate charge per transfer passenger. In 2016 the average level of charges for transfer passengers in Copenhagen Airport corresponded to 62 % of the charge for local outbound passengers. This puts Copenhagen Airport at the middle of the range of the ten other European airports if the level of charges is compared with the charge for a local outbound passenger.

The lower transfer charge at Copenhagen Airport is reflected in the form of a lower passenger charge and a lower security charge. The lower level of charges creates a better economic basis for airlines to use the airport as a hub for transfer traffic. Denmark can thus achieve a level of connectivity that is greater than the passenger catchment area might otherwise suggest, resulting in significant socioeconomic gains.

Figure 6.4 | Charge per transfer passenger as a share of the charge per local outbound passenger in 2016



Source: QVARTZ and Copenhagen Economics (2016)

As illustrated in table 6.1, the level of charges for local outbound passengers and transfer passengers are both relatively higher in Copenhagen Airport when compared with the other two major Scandinavian airports. Similarly, the transfer passenger charge is significantly higher. Copenhagen Airport's transfer passenger charge is approximately two and three times higher than in Stockholm Arlanda and Oslo Gardermoen respectively. This is among other things due to the fact that these airports do not charge a security charge for transfer passengers.

Table 6.1 | Comparison of passenger and security charges in Scandinavia

	Copenhagen Airport	Stockholm Arlanda	Oslo Gardermoen
Per local outbound passenger	145 DKK	98 DKK	91 DKK
Per transfer passenger	91 DKK	39 DKK	28 DKK
Transfer in relation to local outbound passenger	62 %	40 %	31 %

Note: Based on the latest charges regulations, hence these figures might differ slightly from those in figure 6.3.
Source: www.airportcharges.com, charge regulations as of 1 April 2017 and average exchange rate for 2016

All airlines wishing to operate transfer traffic are offered the same transfer passenger charge which, today, reflects Copenhagen Airport's lower costs associated with these passengers.

INITIATIVE (9) In the public interest, the Government will introduce a reduction in the ratio between the charge per transfer passenger and the charge per locally departing passenger in the regulatory model. This is to contribute to retaining the important gains from the additional connectivity that the hub will ensure Denmark. The initiative will also benefit domestic air traffic as approximately one fourth of domestic air traffic is made up of transfer passengers.

6.4. Differentiation between domestic and international passengers

In 2015, Copenhagen Airport integrated the domestic terminal into Terminals 2 and 3. This improved conditions for the operators of transfer traffic but also resulted in the charges for domestic and foreign passengers being evened out. The price per domestic passenger thus rose from DKK 98 in 2014 to DKK 164 in 2016, corresponding to an increase of 67 %. This has weakened the competitiveness of domestic air traffic, where airlines operate in a market characterised by significant competition from cars and the rest of the public transport.

EU-directive concerning airport charges

A fundamental principle of the EU Directive and hence the Danish legislation on payment for the use of an airport (airport charges) is that the charges levied by the airport must be cost-related, non-discriminatory and transparent. Among other things, this means that airlines receiving the same service from an airport must pay the same charges. Should the airport deviate from this principle, the EU Directive allows for such an option provided that the charge differentiation is applied in the interests of the public and society in general and is based on relevant, objective and transparent criteria.

The starting point for a differentiated level of charges at Copenhagen Airport shall be a difference in the service that airlines receive from the airport. In addition, the airport can graduate the level of charges in the interest of society and in accordance with the airport's own commercial interests.

Copenhagen Airport has expressed a wish to investigate the possibilities for setting a lower level of charges for domestic operators. On this basis, the Danish Transport, Construction and Housing Authority is in dialogue with Copenhagen Airport to explore possible solutions to the common desire to create better conditions for domestic air traffic in Denmark. As it is not possible to determine a lower charge for domestic passengers directly in the regulatory model, this depends on Copenhagen Airport finding a concrete solution.

Copenhagen Airport is considered as having a significant commercial interest in countering competition, particularly from other European hubs like Amsterdam and Frankfurt. Furthermore, there is also a significant interest from the society in a well-functioning domestic air travel. This is because domestic air transport increases national cohesion by ensuring that transport times between the longer distances in Denmark do not become disproportionately long. This consideration could also be taken into account in an evaluation of Copenhagen Airport's proposal for a solution.

INITIATIVE (10) The Government encourages Copenhagen Airport to investigate all possibilities for reducing the charges level for domestic operators within the framework of the EU Directive. In this connection, the Government notes that presently the airport offers a lower charge for the low-cost airlines in the GO terminal.

7. Strengthened capacity oversight and introduction of service targets

The Danish Transport, Construction and Housing Authority monitors the capacity of specific areas and processes at Copenhagen Airport. The oversight includes the airport's capacity and future needs in key areas such as passenger check-in, security check, baggage, terminals and aircraft stands.

The purpose of this capacity oversight is to ensure that Copenhagen Airport fulfils its obligation to meet Denmark's needs for national and international, including intercontinental, traffic connections. This must be achieved by the airport by providing the necessary capacity for operation air traffic at all times.

A review of the oversight shows that there is a need to strengthen the capacity oversight in passenger areas at Copenhagen Airport, not least to ensure acceptable waiting times in the airport's security check.

7.1. Continued high level of service and capacity

An airport's attractiveness to airlines is determined not only by the level of its charges, but equally by the levels of service and capacity offered by the airport to the airlines. This is independent of whether the airline's business model focuses primarily on network traffic or point-to-point traffic.

Airlines operate using a term called "Total Cost of Operation" (TCO) which reflects the total costs of operating from a given airport. The higher the service and capacity levels that airlines receive for their payment for the use of the airport, the lower the TCO and thus the more attractive the airport is to the airline. QVARTZ and Copenhagen Economics (2016) have shown that Copenhagen Airport, measured in terms of a number of parameters, provides a high level of service and capacity.

This relatively high level of service and capacity is due to the fact that, for a number of years, Copenhagen Airport has had focus on the airlines' TCO. Hence the airport has made investments aimed at optimising airline operations which has been a contributing factor in order for the levels of service and capacity at the airport to be attractive to airlines.

Copenhagen Airport offers an attractive level of service and capacity to airlines

QVARTZ and Copenhagen Economics (2016) have benchmarked Copenhagen Airport's service and capacity levels compared with ten comparable European airports. The study shows:

- There is spare take-off and landing runway capacity and attractive runway availability for take-off and landing at the busiest times of the day.
- The airport's opening hours and opportunities for turnaround are in line with the best airports. The same is true with regard to the minimal transfer time it takes passengers to transfer between two flights at the airport.
- In 2014 and 2015, punctuality i.e. the percentage of aircraft arriving and departing on time, was the highest compared with the other benchmark airports.

The high levels of service and capacity at Copenhagen Airport have been confirmed by the results of a comprehensive survey which placed the airport as "best in class" in terms of service, capacity and cooperation.

The survey included airlines that accounted for about 90 % of all passengers at the airport in 2015.

Note that recent figures from OAG (2016) indicate that punctuality has fallen from 88.5 % in 2015 to 83.1 % in 2016. However, this is still either on the same level as or better than the other airports. It is important to note that punctuality at a particular airport is not only an indication of the airport's levels of service and capacity. Hence it is estimated that only about 10 % of delays are directly attributable to the airports.

Copenhagen Airport has made a number of TCO investments aimed at faster and better boarding of passengers and more efficient baggage handling. Thus, since 2014, the airport has invested about DKK 240 million in optimising the airlines' operations. This includes a merging of Schengen and domestic areas, self-service baggage delivery, self-service boarding gates and "efficiency gates". The latter allow for boarding and disembarking at both ends of the aircraft, which increases the ability of airlines to turn their aircraft around more quickly at Copenhagen Airport.

In addition to high operational efficiency, the possibility that airlines can take off and land at attractive times is considered to be a crucial competitive parameter for Copenhagen Airport. This involves a combination of available capacity on the runways and among aircraft stands at the busiest times of the day.

The benchmarks from QVARTZ and Copenhagen Economics (2016) show that Copenhagen Airport still has spare runway capacity but the number of aircraft stands is at the lower end of the scale compared with the other European airports. The latter is one of the key investment areas in Copenhagen Airport's expansion plan.

Handling costs represent a significant part of TCO

Costs to the handling companies represent a significant part of the airlines' total operating costs when using Copenhagen Airport. In addition to the service and capacity levels provided by Copenhagen Airport, the labour costs of ground handling personnel play an important role in determining total costs because a number of areas are still relatively labour-intensive.

An analysis from DI (2016) based on salary information reported to the Danish Employer's Association shows that the labour costs of ground handling personnel at Copenhagen Airport are about 20-30 % higher than comparable job functions in the rest of the Capital Region. The negotiation of pay and employment conditions is solely the responsibility of the social partners.

The benchmark analysis also shows that, as far as restrictions on airport operating hours are concerned, Copenhagen Airport is an attractive airport for airlines. This is because the airport is open 24 hours a day and that, compared to a number of other European airports, there are fewer noise restrictions between 11 pm and 6 am. This compares with a number of other comparable airports which are either closed for part of the day or subject to significant restrictions. As far as Copenhagen Airport is concerned, the airport's opening hours give the airlines greater flexibility and this, too, contributes to the attractiveness of the airport and hence the possibility of creating connectivity to Denmark.

Copenhagen Airport is also able to receive the world's largest passenger aircraft, the Airbus A380, and is the only airport in Scandinavia that receives A380 flights on a regular basis.

Important efficiency parameters in Copenhagen Airport's competition with other airports

Based on the analysis carried out by QVARTZ and Copenhagen Economics (2016), three crucial parameters can enable Copenhagen Airport to maintain its position as an airport that provides effective operating conditions for the airlines. These are:

1) Fast "turnaround time"

Aircraft turnaround time is an important parameter. Airlines prefer a low turnaround time as it enables efficient operations with the least possible time on the ground. Turnaround time typically depends on the type of operation and airline.

2) High level of punctuality

Punctuality is an efficiency parameter of great importance for airlines. Delays are costly for airlines and an airport with a high degree of punctuality is therefore more attractive.

3) Low transfer time for passengers

The third important efficiency parameter for airlines is the minimum transfer time passengers need to change aircraft at an airport. This is also known as "minimum connecting times". This is particularly relevant to network carriers operating transfer traffic because transfer times set a limit on connecting flights that passengers can book through websites and travel agencies.

Overall, the benchmarking of service and capacity levels provided to the airlines shows that Denmark, in Copenhagen Airport, has an efficient and well-functioning airport. However, the strong growth in the number of passengers in recent years creates a pressure on the airport's infrastructure. The airport is addressing this in the current expansion including, among other things, providing more aircraft stands. Recently, Copenhagen Airport has announced that it wants to accelerate a number of investments and double the investment in projects aimed at reducing airline operating costs.

Based on the above, it is assessed that service and capacity levels provided for airlines and handling companies should continue to be based on close co-operation and commercial agreements between Copenhagen Airport and its users. The capacity oversight conducted by the Danish Transport, Construction and Housing Authority will continue to include benchmarks as regards aeronautical capacity but will, to a greater extent, focus on those parts of the airport used by passengers where there has proved to be a greater need for oversight.

7.2. Increased focus on passenger capacity

For both passengers and society alike, it is crucial that Copenhagen Airport continuously develops and expands the infrastructure so that service and capacity levels keep pace with the development of passenger traffic.

Based on passenger satisfaction measurements, Copenhagen Airport delivers a relatively high service and capacity level. According to the Airport Service Quality Survey (ASQ), carried out by the Airport Council International (ACI), the airport ranks fourth on the overall level of satisfaction with the airport experience. The survey has been conducted among 27 other European airports with more than 15 million passengers annually.

Skytrax is another international passenger satisfaction survey and is based on several million passenger interviews worldwide. Copenhagen Airport was ranked as the 15th best airport in the world in this survey. This meant that Copenhagen Airport became the highest-placed airport in the Nordic region.

One of the most important passenger areas in Copenhagen Airport is the central security check. A low waiting time and predictability of the maximum waiting time are essential for passengers in order to adapt their travel in the best possible way and avoiding wasting time at the airport. At the same time, it reduces the risk that passengers fail to reach their flight in time.

In parts of 2016, the security check at Copenhagen Airport was characterised by long and unpredictable waiting times for passengers. In addition to being detrimental to passengers travelling overseas, it posed a particular challenge to domestic air traffic whose competitive advantage compared to car, train and bus is the fast transportation time.

In October 2016, and as a consequence of unpredictable waiting times in particular, Copenhagen Airport introduced a "fast-track" security check for

the use of passengers with short travel times. At the same time, the airport initiated a number of initiatives aimed at reducing waiting time and the unpredictability. At the same time, the airport began an expansion of the security check which is expected to be completed in or around summer 2017 and will provide space for a total of 25 tracks at the security check.

Faster and more reliable security check at Copenhagen Airport is a socioeconomic gain

The Technical University of Denmark (DTU) has carried out an analysis of waiting times in the security check at Copenhagen Airport. The objective of this analysis has been to examine the relationship between passenger costs associated with waiting time and unpredictability compared with the costs to Copenhagen Airport of increased staffing levels on the existing tracks at the security check.

Based on the data for waiting times in the period between September 2016 and December 2016, the analysis from 2017 concludes that there will be a clear socioeconomic gain if Copenhagen Airport opens up at least three more tracks at the security check all day compared with the current level of staffing.

This analysis also includes Copenhagen Airport's staff costs. The socioeconomic gains are due to a reduction in both the average waiting time and in the variation in waiting time throughout the day.

One of the key reasons for the challenges associated with waiting time in the security check is that the socioeconomic optimum for passenger waiting time in the security check differs from the operating economic optimum for Copenhagen Airport and the airlines.

Despite the fact that Copenhagen Airport has reduced average and maximum waiting times in the security check, there is still considered to be a socioeconomic potential for improvement in lower and more predictable waiting times.

With the introduction of service targets for the waiting time in the security check, passengers at Copenhagen Airport are guaranteed a minimum level of service. The actual service targets are determined by the Danish Transport, Construction and Housing Authority after consultations with the aviation in-

dustry. These service targets are announced prior to the negotiations of charges between the airport and the airlines.

Service targets in the security check at Copenhagen Airport

The Danish Transport, Construction and Housing Authority's consultation with the aviation industry will be based on the following three target values for the waiting time in the security check at Copenhagen Airport:

- The average waiting time for passengers in a calendar week must be less than 5 minutes.
- No more than 5 % of the time intervals in a calendar week may have a waiting time of more than 10 minutes, i.e. at least 95 % of all waiting times must be less than 10 minutes.
- No waiting time in any time intervals in any calendar week may be more than 15 minutes.

These targets are measured based on the average waiting time between 5 am and 11 pm, measured in 15 minute increments.

Another key passenger area in Copenhagen Airport is the baggage delivery. As in the security check, passenger waiting time represents a socioeconomic cost for the passengers. Unlike the security check, the value chain in the baggage delivery is not only the airport itself but also airlines and handling companies. The more complicated value chain makes it difficult to introduce service targets, and a corresponding proportional sanction system, without a detailed analysis of the value chain.

Passport control is also a passenger area where service and capacity levels are important for the time passengers must spend queueing at Copenhagen Airport. Here the waiting time is dependent on the level of staffing provided by the police and the capacity made available by Copenhagen Airport.

A review of the current capacity oversight shows that the possibilities for the Danish Transport, Construction and Housing Authority to issue injunctions, for example concerning increased staffing in the security check, are limited in the current legislation. Thus, it has not been possible for the authorities to issue an injunction aimed at reducing the disproportionately long waiting times that occurred in parts of 2016. This is because current regulation only covers extraordinary circumstances, for example, if Copenhagen Airport

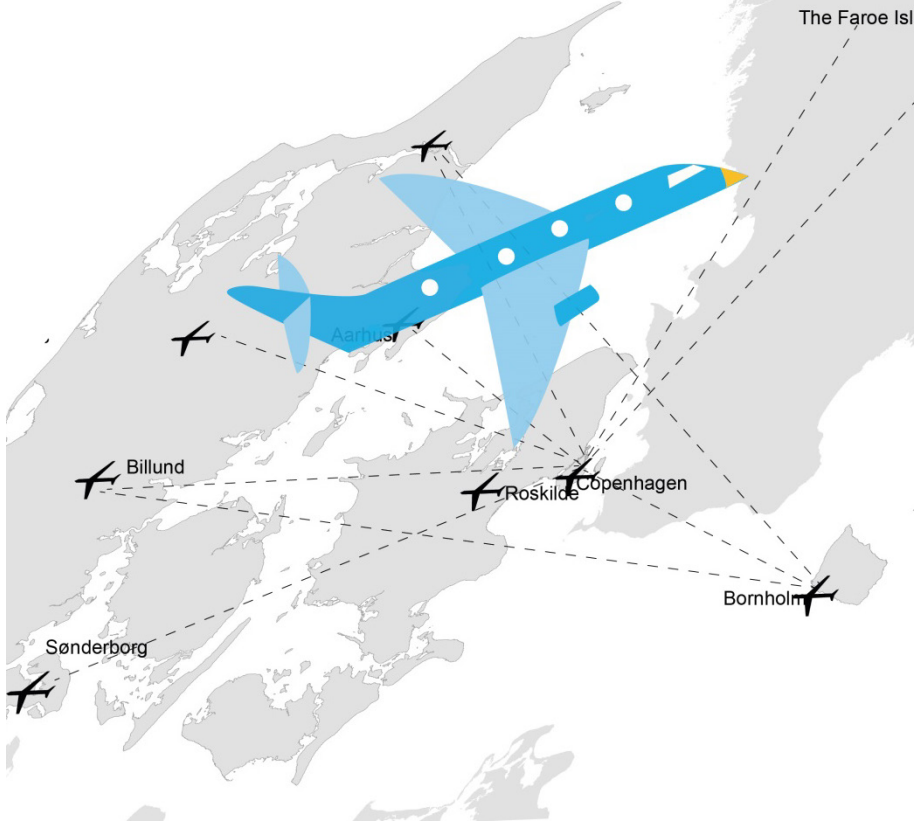
chooses to move significant parts of the domestic air traffic to Roskilde Airport.

INITIATIVE (11) The Government will introduce service level targets for services aimed at passengers in Copenhagen Airport, starting with service level targets for the waiting time at security.

INITIATIVE (12) The Danish Transport, Construction and Housing Authority will be granted authority to introduce a proportionate sanction system in the event that the service level targets are not reached in Copenhagen Airport. As a last resort, the Danish Transport, Construction and Housing Authority will, through easier access in legislation, be granted authority to issue injunctions.

INITIATIVE (13) In cooperation with Copenhagen Airport, the Danish Transport, Construction and Housing Authority will make an analysis of the need and the possibilities for introducing service level targets for the waiting time at baggage reclaim. Moreover, in cooperation with the Danish National Police, an investigation will be made of whether service level targets can be established for the capacity provided by Copenhagen Airport for passport control.

THE REGIONAL AIRPORTS

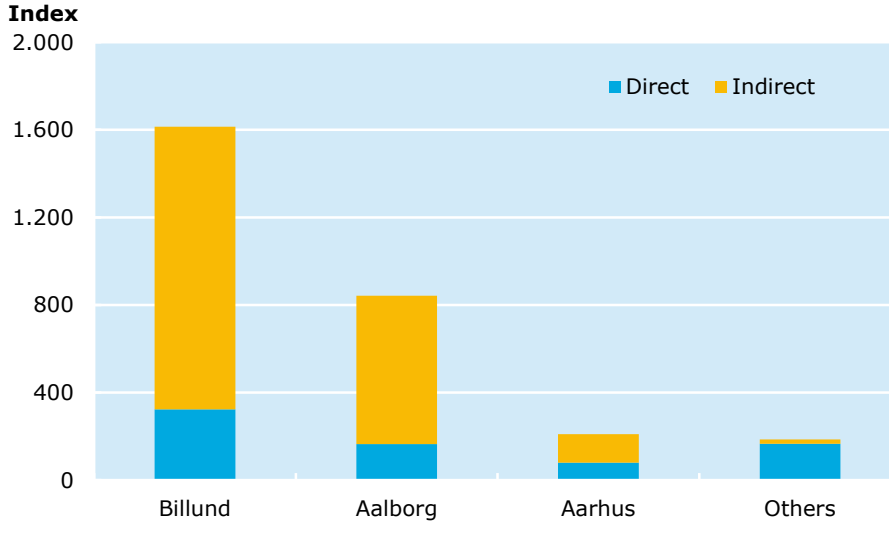


8. The regional airports

Denmark's regional airports are crucial for both connectivity and national cohesion. In addition to providing the basis for domestic air traffic, the airports in West Denmark have established direct and regular connections to major European hubs in, for example, Amsterdam and London. Recently, both Billund Airport and Aalborg Airport have reported that they are looking to add direct intercontinental connections to their route networks.

This positive development has contributed significantly to strengthening Denmark's overall connectivity, as direct connections mean that several destinations can be reached with only one stopover. Overall, the regional airports now account for about a quarter of Denmark's direct and indirect connectivity making them an important factor with regard to the value that connectivity creates for Denmark.

Figure 8.1 | Connectivity contribution from regional airports



Note: The Connectivity Index counts the number of direct and indirect connections with one stopover, the latter being quality-weighted relative to the travel time with a direct connection.
Source: Copenhagen Economics (2016a) based on data for 2015

The route between Aalborg Airport and Amsterdam Schiphol

Direct routes from western-Danish airports to European hubs provide great gains for Denmark in terms of increased connectivity. This applies, for example, to the routes between Aalborg Airport and Amsterdam Schiphol and Billund Airport and London Heathrow.

Copenhagen Economics (2016a) has estimated how much KLM's existing route between Aalborg Airport and Amsterdam Schiphol contributes to connectivity to Denmark. The connectivity provided by this route with 21 weekly departures accounts for about a quarter of Aalborg Airport's total connectivity.

Based on InterVistas (2015), and assuming that a 1% increase in connectivity is equivalent to an increase in per capita GDP of 0.025%, increasing Denmark's connectivity by about 1.6% would form the basis of a potential increase in national GDP of about DKK 850 million.

This includes a negative effect on the connectivity of a lower passenger demand for the domestic connection between Aalborg Airport and Copenhagen Airport. The size of the GDP effect is subject to considerable uncertainty and realising this potential gain will ultimately depend, among other things, on the establishment of new trade relations and increasing knowledge-sharing in comparison with a situation without this connection.

The significant connectivity of the route between Aalborg Airport and Amsterdam Airport largely follows from the fact that that this specific direct connection to one of Europe's major hubs gives access to a comprehensive network of routes to the rest of the world with one stopover. It should be noted, however, that the effect on connectivity and hence on the value of these routes decreases as more routes and weekly departures serving the same destinations directly or with one stopover are added.

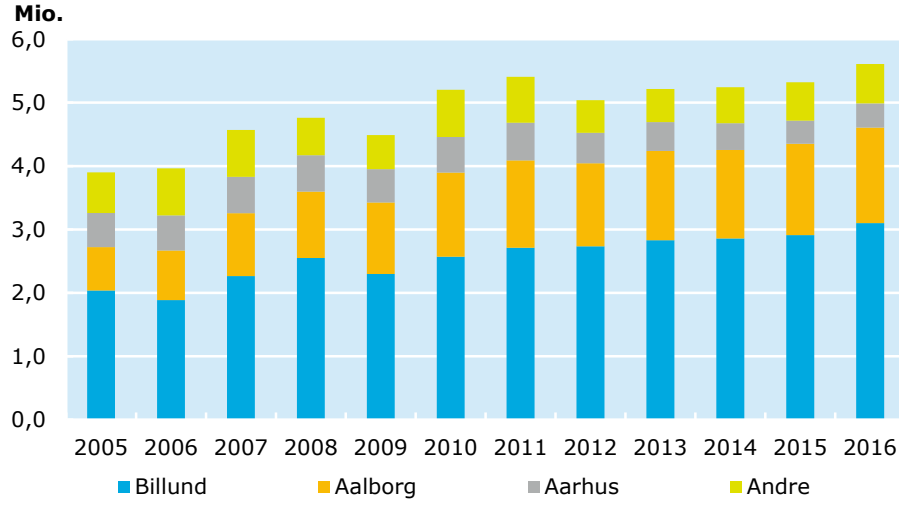
The Government wishes to strengthen connectivity from Denmark's regional airports. This will be done by attracting more international routes to regional airports and by increasing the number of weekly departures on existing routes.

More direct international connections from Western Denmark increase competition for those passengers who previously had to use Copenhagen Airport as the only alternative. This reduces domestic air traffic since a reduction in the number of passengers on the domestic routes to Copenhagen

Airport reduces domestic air traffic as a whole. It also weakens Copenhagen Airport as a hub. The socioeconomic value of new international routes from regional airports is, however, of such a volume that Denmark will suffer a loss if the development of Copenhagen Airport happens at the expense of regional airports.

Denmark's regional airports have seen a significant increase in the number of passengers and routes in the last decade. The number of passengers has grown with more than 3 % annually while the number of weekly departures has increased annually by more than 1 %. The strategic combination of enhanced route development and improved conditions for domestic air traffic will ensure that progress in regional airports continues.

Figure 8.2 | Development in the number of passengers in regional airports



Source: Data from the Danish Transport, Construction and Housing Authority

Overall, regional airports in Denmark account for about 17 % of the total passenger traffic. Billund Airport and Aalborg Airport are the two largest regional airports with a passenger share of approximately 9 % and 5 % respectively.

A significant explanation of the differences in the number of passengers is that in Billund Airport and Aalborg Airport, as opposed to the other regional airports, most passengers travel in the leisure segment. This is due, among other things, because these airports have a larger amount of charter traffic, which has provided a solid basis for the development of scheduled routes.

Figure 8.3 | The nine biggest Danish airports

Source: The Danish Transport, Construction and Housing Authority

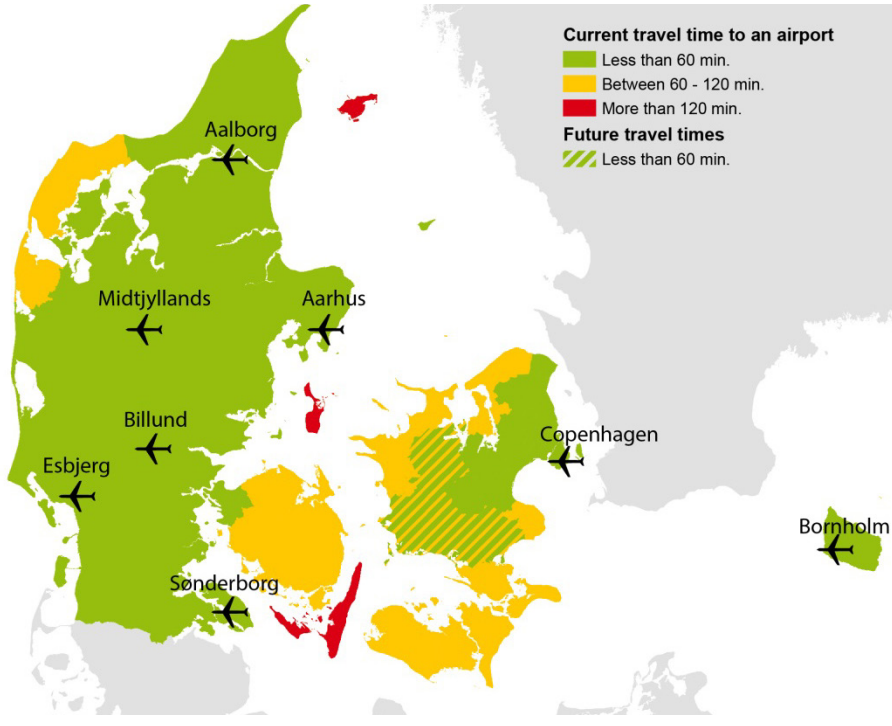
8.1. Improved infrastructure strengthens airports

Well-established road or railway connections are a vital factor in the development of Denmark's airports. For regional airports that do not have a hub function, the passenger catchment area around the airport is crucial for the possibility of attracting new routes. A sound infrastructure also contributes to tourists' ability to get from the airport to the region's cities and attractions.

Denmark has good accessibility to airports. About 80 % of the population lives within one hour's driving time by car or public transport from at least one airport offering domestic air traffic. For the remaining 20 %, with the exception of a few islands, an airport can be reached in less than two hours.

During the coming years, a number of new road and railway projects will further improve the access to the airports, for example the extension of the motorway network in Jutland, a new railway to Aalborg Airport and the new railway between Copenhagen and Ringsted.

Figure 8.4 | Travel time to an airport with scheduled traffic from Danish municipalities



Source: Illustration from the Danish Transport, Construction and Housing Authority

Among the regional airports Aalborg Airport, Esbjerg Airport and Sønderborg Airport – with the opening of the Sønderborg motorway – are situated in close proximity to a motorway.

During the last few years, a number of investments have been made in the motorway network, which will increase the catchment areas of a number of airports. In 2016, the Silkeborg motorway between Funder and Låsby was opened. This has resulted in a 12-minute saving in travel time which has, among other things, increased the catchment areas of Midtjyllands Airport and Aarhus Airport.

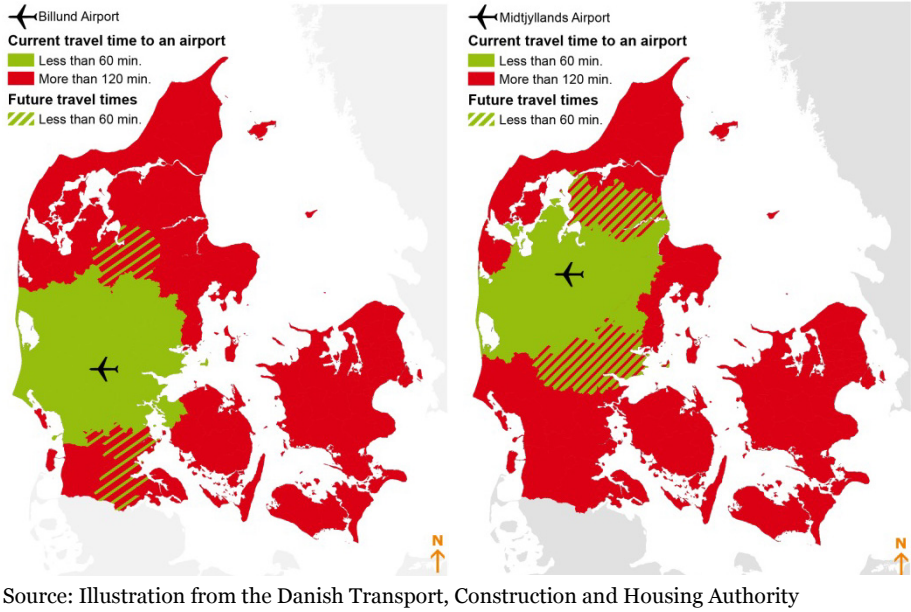
The 40 km Holstebro motorway between Holstebro and Herning is also expected to be completed in 2018. This will significantly shorten the travel time to, for example, Billund Airport from Holstebro.

With the political agreement of 13 December 2016 between the Government, the Social Democrats, Danish Peoples' Party and the Danish Social-Liberal Party, the Government also agreed to conduct an EIA study of a new motorway between Give and Haderslev via Billund in Central Jutland. The Government has also agreed to carry out a preliminary study of a new motorway connection between Hobro and Give via Viborg.

A new Central Jutland motorway will help to relieve the existing E45 motorway and provide improved mobility in Central, West and South Jutland. It will also increase Billund Airport's passenger catchment area.

Within one hour's travel time, Billund Airport and Midtjyllands Airport have a population catchment area of about 1.0 million and 0.7 million people respectively. A new motorway in Central Jutland will expand the catchment areas to about 1.2 million and 1.1 million people respectively so that more people will have quicker access to an airport and even more people will have faster access to both airports.

Figure 8.5 | Billund Airport's and Midtjyllands Airport's catchment areas before and after the building of a new Central Jutland motorway



Source: Illustration from the Danish Transport, Construction and Housing Authority

Motorways provide easier access to airports by car but public transport also plays a role in an airport's attractiveness to passengers. Aalborg Airport is the regional airports where public transport is most used and approximately 10 % of the people travelling to the airport travel by bus, particularly from the surrounding area, including about half from Aalborg and Frederikshavn.

A new railway is currently being constructed to link Aalborg Airport directly to the main railway network. This will mean that, in the future, it will be possible to take the train directly from cities like Aalborg, Aarhus or Randers to the airport.

Figure 8.6 | Current and potential catchment area of Aalborg Airport

Source: Illustration from the Danish Transport, Construction and Housing Authority

The rail link to Aalborg Airport will provide a travel-time saving of 7 minutes compared to the current bus service and passengers travelling from the south will be able to take the train directly to the airport without having to change trains. In combination with a new Central Jutland motorway, the airport railway will increase Aalborg Airport's catchment area, within one hour's travel time from the airport, from about 0.5 million to about 0.7 million persons.

For Aarhus Airport in Tirstrup, the majority of passengers arrive on route 15 from Aarhus. Route 15 has been upgraded over the years, so that there is now a motorway to Løgten and an expressway on the remaining road to Tirstrup. In 2016, the expressway section between Løgten and Bale was expanded to a 2+1 lane expressway. In addition, the speed limit was raised to 100 km/hr on the expressway between Løgten and Ugelbølle.

Route 21 from Randers is also an important route for passengers to Aarhus Airport. This road has been upgraded a number of times over the years, most recently with the establishment of an expressway between Sdr. Borup and Assentoft which carries traffic south of Randers on a 2+1 lane expressway with a maximum speed of 100 km/hr.

Socioeconomic analysis of improved infrastructure to airports in Denmark

Current socioeconomic analyses of infrastructure improvements to and from airports in Denmark focus primarily on travel-time savings for passengers travelling to and from the individual airport.

In the course of its current work aimed at improving the socioeconomic method, the Ministry of Transport, Building and Housing will initiate a project aimed at investigate the positive effects for airports of larger catchment areas. This concerns the effect on passenger numbers and ultimately the impact on connectivity to and from a given airport.

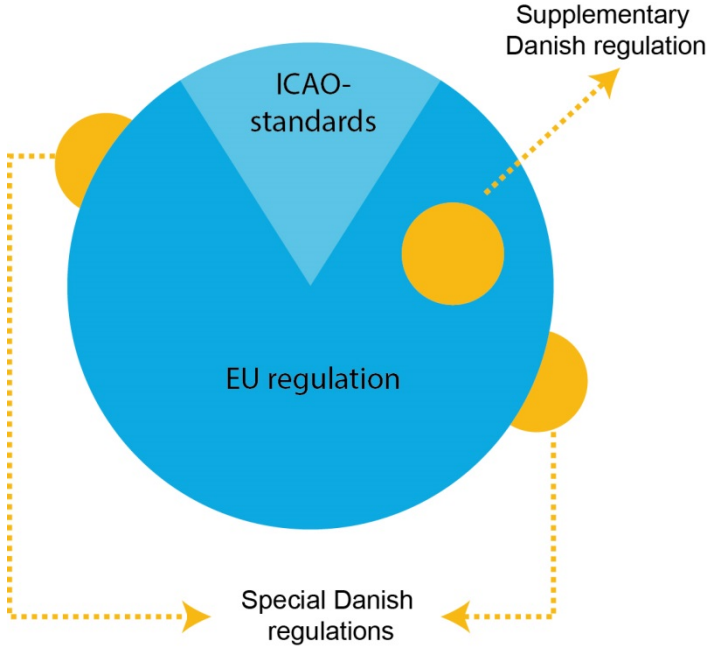
8.2. Service check of security at regional airports

Irrespective of passenger numbers, the aviation sector requires significant investments in infrastructure and staffing and, as far as the smaller airports in Denmark with relatively low passenger numbers are concerned, they involve relatively high resource costs per passenger.

This is particularly true in the security check area, where the demands on personnel and procedures are high because of the large and legitimate focus on the prevention of illegal acts against civil aviation. This means that meeting the safety requirements of airports and passengers is a very cost-intensive task for airports. For smaller regional airports in particular, security costs represent a significant proportion of the airport's total costs.

The security efforts of airports and airlines are mainly governed by EU regulations and international standards but they are also governed by supplementary Danish regulations in accordance with EU regulations and special Danish regulations.

Figure 8.7 | Security regulations in aviation



Source: Illustration from the Danish Transport, Construction and Housing Authority

Current security requirements have largely emerged as a reaction to specific attacks on aviation that have identified gaps in previous security efforts. The reaction has typically been that new demands have been placed on airports and airlines in order to close these gaps. This approach has greatly reduced the risk that the same attacks on aviation will occur again. At the same time, however, this approach has created layer upon layer of requirements that the airlines and airports must meet. This is especially challenging for the smaller regional airports that have to meet the same set of regulations as major airports with international connections and better opportunities for economies of scale.

The current threat level is high, so at present it is not appropriate to relax security efforts. But if the regulatory framework that the airlines and airports

have to live up to is too complex, it will challenge their ability to comply with the regulations. There is therefore good reason to undertake a service check of the regulatory framework.

Effective regulations and continued high safety

A service check must ensure that the regulations are effective and provide a basis for a high degree of safety. This means that the regulations must be:

- comprehensive and sufficient in relation to the current threat level and threat picture,
- designed with the lowest possible complexity, since aviation security depends upon how well airlines and airports understand and comply with the regulations in practice, and
- containing the possibility of using new technology that can deliver the same security as known solutions but with higher efficiency.

The Danish Transport, Construction and Housing Authority will carry out this service check by making a systematic review of current Danish security regulations and removing unnecessary national special regulations which have been implemented in addition to EU regulations.

Where the EU has committed member states to make national regulations that complement EU regulations, the service check must ensure that the Danish regulations are in line with the corresponding regulations in our neighbouring countries. All in all, this service check must ensure that Danish regulations are similarly comprehensive compared to other EU member states.

The service check must take place in close interaction between authorities and representatives of the Danish aviation industry. Among other things, the working group should look at modernising the education requirements for security personnel. For example, more flexibility should be permitted for the companies to organise and implement statutory education programmes for their security personnel.

Qualification programs in the field of security are divided into individual education and training modules. The working group should examine the possibility of subdividing existing modules into shorter and less comprehensive

mini-modules, better tailored to the needs of individual airports. This type of subdivision will increase flexibility for both employer and employee.

In addition, the training of security staff should be opened up as much as possible. Competent and independent third parties should be able to handle all or part of the education and training tasks, currently carried out by the Danish Transport, Construction and Housing Authority. This will benefit the regional airports because this should help create greater flexibility in the supply of education.

The scope and content of the requirements for education and training must also be reviewed. This applies, among other things, to the requirements for vehicle inspection training and the training in hand luggage and cargo screening which are two areas that are especially challenging in smaller airports.

Focus areas in the service check of security

Among other things, the working group should examine:

- the field of education and training of security personnel
- the authority's approval of transport companies

In addition to education and training, the working group should also look at the possibility of repealing the current requirement for regulatory approval of transport companies who transport air cargo and supplies to airports and airlines. Denmark is the only EU member country that imposes such a requirement on the transport companies involved. By repealing this special Danish requirement, transport companies will no longer require special approval. Instead, the authorised cargo handling agent working with the transport company will be responsible for ensuring that the freight is safely transported all the way from the customer and into the aircraft's cargo hold.

As part of the supervision already being carried out by the Danish Transport, Construction and Housing Authority with the approved cargo handling agent, the Authority must also ensure that the cargo handling agent fulfil its responsibility for transport from the customer without any breach of security.

In relation to the EU, the Danish authorities must engage in close dialogue with representatives from the aviation industry and authorities in other countries to determine the consequences of new regulations. In addition, dialogue with other countries, including with the Nordic and Baltic countries, must test Danish views on new regulations and, in particular, ensure that EU regulations are understood and implemented equally.

In the long term, Denmark shall work to reduce the extent of detailed regulations at the European level. New regulations should, to a greater extent, make it possible for each airport to assess its security operation on the basis of a local risk assessment associated with flights from that particular airport. This should be seen as a possible alternative to the current method whereby all airports must comply with the same security requirements, regardless of the size and function of the airport.

The use of local risk assessments as a basis for setting up local security operations must be supported by a management system that ensures that each airport is able to handle airport security systematically and with at least the same level of security as today.

For national authorities, such a change would mean that the supervision of airport security could be carried out with an emphasis on assessing the maturity of the airport security management system and the practical effectiveness of the security system.

INITIATIVE (14) The Government wishes to focus on the Danish security rules with a view to investigating whether there are unnecessary special rules for small airports in Denmark. Consequently, the Danish Transport, Construction and Housing Authority has set up a working group with members from the aviation industry, which is to carry out a service check of the rules.

INITIATIVE (15) The Government wants to strengthen the dialogue between the Danish authorities and the authorities of other nations to ensure that the EU rules are understood and implemented identically.

INITIATIVE (16) In the long term, the Government wants to work at the European level to reduce the use of detailed regulations so as to ensure focus on the effect of security measures instead of how the effect is achieved.

8.3. Strengthened coordination between authorities and the aviation industry

As authority for civil aviation, the Danish Transport, Construction and Housing Authority is responsible for ensuring that regulations, procedures and security plans are complied with at individual airports and airlines, while the police authority regularly assesses the level and nature of security threats. The Danish Transport, Construction and Housing Authority and the police are therefore continually in contact so that additional or extraordinary security measures can be introduced quickly if the nature of the security threat changes.

SKAT, the Danish Tax Authority, is also in continually contact with the airports. The Danish Transport, Construction and Housing Authority therefore also cooperates closely with SKAT regarding information exchange.

INITIATIVE (17) Being the authority responsible for the sector, the Danish Transport, Construction and Housing Authority takes a coordinating role for the authorities to which the regional airports have contact. The Danish Transport, Construction and Housing Authority ensures that the authorities meet regularly to coordinate initiatives relating to the regional airports. This is to ensure good dialogue and efficient cooperation between the authorities for the benefit of the regional airports.

INITIATIVE (18) The Danish Transport, Construction and Housing Authority and the Danish tax authorities will evaluate the existing cooperation agreement with a view to strengthening the exchange of information and the use of joint supervision.

8.4. Remote control of air traffic services

In order to maintain and develop the aviation sector's contribution to Denmark's connectivity, it is necessary to ensure that Danish airports can achieve and maintain an effective flow of traffic. This can be achieved, for example, by incorporating new technological solutions into the management of air traffic.

Air traffic to and from an airport is controlled by the air traffic service. Depending on the airport's volume and type of traffic, this service is provided by either an air traffic control service (ATC) or as an aerodrome flight information service (AFIS). Both types of air traffic service are linked to a control tower in connection with the airfield.

Naviair has initiated a strategic project for the remote-control of regional airports based in a single control centre in Billund Airport. This should help to ensure more efficient and economic air traffic management by providing the services needed, when they are needed, to optimise the use of capacity. Air traffic services at individual airports will be gathered together at a central location which receives information concerning the conditions at each airport by means of video links.

In Sweden, remote-controlled air traffic services are already in use at Örnsköldsvik Airport. This airport is served by a control center in Sundsvall, located approximately 100 km away. In Norway, the Norwegian service provider AVINOR also works with the use of remote services.

INITIATIVE (19) Naviair has initiated an investigation of the possibility of operating the Danish regional airports without staffing the air traffic control towers. A further investigation will be made in 2017 with a view to clarifying financial, operative and technical aspects. The preliminary plan is to establish a joint centre at Billund.

9. Good connectivity to and from the Faroe Islands and Greenland

For Greenland and the Faroe Islands, the aviation sector is not only important for the economy and internal cohesion. The sector provides a crucial link to the outside world and for Greenland it is the only effective way of binding the different societies together in spite of large geographical distances.

Air traffic between Denmark and Greenland and the Faroe Islands has been characterised by a continuous increase in the number of passengers although the number of departures between Denmark and the Faroe Islands is relatively lower today than it was in the period up to 2012. The Government wishes to achieve a strong unity of the realm. Well-established transport options between Denmark and the Faroe Islands and Greenland respectively support this.

9.1. Development of aviation in the Faroe Islands

Aviation connects the Faroe Islands with the outside world. This connection is mainly via the international airport, Vágar, which provides routes to Denmark, Norway, Iceland and the United Kingdom. There are also a number of helicopter landing sites on the islands.

In the Faroe Islands, Atlantic Airways is the primary carrier. Atlantic Airways is 100 % owned by the Government of the Faroe Islands. Atlantic Airways operates a daily service between the Faroe Islands and Copenhagen and also flies twice a week to and from Billund, Reykjavik, Bergen and Edinburgh. It also provides seasonal routes from the Faroe Islands to destinations in for example Greece, Portugal and Spain.

Atlantic Airways has succeeded in stimulating the demand for flights to the Faroe Islands by lowering fares, although this has challenged the profitability of the service. In March 2017, SAS also opened a route between Copenhagen and the Faroe Islands and this could challenge Atlantic Airways' route and earnings.

Aviation's economic footprint on the Faroe Islands

Faroese aviation is of major importance to the Faroese economy. An analysis from Copenhagen Economics (2016b) has shown that aviation has generated more than 200 jobs on the Faroe Islands in the aviation sector and supports about 465 jobs and accounts for 2.6 % of the Faroe Islands' GDP. The significant socioeconomic value of the aviation industry is partly due to the fact that connectivity to the outside world makes the Faroe Islands more attractive for investments, trade and tourists.

From the Faroese perspective, consideration is being given to taking over responsibility for aviation and joining the European Common Aviation Area (ECAA). Since 2016 the Faroese and Danish authorities have been working together in order to prepare the decision guidelines for taking over the aviation area.

On 20 January 2017, the Danish Minister for Transport, Building and Housing, Ole Birk Olesen, and the Faroese Government's Spokesman for Foreign Affairs and Business Affairs, Poul Michelsen, approved the terms of reference for a working group to be set up to address the Faroese taking control of aviation matters.

This task will be conducted in two stages. The first stage will focus on identifying opportunities for creating Faroese competences within the authority area and the possibility of taking control of operational tasks.

This stage will also examine the possibilities and requirements for establishing an independent Faroese flight information region (FIR) in the airspace in and around the Faroe Islands.

The second stage will focus on describing what the taking-over of responsibility for aviation matters will call for in terms of, among other things, development of competencies.

The first stage is expected to be completed in 2017 and the second stage will be completed as soon as possible, depending on the task's complexity. The results from the working group's overall task will be the subject of a report.

The Faroe Islands has also expressed its wish to be included in the agreement of a ECAA between the EU, Iceland, Norway and a number of Balkan

countries. Work is currently being undertaken jointly by Denmark and the Faroe Islands to identify the possibilities and the manner in which the Faroe Islands might join the ECAA.

The ECAA is based on free market access, freedom of establishment, equal conditions of competition and common regulations, including regulations governing air safety, aviation security, air traffic management, labour relations and the environment.

INITIATIVE (20) The Government will work towards the establishment of a solid foundation for the Faroe Islands' decision on taking responsibility for the aviation sector in the Faroe Islands.

INITIATIVE (21) The Government will work actively towards the accommodation of the Faroe Islands' wish to accede to the ECAA Agreement.

9.2. Development of aviation in Greenland

There are 13 airports in Greenland, two of which, Kangerlussuaq Airport and Narsarsuaq Airport, serve as international airports. The remaining 11 are domestic airports. There are also 46 helicopter landing sites and four military airfields.

The many smaller domestic airports and helicopter landing sites are crucial for connecting the Greenlandic community in spite of the large geographical distances.

Greenland's airline Air Greenland has three owners, SAS (37.5 %), Naalakkersuisut, the Government of Greenland, (37.5 %) and the Danish state (25 %). Air Greenland operates both with charter and scheduled air traffic. Domestic air traffic in Greenland is provided on the basis of a service contract, and is therefore the only subsidised activity within the company.

Flights to and from Greenland have been exposed to competition in the last 20 years. However, this is not a very large market and there are significant logistical challenges involved so there has been no substantial competition although Iceland Air has achieved 10 % share of the market over the past 10 years.

Airport projects in Greenland

At a meeting in autumn 2015, Inarsisartut, the Parliament of Greenland, decided that a number of airports will be established in the coming years. The projects are as follows:

- Nuuk: Extension of the runway to international airport standard (950 m to 2,200 m)
- Ilulissat: Extension of the runway to international airport standard (from 845 m to 2,200 m)
- Qaqortoq: Construction of a north Atlantic airport (1,499 m runway)
- Tasiilaq: Construction of a north Atlantic airport (1,499 m runway)
- Ittoqqortoormiit: Construction of a regional airport (650 m runway)

On 1 July 2016, Naalakkersuisut established the company Kalaallit Airports A/S, which is responsible for the work to be carried out in relation to the airport projects in Nuuk, Ilulissat and Qaqortoq. The project and financing plans are currently being prepared. Other airport projects are anchored at the Ministry of Municipalities, Settlements, Outlying Districts, Infrastructure and Housing.

Since 1963 and 1975 respectively, Denmark has had agreements with Canada and Iceland concerning the provision of air traffic control in the airspace over and around Greenland. Canada controls traffic above 19,500 feet around the southern tip of Greenland, and Iceland manages air traffic above 19,500 feet over the rest of Greenland.

With support from Inarsisartut, Naalakkersuisut has started work on describing a time and process plan for transferring the jurisdiction of air traffic to Greenland. In this regard, Greenland has contacted Denmark in order to jointly identify specific areas within the current division of jurisdiction between Denmark and Greenland which Greenland potentially may perform.

10. High-priority and targeted route development in Denmark

Connectivity is measured by the number of direct and indirect connections between Denmark and international destinations. Each new route or additional departure on an existing route thus create value for Denmark by the direct, indirect and catalytic effects of increased connectivity. This applies not least to new routes from the airports in West Denmark, which do not have the same large network of routes as Copenhagen Airport.

To attract new routes, it is important to cultivate a passenger base. As described in chapters 5 and 8, the catchment areas around the airports play a significant role in this respect. Another option is to attract tourists and business travellers from other countries. In this aspect, public actors such as VisitDenmark play a key role in marketing Denmark.

VisitDenmark is also involved in Global Connected, a partially state-funded route development programme that focuses on attracting airlines to Danish airports, for example by contacting airlines that show interest in Denmark and by participating in international fairs. The airports themselves also work on route development.

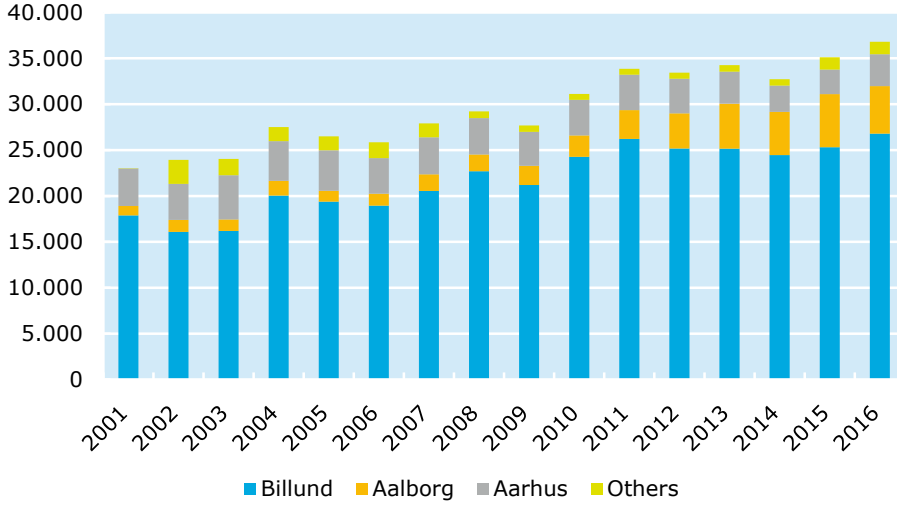
Coordinated efforts must be ensured to attract new routes to Danish airports. In this respect, there must be strong focus on regional airports, as the effect of just one new route to a major European airport can have very high socioeconomic value for both the local areas and Denmark as a whole.

In 2016 the regional airports contributed with 16 % of international flights departures and 12 % of the outbound international passengers. The progress is mainly led by international traffic in Billund Airport and Aalborg Airport. Billund Airport is heavily investing in routes to European hubs and, as the only regional airport, has a greater proportion of foreign than domestic passengers, with domestic passengers accounting for only 7 % of the total number of passengers in 2016.

The new international connections expand the opportunities for business and tourism but at the same time it means that more passengers than before

now travel through other major European hub airports rather than Copenhagen Airport.

Figure 10.1 | Annual number of flights to and from international destinations by scheduled traffic



Source: Data from the Danish Transport, Construction and Housing Authority

10.1. New international routes generate increased value

New routes between Denmark and foreign destinations increase Denmark's connectivity and can therefore have major socioeconomic significance. This is particularly true if the route goes to a hub airport where there are many indirect connections between Denmark and destinations in the rest of the world. The number of weekly frequencies also affects the value of connectivity, just as this value also depends on whether the route is already serviced.

Summary of Copenhagen Economics' (2016a) analyses of the effect of new routes and extensions of existing routes

Based on a larger mapping of the route network at Copenhagen Airport, Copenhagen Economics (2016a) has identified the routes with the greatest commercial potential for a new route launch or expansion of existing routes in the form of several weekly departures.

On the basis of InterVistas (2015), Copenhagen Economics (2016a) has

estimated the potential impact on GDP from increased connectivity through different routes and extensions of existing routes from, among others, Copenhagen Airport. The analysis assumes that the relationship between GDP and connectivity is the same for all routes, while the conclusion of connectivity varies from route to route. The effect on connectivity depends, for example, on whether the destination is already well-connected from Denmark.

The impact on GDP is estimated by Copenhagen Economics (2016a) to be greatest for new intercontinental routes. This is because there are fewer existing routes to destinations outside Europe, and that new intercontinental destinations increase the possibility of travelling with one stopover to several unsecured destinations. Thus, new intercontinental routes provide a greater increase in connectivity when compared with new European routes, as there is already a very wide network of routes between, in particular, Copenhagen Airport and destinations in Europe. For the same reason, connectivity increases more with new European routes from regional airports than new European routes from Copenhagen Airport.

Assuming that, on the basis of InterVistas (2016), a 1 % increase in connectivity equals an increase of 0.025 % of GDP per capita, creating a new intercontinental route and European route from Copenhagen Airport respectively provides a basis for a potential GDP effect of DKK 250-375 million and DKK 15-40 million. This calculation is based on the assumption that the route is operated by a network carrier, while a low-cost carrier creates the basis for a potential GDP effect of DKK 20 million on an intercontinental route and DKK 10-15 million on a European route. The size of the GDP effect is subject to considerable uncertainty and the fulfilment of this potential will ultimately depend on such things as building new trade relations and increasing knowledge sharing, compared with a situation without one of these direct connections.

Copenhagen Economics (2016a) shows that there is a significant difference between the connectivity that a network carrier or a low-cost carrier create on a new route. Thus, the effect on connectivity can be up to 20-30 times higher for an intercontinental route when the route is operated by a network carrier rather than a low-cost carrier. This reflects the fact that network carriers, together with their alliance partners, fly to hub airports more frequently than low-cost carriers.

The Copenhagen Economics (2016a) analysis also shows that the typical lower fares in low-cost carriers mean that the benefits for passengers per departure are greater than when flying with a network carrier. This reflects the fact that travel time is the same regardless of airlines, while the fare is generally lower with a low-cost carrier than with a network carrier.

Lower ticket prices provide socioeconomic value

Another way to measure the positive socioeconomic impact of increased connectivity is to focus on changes in passenger benefits. The figure below illustrates the effects on passengers resulting from time savings and lower fares and changes in traffic volume.

Source: Illustration from Copenhagen Economics (2016a)

Copenhagen Economics (2016a) shows that on a per departure basis, passenger benefits are greatest when using a low-cost carrier because of the lower fares compared with a network carrier. At route level, passenger benefits are the greatest when using network carriers as these carriers typically operate several flights per route each week compared to a low-cost carrier whereby the time savings for the passengers increase.

The calculation of passenger welfare with changing traffic volumes follows the socioeconomic method used in general analyses of the transport area based on the "Manual for Socioeconomic Analysis - Applied Transport Method and Practice" (2015)

It is not only the expansion of traffic from Copenhagen Airport which can create value for Denmark through increased connectivity. New routes or additional weekly departures from regional airports, particularly to European hubs are also estimated to support significant value creation for Denmark.

Both Billund Airport and Aalborg Airport have experienced growth in the number of international departures in recent years, largely due to strategic and structured work on route development. This work entails participation

in route trade fairs and conferences and ongoing dialogue with airlines and local interest organizations concerning interesting new routes and airport development. The result is a solid expansion of both the route programme and the number of airlines in both airports.

In 2016, for example, Billund Airport announced a new route to London Heathrow with British Airways. This could be very important to connectivity in West Denmark because of the extensive network of routes from Heathrow Airport.

10.2. A comprehensive concept for route development

Route development should primarily be anchored in the commercial interests of airlines or airports. But given the high socioeconomic benefits of connectivity, it is important for the Government that route development is supported and coordinated.

Today, route development is carried out indirectly by various state actors. The Danish Transport, Construction and Housing Authority is responsible for Denmark's bilateral air service agreements while the Ministry of Foreign Affairs, including Invest in Denmark, is responsible for advising companies on establishment opportunities in Denmark.

In addition, the route development initiative Global Connected is responsible for route development in the form of destination marketing. Global Connected is anchored in Wonderful Copenhagen, but is split into Greater Copenhagen Connected and Vestdanmark Connected, respectively. The Global Connected programme was established in 2010 and is financed by state, regional, municipal and private funds.

There is a need for greater cooperation and coordination between the large number of actors. Therefore, the Government will establish an interministerial collaboration to establish a set of criteria that reflects the socioeconomic value of a potential route. This list can be used by Global Connected to prioritise the routes that are also of commercial interest to the airlines. This will contribute to the fact that Global Connected uses its funds to concentrate on those routes that are both of commercial and socioeconomic interest for Denmark.

In addition, the Ministry of Foreign Affairs will ensure that route development is included in the agenda for ministerial visits in countries that Global Connected considers interesting.

INITIATIVE (22) The Government will secure strong cooperation between relevant Danish authorities regarding development of routes and thus contribute to establishing new routes to and from Denmark.

INITIATIVE (23) Government will work to ensure continued financial support to the Global Connected route development programme.

INITIATIVE (24) The Government will investigate the possibilities of increasing support and intensifying efforts for route development in Western Denmark.

10.3. Liberal aviation agreements create connectivity

An element in route development is Denmark's aviation agreements with other countries on how scheduled flights between Denmark and the respective country should take place. The Government desires these agreements to be as liberal as possible, so that they do not stand in the way of route openings and increased connectivity.

In connection with the work on a political aviation strategy, a review of existing agreements has shown that some of them can create barriers to new route openings or extensions of existing routes, and that there is potential for entering into agreements with countries with whom Denmark has not previously had any agreements.

The Government will have an interministerial focus on identifying the possibilities for liberalisation of aviation agreements with, in particular, Russia, Japan, South Korea, China, India and Turkey. These agreements contain various restrictions on, for example, the number of weekly frequencies, which airports can be flown to or which airlines may fly between countries.

Denmark negotiates bilateral aviation agreements in cooperation with Sweden and Norway. One of the Scandinavian goals is that agreements should be concluded with as many countries as possible on schemes that are as liberal as possible and based on reciprocity. Denmark currently has bilateral agreements with 67 countries.

Denmark's bilateral aviation agreement with Russia

Danish scheduled air services to, from and over Russia are regulated in an aviation agreement between Denmark, Norway, Sweden and Russia from 1956 with subsequent amendments. This agreement contains a number of limitations. This means, among other things, that only one carrier may be designated on the various routes to and from Russia, as well as for overflying Russian territory on flights between the three Scandinavian capitals and seven cities in the Far East. SAS has been the designated airline since the 1960s.

At the recent bilateral negotiations between the three Scandinavian countries and Russia in June 2016, the Scandinavian authorities put forward the need for modernising the agreement regarding overflying. This is to allow for an expansion for the designated airline, SAS, and for the inclusion of additional airlines, e.g. Norwegian, from the Scandinavian side. Denmark is still working for a liberalisation of the agreement with Russia.

Within the European Economic Area, the EEA (the 28 EU countries, Norway and Iceland), a single market for aviation has been gradually established since the 1980s with equal and free access for all EU/EEA airlines. Denmark is linked to the 28 EU countries and 16 other countries through different types of EU aviation agreements, which largely replace the bilateral aviation agreements with the respective countries.

During the past 10 years, EU aviation agreements have been concluded with major aviation countries such as the United States and Canada, as well as countries such as Morocco, Israel, Jordan, Moldova and Georgia.

In 2016, the Commission negotiated EU aviation agreements with Brazil, Ukraine, Tunisia and Azerbaijan, and in the same year, at the meeting of the Transport, Telecommunications and Energy Council, the member states mandated that the Commission could begin negotiations with ASEAN countries, Qatar, the United Arab Emirates, Turkey and Armenia.

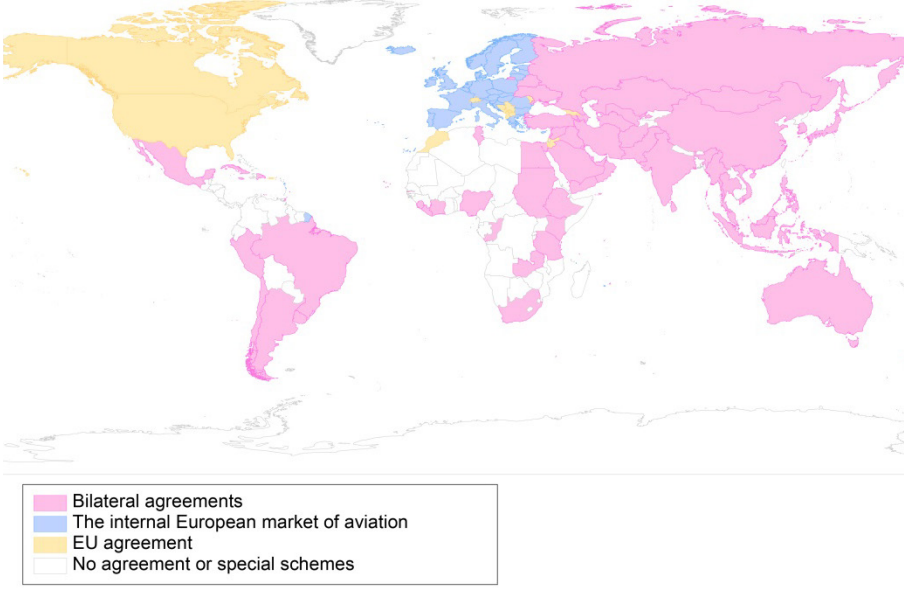
Clear taxation agreements in the aviation sector

Denmark has 71 double taxation agreements (DBOs) and 9 tax agreements relating to aviation. The purpose is to prevent the same income from being taxed both in the country where the income comes from

(source country) and in the country where the person receiving the income is tax resident (the country of residence).

Denmark negotiates new taxation agreements on aviation when needed. The Danish network of tax treaties will therefore be continuously expanded as Denmark receives requests from foreign tax authorities or Danish airlines wishing to negotiate new agreements or clarify existing agreements. Against this background, the Ministry of Taxation will continue to work for the conclusion of new, relevant and socially-responsible tax agreements.

Figure 10.2 | Overview of Denmark's various aviation agreements



Source: Illustration from Danish Transport, Construction and Housing Authority for 2017

Aviation agreements allow for establishing specific routes, but it is the airlines themselves that decide if they want to operate on these routes. In mid-2016 there was a direct scheduled air service between Denmark and about 42 of the 110 countries covered by either EU aviation agreements or bilateral agreements. On the Danish Transport, Construction and Housing Authority's website, new and up-to-date Danish bilateral air service agreements are published to the extent that they are not linked to confidentiality clauses. This

makes it easier for foreign airlines to get an immediate overview of the possibilities for establishing routes to and from Denmark.

INITIATIVE (25) The Government will continue the work of making new aviation agreements with relevant third countries on as open and liberal terms as possible.

INITIATIVE (26) The Government will ensure increased coordination between ministries so as to ensure that aviation agreements will be discussed in case of ministerial visits to relevant countries.

INITIATIVE (27) The Government will focus on liberalising existing aviation agreements with relevant countries. Danish and Scandinavian airlines will be invited to participate in relevant future aviation negotiations.

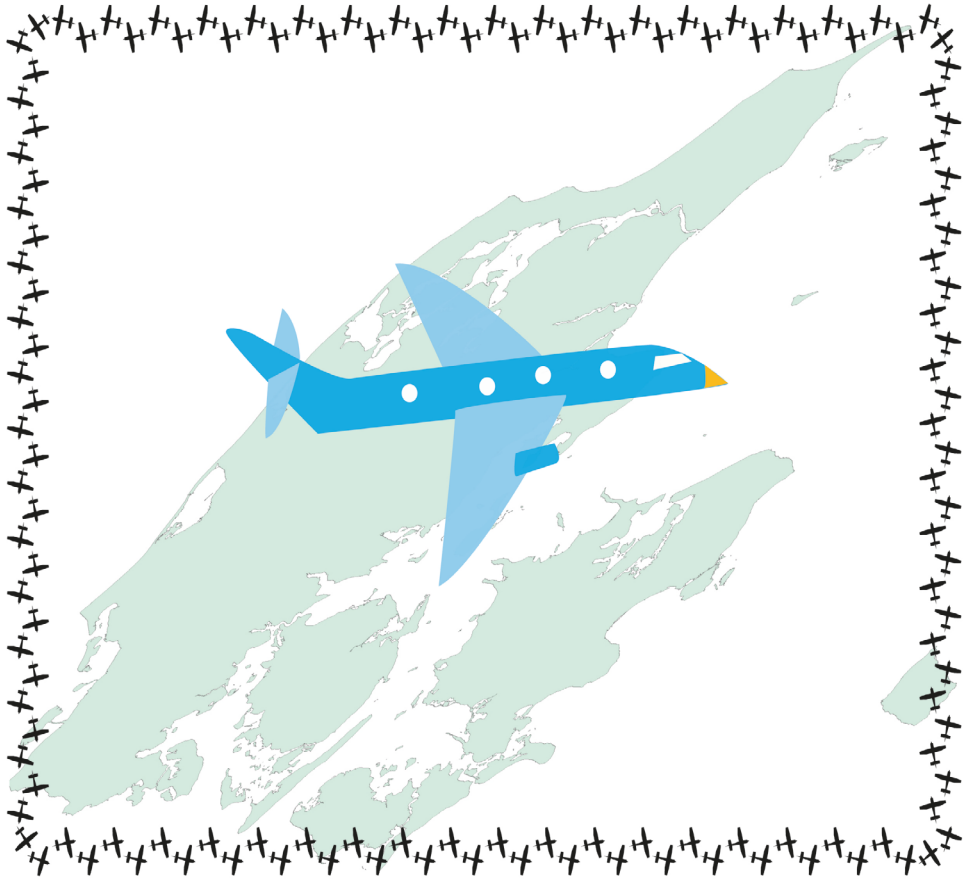
10.4. Better access to the United States

Several airlines with operations in Denmark, including SAS and Norwegian, have routes to the United States. Passengers on these routes can experience long and unpredictable waiting times upon arrival on American soil as a result of customs and passport checks.

Global Entry is a US border control programme that allows airline passengers, approved by the Government and in return for payment, to become members and thus bypass normal customs and passport checks on arrival in the United States. It is expected that up to two hours per arrival in the United States can be saved, which could result in significant passenger benefits for frequent travellers.

INITIATIVE (28) The Ministry of Transport, Building and Housing will work towards identifying the needs of business and industry and the requirements of the USA to the registration of members of Global Entry with a view to clarifying the possibilities of whether Denmark can accede to Global Entry.

THE AIRLINES AND DOMESTIC AIR TRAFFIC



11. Improved conditions for airlines

Competition between airlines has been fierce for many years and there is no immediate prospect that it will decrease in the future. This creates both challenges and opportunities for Danish airlines. In this context, it is important that there are good conditions for Danish airlines. This must be achieved by focusing on whether the cost level in Denmark can be lowered and by working to ensure clear and unified regulations and guidelines both at national level and in relation to EU and non-EU countries.

Another key area for Danish airlines is access to a well-trained workforce in Denmark, including pilots and mechanics. Developments in the number of qualified pilots during the years following the financial crisis have been lower than the anticipated requirements of Danish airlines. However, recent figures show that admissions to pilot training have risen to 100 candidates, corresponding to the expected annual requirement. Looking ahead, developments in the number of newly-trained pilots should be closely monitored in order to avoid a shortage of pilots in the future. The number of applicants for flight mechanic training has also been in decline. The parties involved in the training of flight mechanics have submitted an application for an update of the training programme and this is now under consideration.

International airlines should also enjoy good conditions for their operations in Denmark, provided that foreign airlines comply with Danish and international legislation. This applies to both low-cost carriers that provide passenger benefits in the form of cheaper tickets, and to network carriers that, through their own network and interline agreements, establish connections from Denmark to destinations around the world.

Small and medium-sized enterprises are central in the value chain

Several small and medium-sized enterprises (SMEs) are directly and indirectly engaged with Danish aviation. These include a range of company types from flying schools, smaller aircraft workshops, manufacturing and design companies, air taxi companies, smaller domestic airlines etc.

These companies contribute to the Danish economy in terms of both jobs, increased national connectivity and overall productivity gains for Denmark

11.1. Equal market conditions in EU aviation agreements

Increasing global competition increases the pressure on airlines to reduce their costs. In recent years, the strong growth of particularly Gulf State airlines, especially from the United Arab Emirates and Qatar, has led to greater competition for European companies. This is particularly true of traffic between Europe and South/Southeast Asia and Australia/New Zealand.

Entering into joint aviation agreements between the EU and third countries can improve the competitive conditions for both Danish and foreign airlines and can create better transport opportunities and economic growth for EU member states. Common aviation agreements can also be used to support fair competition in aviation, for example, if the agreement contains requirements relating, in particular, to international standards for the aviation labour market and addresses unfair practices that make European airlines less competitive on the international stage. Common aviation agreements are thus key means of ensuring increased competitiveness for i.e. Danish airlines.

At an EU meeting in the Transport, Telecommunications and Energy Council on June 7th 2016, member states gave a mandate to the Commission to negotiate joint aviation agreements with the United Arab Emirates, Qatar, Turkey and ASEAN (Association of Southeast Asian Nations).

INITIATIVE (29) The Government will work to ensure that joint aviation agreements with third parties promote international standards for the labour market and equal competition.

INITIATIVE (30) The Government will support the European Commission's work to limit disloyal forms of practice in third countries and of operators in third countries.

11.2. Clear and uniform regulations at EU level

Strong competition between airlines to reduce operating costs and increase flexibility has resulted in the emergence of new business and employment models. The increased competition that really accelerated in the 1990s has had very positive impact on aviation in the EU, particularly for the consumer in terms of more routes and lower prices.

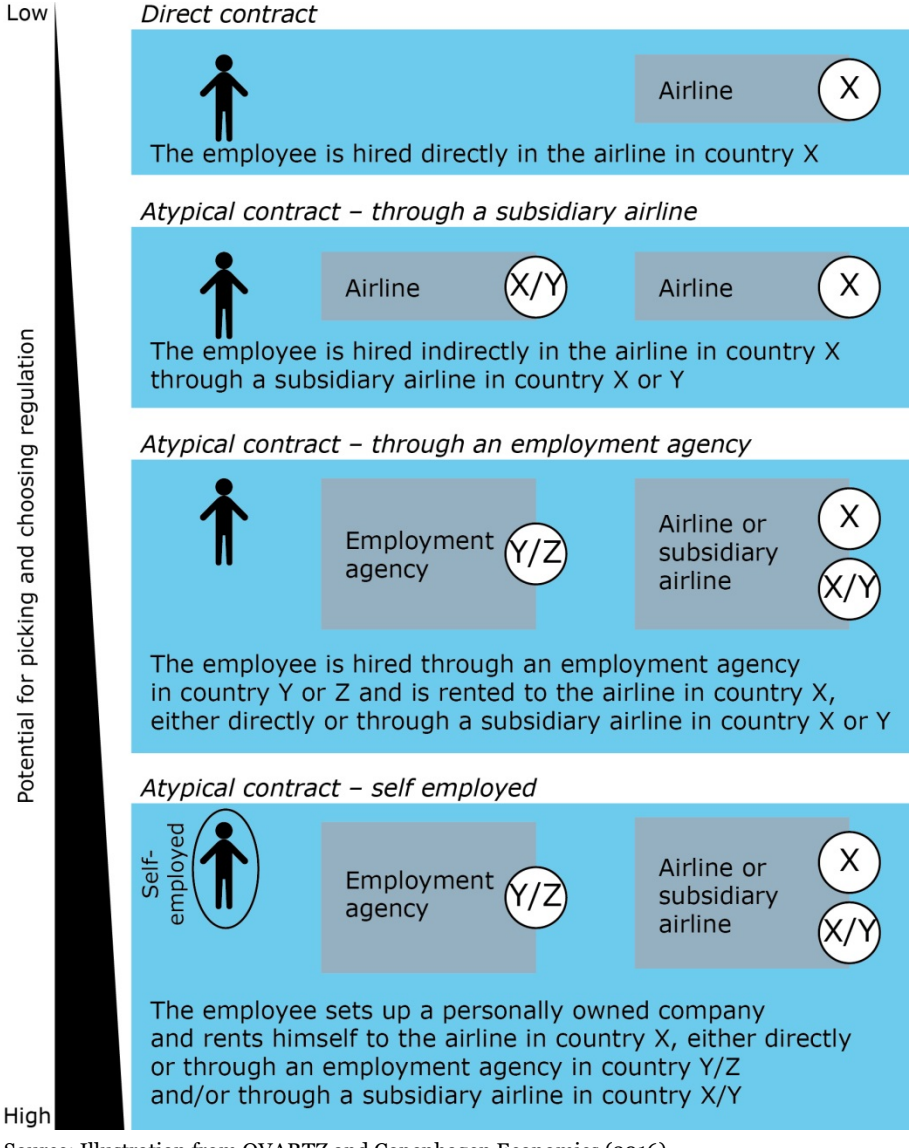
However, market liberalisation has also been a driving force for other competition in the form of exploitation of unintended differences among member states' implementation, application and administration of rules and regulations. For example, there may be challenges when airlines employ personnel through recruitment agencies or as so-called "self-employed" personnel. The situation is further complicated if the recruitment agency is resident in another member state than the airline or if the employee's base is moved between other member states and leads to circumvention of the employee's rights.

Under circumstances such as these, it may be difficult to establish which country's legislation applies to the employee and which employer is responsible for ensuring that the employee is socially insured.

Another central issue is the monitoring of the work environment on board aircraft in the EU. The occupational safety regulations for crews on board aircraft take the form of directives, but requirements for the carrying out of the inspections are determined by national regulations. There may, therefore, be differences in member states' monitoring of their airlines, including which regulations apply and how often the inspections must be carried out.

In 2015, a Danish working group comprising representatives of industry and employers' organisations, airlines and the Danish Transport, Construction and Housing Authority proposed that it should be emphasised to the European Commission that there is a need for changing the regulations to ensure a uniform interpretation, administration and enforcement. The working group suggested that the adjustments could be made by sector-specific regulation. This would help to avoid situations whereby regulatory adjustment led to unintended changes in the regulation of sectors that do not face the same challenges and characteristics as the aviation sector. The working group's proposals for concrete initiatives were sent to the European Commission in the spring of 2017.

Table 11.1 | Illustration of the various employment structures in the EU



Source: Illustration from QVARTZ and Copenhagen Economics (2016)

INITIATIVE (31) The Government will work for the establishment of clear and transparent rules at EU level as well as rules to ensure that companies do not exploit differences in the laws of Member States, in-

cluding the implementation and interpretation of acts from the EU, in an unintended manner.

INITIATIVE (32) The Government will work for more uniform guidelines within the EU for the supervision of health and safety onboard aircraft. This is to ensure that all aircraft in the EU are subject to supervision by the authorities and that supervision is exercised according to uniform rules.

11.3. Continuous streamlining of the safety contribution

The safety contribution was introduced in 2013 and covers part of the costs of the Danish Transport, Construction and Housing Authority's supervisory activities. Previously, these costs were only covered by Danish airlines and airports, etc. The safety contribution ensures that the costs are shared by all passengers, including those of the international airlines, using a Danish airport.

The current legislation specifies that the safety contribution should be regulated once a year. The applicable rate is DKK 5.25 per passenger and has gradually been reduced since the safety contribution was first introduced. A lower contribution will lead to better conditions for airlines, thus creating a basis for higher connectivity to Denmark.

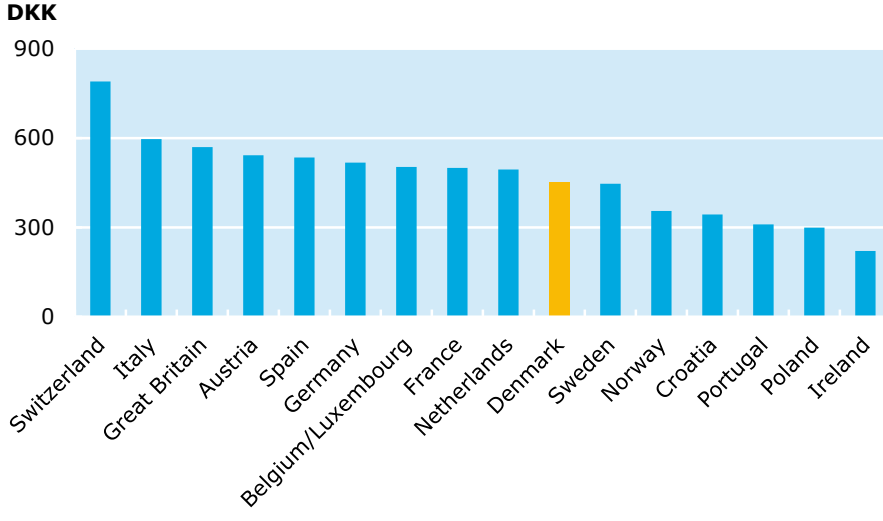
INITIATIVE (33) The Danish Transport, Construction and Housing Authority will continue to streamline the safety contribution, so that passenger growth in Denmark will benefit the airlines in the form of a lower safety contribution. This should be effected while maintaining the safety level.

11.4. Focus on lower charges at Naviair

Air traffic management includes the routing of aircraft from start to landing and it can be divided into three areas: area control, approach control and tower control. The tower control directs the aircraft during take-off and landing while the approach control carries out approach and departure control.

Area control, or "en route", covers the management of flights through Danish airspace. In Denmark, Naviair provides area control services in Danish airspace and areas where the provision of these services is delegated to Naviair from neighbouring countries. In this connection, Naviair charges an en route fee from the airlines. Figure 11.2 shows that Naviair's en route charge is competitive compared to corresponding charges levied in other countries.

Figure 11.2 | Comparison of en route charges in 2017



Note: The en route charge is calculated per 100 km per 50 tons
Source: Data from Naviair's internet homepage

Naviair also provides air traffic management in connection with arrivals and departures at Copenhagen Airport, Roskilde Airport and Billund Airport, in which respect Naviair charges a so-called TNC charge.

Naviair has continuously reduced its charges for en route and TNC, respectively. This helps to reduce the cost levels for airlines, thereby creating a basis for increased connectivity.

INITIATIVE (34) Naviair will continue its focus on reducing the "en route charge" and the "TNC charge" as air traffic management is continually streamlined.

11.5. Aviation education and training

Historically, pilot training in Denmark has had different degrees of public involvement. Today, pilot training is privatised and is made available by four SU-eligible (The Danish students' Grants and Loans Scheme) schools, the largest of which is the Center Air Pilot Academy (CAPA) which accounts for most graduating commercial pilots.

There are also a number of smaller schools that offer either module-based pilot training or what is known as "Type Rating" that certifies pilots to fly a particular type of aircraft.

In Denmark, pilot training is primarily self-financed and basic commercial pilot training costs about DKK 700,000. Type Rating training to attain certification to fly a particular type of aircraft can cost up to an additional DKK 200,000.

Following the financial crisis, admission to pilot training declined. This was partly due to uncertain job opportunities in a weakened Danish aviation industry, and partly the result of limited borrowing opportunities due to increased demands on bank's collateral for lending.

In recent years, student levels have risen and a sufficient number of pilots are now being trained in Denmark. The Ministry of Transport, Building and Housing will follow the development to ensure that this positive trend is not just a fluctuation, but the result of a more structural boost in the admission of pilot aspirants.

A sufficient supply of highly-skilled commercial pilots is important for Danish aviation because an increasing demand for pilots without a corresponding increase in supply can cause labour costs to rise, which will weaken the economic viability of individual routes and possibly lead to closures or fewer departures on certain domestic routes.

In addition to pilots, aircraft mechanics also play a key role as part of a well-functioning value chain in the Danish aviation industry. However, in recent years there has been a decline in enrolment for aircraft mechanics training and this has posed challenges for the airlines' recruitment of well-qualified aircraft mechanics. It is assessed that by making the education of aircraft mechanics more attractive, current and future needs for aircraft mechanics in Denmark can be assured.

Aircraft mechanic education is a vocational training programme where students alternate between business practical experience and school education. There are currently two approved schools for basic aircraft mechanics education in Denmark, TEC Aviation (TEC) in Hvidovre and the Armed Forces Air Force Training Center (AFTC) in Karup.

In 2016 there have been discussions between the education partners about the possibilities for creating a better and more modern platform for education.

It is assessed that an updated training course which introduces a step-by-step training programme, with step 1 (A-mechanics) followed by step 2 (B1-aircraft mechanic, mechanics) and step 3 (B2-aircraft mechanic, electronics) will increase access to education and create greater flexibility for both students and companies.

The parties involved in this training and education have submitted a development report with a view to updating vocational training for aircraft mechanics.

12. Domestic air traffic in Denmark

Domestic air traffic has a pivotal role in connecting Denmark more closely and ensuring that regional airports are connected to the outside world via the hub at Copenhagen Airport. Aviation is a fast alternative to car, bus or train and for many connections, for example to and from Bornholm or between Copenhagen and Aalborg or Sønderborg, aviation is the most efficient means of transportation.

Domestic air traffic also brings passengers to and from the international routes at Copenhagen Airport, thereby supporting the airport's hub by increasing the passenger base for these routes. Domestic air traffic is therefore an essential element in the value creation that Copenhagen Airport's major route network contributes to Denmark. Domestic routes also provide relatively high gains for employment in the aviation sector, because the routes support jobs at both ends of the route.

The Government will initiate a number of measures to further improve the conditions for domestic air traffic, thus ensuring that the good links between the regions can also be maintained and expanded in the future.

An example of the value of increased domestic air traffic

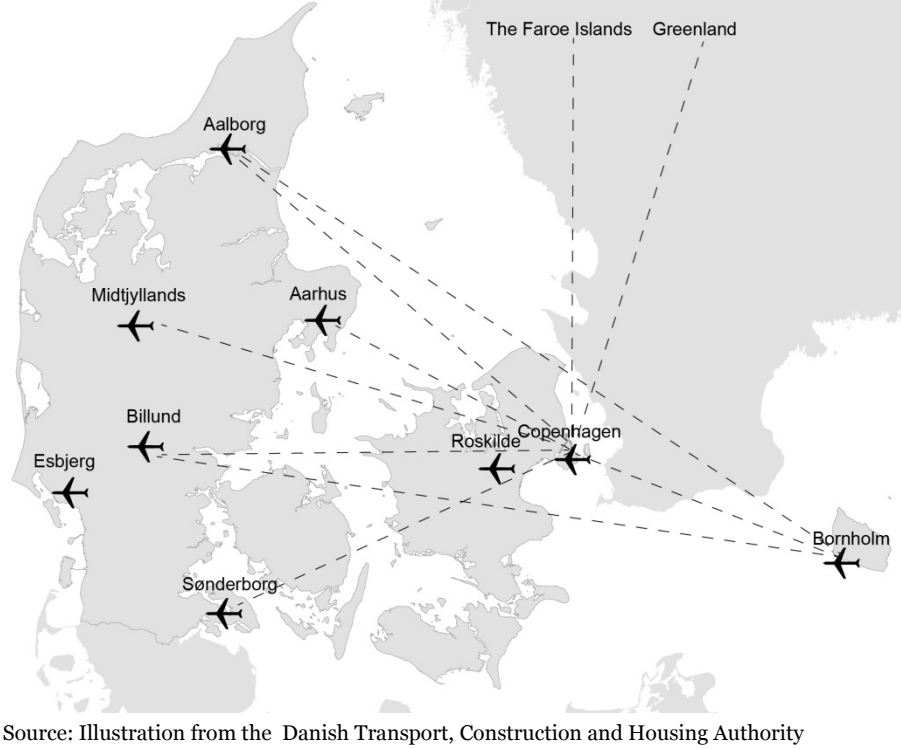
Copenhagen Economics (2016a) has analysed the value of increased domestic air traffic on the route between Copenhagen Airport and Aalborg Airport. This analysis shows that one additional daily departure will lead to an expected passenger growth of approximately 7 % and also further increase direct national connectivity.

From Copenhagen Airport's point of view, an increased frequency to Aalborg Airport does not lead to a visible increase in indirect connectivity, as Aalborg Airport's route network is covered by the network at Copenhagen Airport. From Aalborg Airport's point of view, there is greater growth in indirect connectivity, although this growth is still relatively small compared to the increase in direct connectivity. This is because there are already about 54 weekly flights from Aalborg Airport to Copenhagen Airport, so an additional daily departure does not cause any significant difference as regards the possibilities for onward travel using Copenhagen Airport's network.

Another way to assess the value for the society is to consider changes in passenger welfare. In this respect, an increased number of departures results in improved passenger welfare because it will be easier for passengers to travel at the desired time. Depending on the size of the ticket price, one extra daily departure results in annual passenger benefits of between DKK 21-30 million.

Increased domestic air traffic will also have a positive impact on employment in the aviation sector because additional personnel will be needed for ground handling, security, etc. in both Copenhagen Airport and Aalborg Airport.

Figure 12.1 | Domestic routes in Denmark and to the Faroe Islands and Greenland

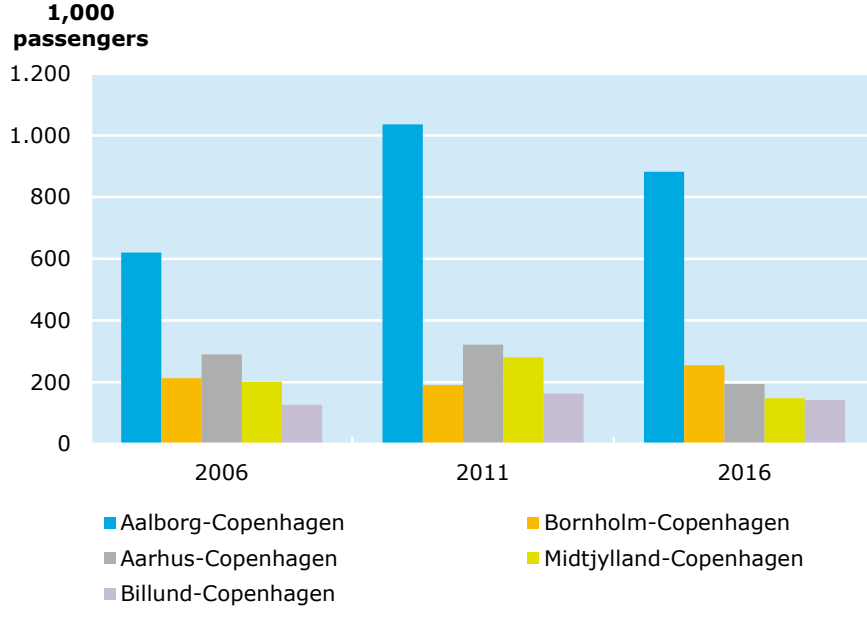


Source: Illustration from the Danish Transport, Construction and Housing Authority

12.1. A key part of the Danish transport system

For journeys between the different regions of Denmark, air travel represents a faster alternative to other modes of transport. Despite the fluctuations from year to year, there is a general trend that the route between Aalborg and Copenhagen, served today by SAS and Norwegian, is the largest in terms of passengers. However, the route between Rønne and Copenhagen, served by DAT, is also growing in importance. Unsurprisingly, this indicates that domestic air traffic, and the possibility of travelling back and forth on the same day, has the greatest significance and potential in those areas of Denmark that have the longest travelling time to Copenhagen.

Figure 12.2 | Passenger numbers on the most heavily-used domestic air routes



Source: Statistic Denmark, Table FLYV33

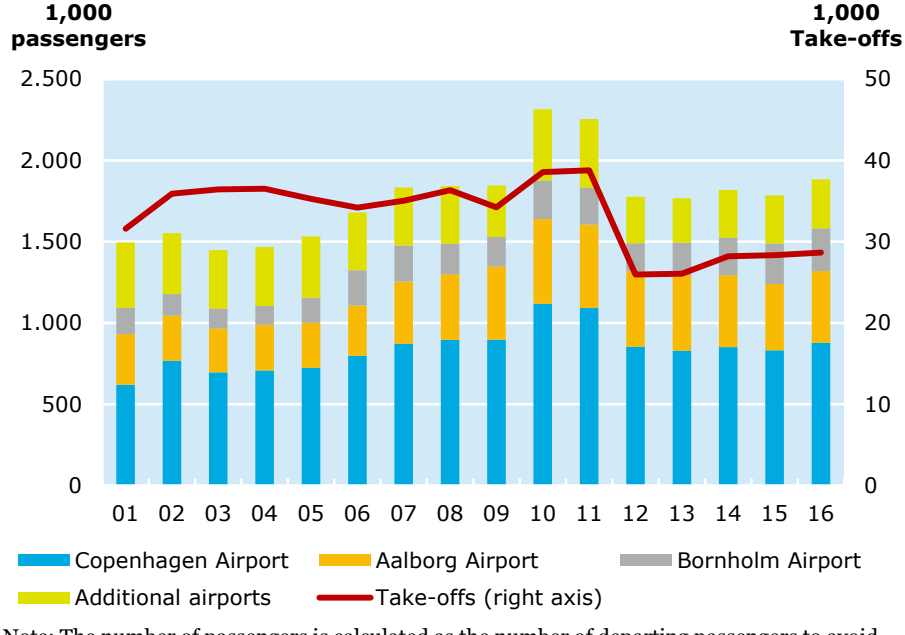
Domestic air traffic is not only tied to Copenhagen Airport. Bornholm Airport has a summer route to Billund and, from 2017 also to Aalborg, both operated by DAT.

DAT also operates the route between Midtjyllands Airport and Copenhagen Airport. This route was previously operated by both Norwegian and Cimber-Sterling.

Figure 12.3 shows that, measured by the number of passengers and departures, domestic air traffic peaked in 2011 and 2012. This was due to particularly tough competition on the route between Copenhagen and Aalborg, where SAS, Norwegian and Cimber Sterling competed for passengers. In 2012, Cimber-Sterling was declared bankrupt, which meant that the number of passengers fell to the level prior to 2010. This is partially due to the fact that the domestic air traffic to a larger extent – similarly to international air traffic – is operated with larger aircraft.

At the same time, there has been a decrease in the number of departures between Copenhagen Airport and Midtjyllands Airport and Aarhus Airport respectively. However, DAT's recent prioritisation of Midtjyllands Airport has led to an increase in the number of departures.

Figure 12.3 | Development of domestic air traffic in Denmark



Note: The number of passengers is calculated as the number of departing passengers to avoid double accounting. The figure does not contain passengers to and from Greenland and the Faroe Islands.
Source: Data from the Danish Transport, Construction and Housing Authority

There are relatively few airlines that operate Danish domestic air traffic. The example of Cimber-Sterling shows that Danish domestic air traffic is vulnerable to decisions made by these airlines. The domestic routes from Midtjyllands Airport and Sønderborg Airport are thus characterised by strong locally anchored cooperation between airport, airlines and the business sector, which cannot necessarily be taken over by other airlines.

Enhanced Danish domestic air traffic will help to maintain and develop connections between the regions. In conjunction with several other initiatives, it will also contribute to maintaining Copenhagen Airport's hub and increase opportunities for passengers from abroad to reach all parts of Denmark from Copenhagen Airport.

Price war on the route between Aalborg and Copenhagen

The large increase in the number of domestic passengers travelling between Aalborg and Copenhagen in 2010 was mainly due to an intense price war between Norwegian, Cimber-Sterling and SAS. However, in May 2012 Cimber-Sterling was declared bankrupt and this resulted in a significant decline in domestic air traffic. After this, the annual number of domestic air passengers has remained at a relatively stable level of about 1.8 million passengers in the last four years.

Passenger demand is crucial as far as the frequency of domestic routes is concerned and travel time is a particularly critical factor in the choice of domestic air traffic over travel by car, bus or train. To provide a better opportunity for travellers to get an overview of travel times and to increase the visibility of domestic air traffic, this should be part of rejseplanen.dk on a par with trains and buses.

INITIATIVE (35) The Government believes that domestic air traffic should be included in rejseplanen.dk on a par with other public transport in Denmark. The purpose is to improve the visibility of domestic air traffic.

12.2. Domestic air traffic in Copenhagen Airport

In addition to the fact that most domestic air traffic serves passengers travelling between Copenhagen and other areas in Denmark, a not insignificant

proportion of domestic air passengers use Copenhagen Airport as the hub for traveling to international destinations. Domestic air traffic between regional airports and Copenhagen Airport thus increases Copenhagen Airport's passenger base and thereby the attractiveness of establishing international routes to and from Copenhagen Airport.

By 2015, 28 % of domestic passengers arrived at Copenhagen from a foreign destination before flying onward to a regional airport. This figure does not include passengers who flew with two different airlines without an interline agreement. The proportion of domestic travellers using Copenhagen Airport as their travel hub is therefore actually even higher.

Interline agreements

Interline agreements enable passengers to travel with two different airlines on the same ticket without having to deal with luggage and check in when changing flights. These agreements thus help to integrate domestic and international traffic.

DAT and Air Alsie have interline agreements with both SAS and Finnair. In addition, Air Alsie also has agreements with a number of other airlines. This means that a passenger can book a ticket to Sønderborg in a broadly-branched network of routes with an intermediate stopover at Copenhagen Airport. Thanks to the interline agreements and SAS's hub in Copenhagen, there is a good connection between domestic and international traffic. This is very important for the international connectivity to all of Denmark.

A good connection between domestic and international traffic also necessarily depends on good transfer conditions and short transfer times. In 2015, Copenhagen Airport decided to close the domestic terminal. This resulted in easier transfers for passengers moving between domestic and international traffic, but it has also been criticised by domestic commuters and domestic airlines because the waiting time in the former domestic terminal security check was shorter and more predictable than in the other terminals.

For domestic commuters, short and predictable waiting times are particularly important as the waiting time in the security check represents a relatively high proportion of total transport time. A dedicated domestic terminal also makes waiting time more predictable, as it will not depend on the flow in

other departures at the airport. Predictability in the total travel time is crucial when using air traffic for commuting.

In 2016, and in response to the criticism, Copenhagen Airport opened a dedicated security check line for travellers with short travel times.

The closure of the domestic terminal has also resulted in higher levels of charges for domestic air traffic, which must now pay the same charges as international traffic. As previously mentioned in section 6.4, the Government encourages Copenhagen Airport to investigate all options for reducing the levels of charges for domestic operators. The Government notes that the airport today offers a lower charge to the low-cost carriers using the GO terminal.

INITIATIVE (36) The Government encourages Copenhagen Airport to focus on ensuring that the framework for domestic air traffic is adapted to the needs of passengers and operators.

INITIATIVE (37) The Government encourages Copenhagen Airport to have a special focus on the conditions for domestic air traffic in connection with the expansion of the airport towards 40 million passengers.

13. Air cargo as an integrated part of Danish aviation

Air cargo is a central part of Denmark's international trade. Although the amount of cargo, measured in tonnes, is less than 1 % of the freight transport to and from Denmark, the value of air cargo is assessed to be 20-30 % of Denmark's total exports. Therefore, good and frequent connections to the major hubs for air cargo are extremely important to Danish business. Measured in terms of value, more than half of the goods dispatched from Copenhagen Airport are estimated to come from the pharmaceutical industry. Therefore, it is important that air cargo can be easily transported to and from airports and that custom procedures are as simple and efficient as possible.

In addition to having a direct impact on parts of the Danish business sectors, there is a positive interaction between air cargo and network traffic in particular. This is because air cargo, which is carried on regular passenger aircraft, can account for a significant part of the earnings, especially on long-haul routes. Thus, attractive conditions for air cargo in Denmark can contribute to maintaining and increasing the number of routes that otherwise would not be profitable solely based on passenger traffic. In this way, air cargo has a direct and positive effect on international connectivity to and from Denmark.

13.1. Positive developments in air cargo

Overall, an increasing amount of goods has been transported to and from Denmark as air cargo, as illustrated in Figure 13.1. This growth is considered to be driven by, in particular, increased internet trade and a positive development in exports. In addition, changed inventory strategies, whereby many companies have chosen to reduce their stock of spare parts, etc., and instead rely on rapid delivery by air cargo when the need arises.

Increasing passenger traffic has also played an important role, as a significant proportion of air cargo is transported in the cargo holds of passenger aircraft. This has put pressure on the rates paid for air cargo making it a more attractive mode of transport. At the same time, air cargo supports passenger routes' profitability and vice versa. This is particularly true of the large network carriers' long-distance routes, which is why the routes from

SAS and the Copenhagen Airport hub are significant for the function of the airport as a northern European hub for air cargo.

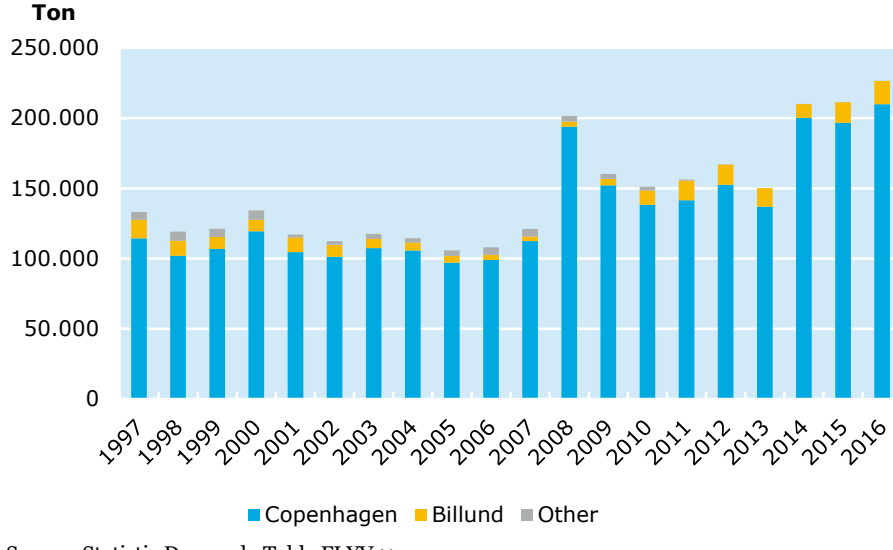
The value of Denmark's export via air cargo

For use in the Aviation Strategy, the Danish Transport, Construction and Housing Authority has estimated that the value of air cargo constitutes 20-30 % of the value of Denmark's total exports. This assessment is based on data from Statistics Denmark and Eurostat and dialogue with Copenhagen Airport and it is subject to considerable uncertainty.

By comparison, IATA (2016b) estimates that the value of global air cargo accounts for approximately 35 % of the value of global trade as a whole.

The link between air cargo and network traffic is supported by the fact that the hubs of the largest European network carriers in Frankfurt, Paris, Amsterdam and London Heathrow are also among the airports that handle the largest amount of air cargo.

Figure 13.1 | Development of air cargo in Danish airports



Source: Statistic Denmark, Table FLYV41

Between 1997 and 2016, Copenhagen Airport has accounted for more than 90 % of the air cargo handled in Denmark. This freight is primarily trans-

ported to and from Denmark and South Sweden, but the airport's hub function for example means that, in some cases, cargo to and from Norway are reloaded at Copenhagen Airport. Billund Airport has handled most of the remaining cargo while the other Danish airports handle no significant amounts.

While Copenhagen Airport's share of goods has remained stable between 90 % and 97 %, there has been a significant development in the total volume of air cargo in Denmark, which has more than doubled since its low point in 2005. Denmark has thus had a larger percentage of air cargo growth than in the EU as a whole.

The largest share of air cargo is exchanged with Germany, where there are major hubs for package transport. In addition, significant air cargo is exchanged with Norway and Sweden, as Copenhagen Airport serves as a gateway to the Scandinavian countries, particularly South Sweden. In addition, cargo flows are largely defined by trade relations and by which network and cargo routes originate from Denmark.

Table 13.1 | The five biggest air cargo destinations in 2016

Country	1.000 ton
Germany	44
United States	42
China	23
Norway	21
Sweden	19

Source: Data from the Danish Transport, Construction and Housing Authority

13.2. Conditions for air cargo in Copenhagen Airport

Copenhagen Airport has an attractive location in relation to the air cargo market. Firstly, the immediate proximity to the Copenhagen area means that there is easy access to a large population catchment area and, secondly, the proximity of the motorway and the Oresund connection means that there is rapid access to the main road network in Denmark and South Sweden.

In Copenhagen Airport's north sector, SAS has a cargo terminal that is strategically well-positioned for handling goods from passenger aircraft. Most of

the other cargo facilities are in the eastern sector, including stands for cargo aircraft, cargo terminals and other cargo-related facilities, including veterinary checks. To the east of Kystvejen (the coast road), towards the Oresund, there is also an undeveloped area that can be used for air cargo facilities. It is therefore estimated that there are good opportunities for expanding the facilities in line with the continued growth in cargo quantities.

The location of the cargo facilities in the eastern sector of Copenhagen Airport makes good sense because it frees up the area in the northern sector for passenger-oriented activities. However, it also means that the entire traffic to and from the terminals must travel along the coast road via a roundabout.

Air cargo is dependent on an efficient interaction with transport by lorries and vans and is, therefore, also dependent on good and efficient access conditions. With continued growth in cargo quantities and the possible expansion of the eastern area, there is a risk that the infrastructure around the airport may constitute a bottleneck that will limit the efficiency of cargo operations.

In addition to the infrastructure itself, it is important for Danish air cargo carriers that customs procedures are as simple, considerate and efficient as possible. The EU has drawn up and adopted a new regulation that will harmonise and digitise customs processes across member states. It is an extensive implementation task that involves transformation of processes as well as IT and data support in the customs area.

The Implementation Center for Customs was established on the basis of the EU's new Customs Regulation and with co-financing by the Ministry for Taxation's investment plan from August 2016. The Implementation Center is responsible for ensuring the implementation of the EU Customs Code in Denmark.

The Implementation Center will decide on the specific extent of the implementation and the needs of the business sector will be included in the development of the respective digital solutions. A full system support of the EU Customs Code is expected once the implementation has been completed. The EU's timetable determines that implementation must be completed by the end of 2020. However, discussions between the EU and individual member states are ongoing about a revised timetable for a possible agreement on a more realistic implementation deadline.

INITIATIVE (38) The Government encourages Copenhagen Airport to focus attention on good accessibility and road capacity to the freight terminals in its expansion plan towards 40 million passengers.

Summary of Initiatives and Sources

14. Summary of initiatives

INITIATIVE (1) Together with Copenhagen Airport, the Government will investigate the possibility of expanding Copenhagen Airport Station with a view to having more direct trains to the airport and achieving more robust train traffic to Sweden in the event of a reintroduction of Swedish ID control.

INITIATIVE (2) The Government supports Copenhagen Airport's vision of an expansion to serve at least 40 million passengers annually. To facilitate the expansion, the Government will ensure that the necessary administrative processes are managed as efficient as possible by the relevant authorities.

INITIATIVE (3) The Government finds it important that, in cooperation with the airlines, Copenhagen Airport finds the best solution as regards the cross-wind runway. It is vital that the attractiveness of the airport does not risk being impaired by the closure of the cross-wind runway.

INITIATIVE (4) The Government will work to ensure that the requirement that activities in the Copenhagen Airport area must be related to aviation or the operation of the airport is relaxed to the extent that it is not deemed to limit the possibility of operating air traffic now or in future.

INITIATIVE (5) The Government will investigate whether there is a basis for changing other parameters relating to the Copenhagen Airport area so as to provide better planning opportunities for the airport.

INITIATIVE (6) Together with the Swedish authorities, the Government will work to ensure more efficient possibilities for approaches and landings in the airports in the Oresund region.

INITIATIVE (7) The Government will make an adjustment of the regulatory model for Copenhagen Airport. It must ensure more equal and transparent negotiations between Copenhagen Airport and the airlines. This involves more transparency regarding the determination of parameters in the model as well as a shorter fall back period. The adjustment of the regulatory model will form the basis for negotiations in 2018.

INITIATIVE (8) The Government will make an adjustment of the regulatory model so that a greater part of Copenhagen Airport's commercial revenue is used directly to cover the costs of air traffic.

INITIATIVE (9) In the public interest, the Government will introduce a reduction in the ratio between the charge per transfer passenger and the

charge per locally departing passenger in the regulatory model. This is to contribute to retaining the important gains from the additional connectivity that the hub will ensure Denmark. The initiative will also benefit domestic air traffic as approximately one fourth of domestic air traffic is made up of transfer passengers.

INITIATIVE (10) The Government encourages Copenhagen Airport to investigate all possibilities for reducing the charges level for domestic operators within the framework of the EU Directive. In this connection, the Government notes that presently the airport offers a lower charge for the low-cost airlines in the GO terminal.

INITIATIVE (11) The Government will introduce service level targets for services aimed at passengers in Copenhagen Airport, starting with service level targets for the waiting time at security.

INITIATIVE (12) The Danish Transport, Construction and Housing Authority will be granted authority to introduce a proportionate sanction system in the event that the service level targets are not reached in Copenhagen Airport. As a last resort, the Danish Transport, Construction and Housing Authority will, through easier access in legislation, be granted authority to issue injunctions.

INITIATIVE (13) In cooperation with Copenhagen Airport, the Danish Transport, Construction and Housing Authority will make an analysis of the need and the possibilities for introducing service level targets for the waiting time at baggage reclaim. Moreover, in cooperation with the Danish National Police, an investigation will be made of whether service level targets can be established for the capacity provided by Copenhagen Airport for passport control.

INITIATIVE (14) The Government wishes to focus on the Danish security rules with a view to investigating whether there are unnecessary special rules for small airports in Denmark. Consequently, the Danish Transport, Construction and Housing Authority has set up a working group with members from the aviation industry, which is to carry out a service check of the rules.

INITIATIVE (15) The Government wants to strengthen the dialogue between the Danish authorities and the authorities of other nations to ensure that the EU rules are understood and implemented identically.

INITIATIVE (16) In the long term, the Government wants to work at the European level to reduce the use of detailed regulations so as to ensure focus on the effect of security measures instead of how the effect is achieved.

INITIATIVE (17) Being the authority responsible for the sector, the Danish Transport, Construction and Housing Authority takes a coordinating role for the authorities to which the regional airports have contact. The Danish Transport, Construction and Housing Authority ensures that the authorities meet regularly to coordinate initiatives relating to the regional airports. This is to ensure good dialogue and efficient cooperation between the authorities for the benefit of the regional airports.

INITIATIVE (18) The Danish Transport, Construction and Housing Authority and the Danish tax authorities will evaluate the existing cooperation agreement with a view to strengthening the exchange of information and the use of joint supervision.

INITIATIVE (19) Naviair has initiated an investigation of the possibility of operating the Danish regional airports without staffing the air traffic control towers. A further investigation will be made in 2017 with a view to clarifying financial, operative and technical aspects. The preliminary plan is to establish a joint centre at Billund.

INITIATIVE (20) The Government will work towards the establishment of a solid foundation for the Faroe Islands' decision on taking responsibility for the aviation sector in the Faroe Islands.

INITIATIVE (21) The Government will work actively towards the accommodation of the Faroe Islands' wish to accede to the ECAA Agreement.

INITIATIVE (22) The Government will secure strong cooperation between relevant Danish authorities regarding development of routes and thus contribute to establishing new routes to and from Denmark.

INITIATIVE (23) Government will work to ensure continued financial support to the Global Connected route development programme.

INITIATIVE (24) The Government will investigate the possibilities of increasing support and intensifying efforts for route development in Western Denmark.

INITIATIVE (25) The Government will continue the work of making new aviation agreements with relevant third countries on as open and liberal terms as possible.

INITIATIVE (26) The Government will ensure increased coordination between ministries so as to ensure that aviation agreements will be discussed in case of ministerial visits to relevant countries.

INITIATIVE (27) The Government will focus on liberalising existing aviation agreements with relevant countries. Danish and Scandinavian airlines will be invited to participate in relevant future aviation negotiations.

INITIATIVE (28) The Ministry of Transport, Building and Housing will work towards identifying the needs of business and industry and the requirements of the USA to the registration of members of Global Entry with a view to clarifying the possibilities of whether Denmark can accede to Global Entry.

INITIATIVE (29) The Government will work to ensure that joint aviation agreements with third parties promote international standards for the labour market and equal competition.

INITIATIVE (30) The Government will support the European Commission's work to limit disloyal forms of practice in third countries and of operators in third countries.

INITIATIVE (31) The Government will work for the establishment of clear and transparent rules at EU level as well as rules to ensure that companies do not exploit differences in the laws of Member States, including the implementation and interpretation of acts from the EU, in an unintended manner.

INITIATIVE (32) The Government will work for more uniform guidelines within the EU for the supervision of health and safety onboard aircraft. This is to ensure that all aircraft in the EU are subject to supervision by the authorities and that supervision is exercised according to uniform rules.

INITIATIVE (33) The Danish Transport, Construction and Housing Authority will continue to streamline the safety contribution, so that passenger growth in Denmark will benefit the airlines in the form of a lower safety contribution. This should be effected while maintaining the safety level.

INITIATIVE (34) Naviair will continue its focus on reducing the "en route charge" and the "TNC charge" as air traffic management is continually streamlined.

INITIATIVE (35) The Government believes that domestic air traffic should be included in rejseplanen.dk on a par with other public transport in Denmark. The purpose is to improve the visibility of domestic air traffic.

INITIATIVE (36) The Government encourages Copenhagen Airport to focus on ensuring that the framework for domestic air traffic is adapted to the needs of passengers and operators.

INITIATIVE (37) The Government encourages Copenhagen Airport to have a special focus on the conditions for domestic air traffic in connection with the expansion of the airport towards 40 million passengers.

INITIATIVE (38) The Government encourages Copenhagen Airport to focus attention on good accessibility and road capacity to the freight terminals in its expansion plan towards 40 million passengers.

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