The Impact of Emirates Airline on the German Economy

Executive Summary

May 2012
Cover Picture: Emirates Airbus 380 visiting ILA Berlin Air Show 2010
Photographer: Wolfgang Grimme, DLR
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The study was conducted for Emirates Airline.
Executive Summary

Since 1987, Emirates Airline has operated flights from Dubai to Germany. As of December 2011, the Dubai-based carrier serves four points in Germany (Frankfurt, Munich, Düsseldorf and Hamburg) with a total of nine daily passenger flights to and from Dubai. Additionally, Frankfurt and Düsseldorf are served regularly with freighters.

The airline has contracted the Institute of Air Transport and Airport Research at the German Aerospace Center (DLR) to examine the economic effects coming from the provision and use of existing passenger and cargo flights and the additional benefits that could be gained from potential new services to Berlin and Stuttgart. Currently, the bilateral air services agreement between the United Arab Emirates and Germany allows Emirates to serve four points in Germany with passenger flights. Furthermore, the analysis includes the impacts on the German economy due to Emirates’ orders for aircraft, engines, spare parts and maintenance services.

Scope of the Study / Methodology

In this study, the effects for the German economy have been analysed in the following areas:

- Connectivity impacts concerning airports that are currently being served by Emirates
- Connectivity impacts resulting from potential new Emirates services from Dubai to Berlin and Stuttgart
- Impacts of Emirates’ services on passenger flows, competing airlines and hubs
- Direct, indirect and induced employment effects due to Emirates’ economic activity in connection with the operation of existing and potential new
- Direct, indirect and induced employment effects due to incoming tourists flying with Emirates to Germany
- Effects for shippers of air cargo concerning freight capacities and the accessibility of destinations
- Direct, indirect and induced employment due to Emirates’ orders for new aircraft, engines, spare parts and maintenance services

The analysis of connectivity is based on schedules data for December 2011. Concerning the assessment of the impacts of Emirates’ services on passenger flows and capacity supply, data provided by Sabre Airport Data Intelligence, based on Market Information Data Tapes (MIDT) was analysed. Furthermore, data provided by the Official Airline Guide (OAG) on seat capacities and aircraft were used.

Employment effects of Emirates’ activities in Germany, coming from the provision of air transport services and from orders for aircraft, engines, spare parts and maintenance services were assessed by applying input-output analyses, which are based on input-output tables provided by the German Statistical Office and supplemented with data on expenditures provided by Emirates. The input-output methodology is well accepted for impact assessments of the contribution of individual industries or activities to the economy and delivers sound and reliable results.
For a qualitative assessment in areas where quantitative data was not available, stakeholder interviews with managers of tourism authorities, chambers of commerce and freight forwarders were conducted.

Results

The following paragraphs summarise the main findings of our investigation:

Connectivity Impacts

- Secondary airports like Düsseldorf and Hamburg, which attract significant passenger volumes, but do not have a hub function improve their connectivity to the world regions Southern/East Africa, Asia, the Middle East and Southwest Pacific through Emirates’ services. The number of destinations that can be reached with a maximum of one intermediate stop or transfer increases. The number of flight segments required is reduced accordingly. Overall, this improves passenger comfort.

- The improvement, as measured by a specified connectivity indicator, can be as much as 12 % for Düsseldorf and Hamburg, when the 61 destinations served by Emirates in Southern/East Africa, Asia, the Middle East and Southwest Pacific are considered.

- Both passengers and shippers of air cargo benefit from dedicated capacities to Southern/East Africa, Asia, the Middle East and Southwest Pacific with better availability of seat and cargo capacities and more choice in departure times, frequencies, prices and transfer points.

- From the viewpoint of economic theory, Emirates displays a function as “countervailing power” against increased oligopolisation and monopolisation of markets through mergers and alliances. For Germany, this applies particularly to the “fortress hubs” in Frankfurt and Munich, where Star Alliance has a share of 62 % and 65 %, respectively, in the number of seats offered on flights to Southern/East Africa, Asia and the Middle East.

- At the airports of Berlin and Stuttgart only very few intercontinental flights to Asia or the Middle East are offered, so passengers are required to transfer via a German or European hub for most trips, or to travel by car or train to nearby airports with a larger supply of long-haul flights. New Emirates services would broaden the choice in frequencies and enhance the accessibility of German regions.

- In Stuttgart, with a daily flight to Dubai, the number of weekly flight nonstop and one-stop connections to the Eastern Hemisphere would increase by 14 %. In Berlin, a daily flight by Emirates would increase the number of connections to Southern/Eastern Africa, Asia, the Middle East and Southwest Pacific by almost 10 %.

- With a daily flight from Stuttgart and Berlin to Dubai, Emirates can generate 210 one-stop connections per week in transfer window of up to 6 hours after arrival in Dubai. In comparison, Qatar Airways generates currently only 66 weekly transfer connections from Stuttgart and 148 connections from Berlin via Doha.
Impacts on Passenger Flows

- The analysis of passenger development shows that Emirates stimulates the demand for trips between Germany and the Eastern Hemisphere. From this it can be concluded that passengers travelling on Emirates represent to a large extent additional demand, which has not been shifted away from other airlines or hubs.

- The number of transfer passengers travelling from Düsseldorf / Hamburg via Frankfurt and Munich remains constant or even grows, despite new or increasing competition from Emirates and other new.

- The air transport market between Germany and destinations in the Eastern Hemisphere (Southern and East Africa, Asia, the Middle East and South West Pacific) has grown by 30 % between 2005 and 2010 (+1.3 million passengers in absolute terms). Emirates' market share increased in this period from 7.5 to 10.2 %, the market share of German carriers increased from 23 to 24.5 %. In the particularly important market Germany-North Eastern Asia (1.4 million travellers in 2010; e.g. China, Japan and South Korea), Emirates’ market share is lowest with 3.5 %. Emirates' market share is highest between Germany and the South West Pacific region with 20 %. In this market, no German airlines operate.

- From a growing demand in air travel between Germany and the Eastern Hemisphere many airlines benefit. Emirates’ share in the overall growth between 2005 and 2010 is +250,000 passengers, while Lufthansa’s passenger numbers increased by +220,000, followed by Turkish Airlines and Air Berlin with +116,000.

- Even in markets particularly exposed to competition with new entrants, like Middle East and India, market leader Lufthansa has continued to grow substantially in terms of seat capacities offered (from 134,000 to 217,000 per month between 2003 and 2011) and also destinations offered (from 15 to 21 between 2003 and 2011).

- Based on the market analyses, we form the hypothesis that different market segments have evolved over the past years. On the one hand, time-sensitive travellers from Frankfurt and Munich continue to fly on non-stop services to Asia and passengers from secondary airports in Germany continue to use connections via Frankfurt and Munich, which often have the shortest travel times compared to competing transfer itineraries. On the other hand, price-sensitive passengers prefer the offers of new entrants, with slightly longer travel times, but a competitive offer concerning value for money.

- As the route networks of Emirates and Qatar Airways are overlapping to a large extent and similar travel times on many origin-destination pairs are offered, it can be expected that competition will be much stronger between the two Gulf carriers than between Emirates and Lufthansa, once Emirates would start operations in Berlin and Stuttgart.

- Moreover, Emirates’ daily non-stop services with wide-body jets from Berlin and Stuttgart to Dubai, would be more attractive from passengers’ point view compared to Qatar Airways’ three-weekly service from Stuttgart to Doha and daily service with narrow-body jets from Berlin to Doha. This limitation in the number of seats impedes the ability to stimulate traffic and hence for instance to stimulate incoming tourism.

- Overall, the growth of airlines like Emirates has not led to a reduction of existing nonstop / direct services of German carriers. On the contrary, the accessibility of Germany has improved due to the new offers.
Impacts of Emirates’ economic activity in Germany

- In fiscal year 2010/11, Emirates spent € 203.3 million in Germany for salaries of its employees and the purchase of goods and services required to operate passenger and cargo flights.

- In our definition, Emirates’ staff is defined as direct employment, while persons employed with suppliers delivering inputs to Emirates (e.g. ground handlers, crew hotels, fuel suppliers) are counted as indirect employees. This includes the full chain of inputs.

- Input-output analyses show, that besides 169 employees directly employed with Emirates, 2,271 indirect jobs are created both through Emirates’ expenditures e.g. for ground handling, catering, crew accommodation and airport charges, as well as through the expenditures of Emirates’ passengers (e.g. at airport retailing, parking and restaurants) and through the provision of public services (customs, border control). Moreover, through consumption expenditures of persons directly and indirectly employed, 712 jobs are induced.

- According to these results, the activities of Emirates for the provision of air transport services create in total approximately 3,200 direct, indirect and induced jobs across different industries and different skill levels.

- We have also applied an alternative methodology as found in the literature on economic impacts of aviation, using the relation between employment at airports and passenger/cargo traffic. This methodology results in about 3,600 direct, indirect and induced jobs.

Impacts on Incoming Tourism

- Interviews in the tourism industry have confirmed that the regional availability of direct long-haul flights is a key factor to increase the attractiveness of a city or region for incoming tourists from Asia and the Middle.

- On average, every additional arriving passenger increases the number of overnight stays of foreign tourists in Germany by 0.8. Therefore, it is estimated that Emirates accounted for approximately 485,000 overnight stays by foreign tourists in 2010.

- Expenditures of foreign tourists coming on Emirates to Germany are approximately € 76 million, creating almost 2,600 direct, indirect and induced jobs.

- The German National Tourist Board expects that incoming travellers from the Middle East region will become the second largest group of non-European travellers (estimation of 2.3 million nights in 2020) after those from the US (estimation of 5.9 million nights in 2020), when measured by the number of nights spent in Germany. This can be regarded as an indication also for further growth potentials for air transport between Germany and the Middle East.

- The growth of incoming tourism from the Middle East is even more remarkable, when taking into account the relatively small population size of 39.2 million inhabitants. Based on the expected number of nights to be spent in Germany per inhabitant, the propensity of Middle Easterners to travel to Germany (58.7 overnight stays per thousand inhabitants) is about 35 times the one of the Chinese (1.6 overnight stays).
per thousand inhabitants), 3.2 times the one of the Americans (18.6 overnight stays per thousand inhabitants) and 2.3 times the propensity to travel of the Australians (25.7 overnight stays per thousand inhabitants). In order to guarantee the long-term attractiveness of Germany for foreign tourists, availability of flights and low air fares are particularly important.

Impacts of potential new services to additional points in Germany

- Each additional flight to Germany will create approximately 140,000 additional passengers for the respective airport, where such a flight will be operated.

- Each additional flight to Germany will create about 200 direct, indirect and induced jobs from aviation-related activities.

- Each new Emirates flight will potentially increase incoming tourism by about 55,000 overnight stays. The expenditures related to this increase in incoming tourism amount to about € 8.3 million annually, creating approximately 280 direct, indirect and induced jobs.

- With two daily flights, for each destination the number of additional passengers increases to about 360,000, the number of jobs to 440 and the number of overnight stays to 144,000. This incoming tourism effect creates approximately 730 additional jobs.

- Switching from any of the four points currently served to new points does not create any additional benefits for the German economy.

- With traffic rights for additional points to be served by Emirates, Germany’s overall global competitiveness for business relations, exports and incoming tourism will be improved.

Impacts on the German aeronautical industry

- Emirates is one of the main customers of the German aeronautical industry. Between 1985 and 2011 Emirates took delivery of 84 Airbus aircraft, of which 65 were in service at the end of December 2011 (including 20 Airbus A380 valued at more than US$7 billion at list prices). As of December 2011, the carrier has 140 firm orders for Airbus aircraft to be delivered over the next 10 years (2012-2022), with a contract value at list prices of US-$ 54.7 billion (€ 41.4 billion; including spare parts and spare engines).

- Without considering investments in engines, the share for Airbus Germany and German suppliers exceeds € 10 billion. In total, this will protect and create more than 9,400 jobs at Airbus, its suppliers and through the consumption expenditures of employees.

- Emirates’ decision to equip its fleet of 90 Airbus A380 aircraft with Engine Alliance engines, in which German manufacturer MTU has a share of 22.5 % in development and production, has created almost 600 direct, indirect and induced jobs in Germany.

- For the operation of its current fleet, Emirates spends annually almost € 280 million with German suppliers of cabin interiors, ground support equipment, spare parts and
repair services. These expenditures create more than 2,500 direct, indirect and induced jobs in Germany.

- The total employment effect in the aeronautical industry, for its suppliers and through the spending of income of persons directly or indirectly employed in this industry exceeds 12,500 full time jobs.

- Our analysis does not include effects coming from deliveries of the German industry to Boeing, where Emirates has 97 aircraft on firm order. Boeing did not provide any information on the German content of Boeing aircraft. However, based on the list prices of the aircraft ordered by Emirates, we estimate that every percentage point of German participation in Boeing’s aircraft programs creates 200 direct, indirect and induced jobs in Germany.

- With total revenues in the order of € 25 billion in the German aerospace industry Emirates would account for about 4 % of these revenues over the next 10 years.
Conclusion

The study finds that more than 18,000 jobs in Germany are dependent on the economic activities of Emirates. The total of direct expenditures by Emirates and indirect expenditures by incoming tourists travelling on Emirates exceed € 1.6 billion per year.

When two additional points in Germany (Berlin and Stuttgart) would be allowed to be served on a daily basis, we expect an additional contribution of close to 1000 jobs through the aviation-related activities and incoming tourism. If both destinations were served twice daily, more than 2000 new jobs would be created.

The following tables summarise the findings concerning expenditures and related employment effects:

**Scenario 1 – one daily flight to Berlin and Stuttgart**

<table>
<thead>
<tr>
<th>Employment</th>
<th>Existing flights</th>
<th>Existing flights + one additional daily flight to BER and STR each</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provision of air services</td>
<td>3,152</td>
<td>3,548</td>
<td>+12.6 %</td>
</tr>
<tr>
<td>Incoming tourism</td>
<td>2,583</td>
<td>3,147</td>
<td>+ 21.8 %</td>
</tr>
<tr>
<td>Industry</td>
<td>12,558</td>
<td>-/-.</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>18,293</td>
<td>19,253</td>
<td>+ 5.2 %</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Expenditures</th>
<th>Existing flights</th>
<th>Existing flights + one additional daily flight to BER and STR each</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provision of air services</td>
<td>€ 203.3 million</td>
<td>€ 233.6 million</td>
<td>+14.9 %</td>
</tr>
<tr>
<td>Incoming tourism</td>
<td>€ 76 million</td>
<td>€ 92.6 million</td>
<td>+ 21.8 %</td>
</tr>
<tr>
<td>Industry</td>
<td>€ 1,399.9 million</td>
<td>-/-.</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>€ 1,679.2 million</td>
<td>€ 1,726.1 million</td>
<td>+ 2.8 %</td>
</tr>
</tbody>
</table>

**Scenario 2 – two daily flights to Berlin and Stuttgart**

<table>
<thead>
<tr>
<th>Employment</th>
<th>Existing flights</th>
<th>Existing flights + two additional daily flights to BER and STR each</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provision of air services</td>
<td>3,152</td>
<td>4,030</td>
<td>+27.9 %</td>
</tr>
<tr>
<td>Incoming tourism</td>
<td>2,583</td>
<td>4,043</td>
<td>+ 56.5 %</td>
</tr>
<tr>
<td>Industry</td>
<td>12,558</td>
<td>-/-.</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>18,293</td>
<td>20,631</td>
<td>+ 12.8 %</td>
</tr>
<tr>
<td>Expenditures</td>
<td>Existing flights</td>
<td>Existing flights + two additional daily flights to BER and STR each</td>
<td>Change</td>
</tr>
<tr>
<td>---------------------------</td>
<td>------------------</td>
<td>------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Provision of air services</td>
<td>€ 203.3 million</td>
<td>€ 269.1 million</td>
<td>+32.4 %</td>
</tr>
<tr>
<td>Incoming tourism</td>
<td>€ 76 million</td>
<td>€ 119.2 million</td>
<td>+ 56.8 %</td>
</tr>
<tr>
<td>Industry</td>
<td>€ 1,399.9 million</td>
<td></td>
<td>-/-</td>
</tr>
<tr>
<td>Total</td>
<td>€ 1,679.2 million</td>
<td>€ 1,788.2 million</td>
<td>+ 6.5 %</td>
</tr>
</tbody>
</table>

The example of Emirates shows that Germany benefits from air transport liberalisation twofold: On the one hand through the economic effects of additional flights and on the other hand through the employment effects in the aeronautical industry due to the large number of aircraft.

From the analyses and the data shown in this report, a further liberalisation of aviation markets with third countries is likely to be beneficial for a wide range of stakeholders, such as for employees being hired to handle additional traffic, for Germany's airports, for the aeronautical industry, for shippers of air cargo and last but not least for passengers, who benefit from competitive prices, larger capacities and better connectivity.

Overall, the analyses show that the German economy significantly benefits from the activities of Emirates in Germany. Moreover, it has been shown that the economic benefits can be further increased when flights to additional German airports will be offered.