THE TRANSFORMATION OF A LEGACY CARRIER – A CASE STUDY OF TURKISH AIRLINES

Abstract

This study examines the metronomic rise of Turkish Airlines into a global carrier in the period following domestic deregulation and part privatisation. Using a comparative assessment of the carrier’s network and its competitive strategies during the 2003-2013/2014 period it was found that Turkish Airlines now benefits from considerable network, cost, service and brand advantages over competing European and to a lesser extent Middle-Eastern airlines. Its network operation based in Istanbul Ataturk airport enjoys strong geographic and demographic advantages, which enables it to optimise the use of its large and young short-haul fleet between a significant number of domestic and international points. This study has important implications for partially or fully state owned legacy carriers as to how to gain competitive advantages in an increasingly open and liberal airline industry.

Key words: Competitive advantage, Turkish Airlines, Network development, Strategic direction, legacy carriers

1. Introduction

Turkish Airlines (TK) was founded in 1933 as a state-owned enterprise commencing operations with a fleet of 5 aircraft and a total seat capacity of just 28 (TK, 2006). After the Second World War, Turkish Airlines benefitted from the post-war US assistance programme which gave the carrier an upgraded fleet of Douglas DC-3s (Funding Universe, 2013). Its network scope was primarily domestic until the 1960s when its focus changed to international operations, in part due to a minority stake (6%) held by BOAC (British Overseas Airways Company) and started to operate a combination of Viscount, Fokker and later McDonnell Douglas and Boeing jet aircraft. The carrier’s financial struggles commenced in the 1980s and ran through to the early 1990’s partly as a result of its reputation for delays and a sub-standard safety performance. The country was also plagued by inflation at the time which made it difficult for the carrier to raise sufficient capital to purchase aircraft (International Directory of Company Histories, 2006). Political intervention as a result of continued state subsidy was also
hindering the formation of a coherent and sustained competitive strategy at Turkish Airlines in the years preceding domestic deregulation and further privatisation (from 2003 onwards), which was partly down to the political influence of the government linked labour union – the Turkish Civil Union of Aviation (Yeditepe University, 2010). This type of experience was not unique but mirrored by the experiences of many other state-owned carriers at the time, as detailed in Doganis (2006).

The privatisation activities of the company dated back to the 1990s. With the incentive of encouraging productivity\(^1\) and raising capital (Republic of Turkey Privatisation Administration, 2012), the government organised an IPO (Initial Public Offering), which was held in 1990 with 1.83% of the company’s shares being offered to the public. In 2003, a new government came into power and accelerated the privatisation of Turkish Airlines. Subsequently, two SPOs (Secondary Public Offerings) were held in 2004 and 2006, with the share of the government’s ownership in Turkish Airlines falling below 75% and 50% respectively. As a result of this privatisation process, the company ceased to be a state enterprise by May 2006 (TK, 2008) with further pushes for efficiency and productivity being among the main drivers for change.

The new government expressed its desire to develop the aviation industry with its slogan “every Turkish citizen is going to fly at least once in his life.” A series of aviation reforms has been implemented since 2003 with the aim of expanding the Turkish airline industry. One was to deregulate the domestic market. Another was to improve international competitiveness of Turkish Airlines. Illustratively, the number of international civil aviation agreements signed between Turkey and foreign governments was increased from 81 in 2003 to 143 by 2012 which has helped Turkish Airlines to expand its international network.

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\(^1\) At this time the airline’s fleet doubled in size while the workforce stayed at around 8,000 showing some early increases in productivity as a result of the initial stages of privatisation aircraft (International Directory of Company Histories, 2006).
Coinciding with government change in 2003, a new executive board of Turkish Airlines was created in the same year. Major steps were taken to open up new routes and improve the network, renew outdated fleet with newer and more efficient aircraft. Figure 1 shows that Turkish Airlines has experienced tremendous growth, particularly after 2003. The total number of passengers it carried increased from 10.4 million in 2003 to 48.3 million by 2013 with a combined annual growth rate of 16.6% - far outpacing the world average of 8.1% (ICAO, 2014; TK, 2014a). In recent years, Turkish Airlines has quickly risen to become a new global challenger in the airline industry. In addition to its outstanding traffic growth, Figure 1 shows that TK has consistently achieved operational profits since 2002. This represents a successful turnaround given the loss making performance of the carrier in the preceding five years.

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Figure 1 shows that the company’s total operational profit boomed rapidly in 2007 and 2008. According to Air Transport World (ATW) statistics, the carrier was ranked 25th in global net profits in 2007, but this quickly improved by reaching 4th position in 2008 and 6th by 2009 (ATW, 2008; ATW, 2009; ATW, 2010). By 2013, it carried more than 48.3 million passengers with 233 aircraft (TK, 2014a). An insight into its relentless growth is displayed by examining the data during the economic downturn in 2009 as the number of passengers across the whole air transport industry dropped by 3.5%, while it was more accentuated across the members of the Association of European Airlines (AEA) which decreased by 5.8%, while Turkish Airlines witnessed an 11% increase in passenger numbers. Since 2003 the company has expanded rapidly as its passenger Compound Annual Growth Rate (CAGR) recorded more than 15% - becoming Europe’s fastest growing airline. Concurrently, Turkish Airlines also began differentiating and enhancing its products and services which were recognised in 2011 when it achieved the Skytrax award for Best Airline in Europe – it was now becoming increasingly evident that European incumbents were now facing a new threat. Although
up to 2003 the carrier had played an insignificant role in the aviation market, however it is now fast becoming a major player in the industry.

The rise of Turkish Airlines provides an excellent case study of how a loss-making legacy carrier can be transformed to a highly profitable global player within a relatively short period. The purpose of this paper is thus to examine the two most critical aspects of the strategic transformation of Turkish Airlines, namely network development and competitive advantage. More specifically, the following two objectives have been set: (1) to analyse the network development of Turkish Airlines in the last decade and (2) to identify the main competitive advantages of Turkish Airlines over its international competitors. It complements the most recent case study on Turkish Airlines by Tan and Aksin (2012), which found a positive feedback between growth and cost as well as quality driven by scale economies at the carrier. Using a comparative assessment of the carrier’s network and its competitive strategies during the ten-year period up to 2013-14 it is found that Turkish Airlines now benefits from considerable network, cost, service and brand advantages over competing European and to a lesser extent Middle-Eastern airlines. This study has important implications for partially or fully state owned legacy carriers as to how to gain competitive advantages in an increasingly open and liberal airline industry. The rest of this paper is structured as follows; Section 2 provides background information on Turkey and its air transport market, Section 3 examines the network developments of Turkish Airlines, Section 4 analyses the competitive cost advantages Turkish Airlines has developed, Section 5 contains a comparative analysis of Turkish Airlines’ air fares, Section 6 examines the carrier’s service and brand while Section 7 concludes.

2. Turkey and its air transport market

Positioned at the crossroads of Europe, Asia and Africa, Turkey is the third largest country in Europe both in terms of land area and population. With 8,333 km of coastlines (including islands) on the Black Sea, the Mediterranean Sea, the Aegean Sea and the Marmara Sea, as well as favourable climate, natural beauty, and cultural
heritage - Turkey is one of the world’s top 10 tourist destinations in terms of international tourist arrivals and tourism receipts (UNWTO, 2014). Between 2003 and 2013 the number of international tourist arrivals in Turkey has increased from 13.7 million to 33.8 million with an average annual growth rate of 9.5% - the highest among the top ten tourism destinations in the world over the last decade. According to Turkey Ministry of Culture and Tourism (MCT) statistics, 71.9% of the international tourists arrived by air in 2013 with Germany, Russia and the United Kingdom representing more than one third of all international tourist arrivals (MCT Turkey, 2014).

As a result of a sound macroeconomic strategy in combination with sensible fiscal policies and major structural reforms, the GDP of Turkey has more than tripled, from $232 billion in 2002 to $852 billion by 2013 making Turkey the 17th largest economy in the world and 7th in Europe (IMF, 2014a; World Bank, 2014). According to the Organization for Economic Co-operation and Development (OECD) forecast, Turkey will be the fastest growing economy among OECD’s members with an average growth rate of 6.7% between 2011 and 2017 (ISPA Turkey, 2011). Already the GDP per capita of the country has grown from $3,518 in 2002 to $11,236 by 2013 and is expected to reach more than $15,000 by 2016 (IMF, 2014b).

The air transport industry in Turkey can be divided into three main phases: (i) Pre 1983; (ii) 1983 to 2003; and (iii) from 2003 onwards. Before 1983, Korul and Kucukonal (2006) reported that Turkish Airlines was the country’s sole carrier. Following the legislation of the “Turkish Civil Aviation Act” on 14th October 1983, which allowed private entrepreneurs to establish and operate airlines within Turkey, 19 new companies were formed but 10 of them went bankrupt shortly thereafter. A major reason was due to the restrictive route entry which stipulated that other airlines could only operate on domestic routes if Turkish Airlines did not have a scheduled flight on those routes or it could not meet the demand within an appropriate timeframe. Turkey’s air transport industry developed slowly during this period. According to World Bank Data (2013),

\[^3\] Data originally provided by the International Civil Aviation Authority (ICAO).
the number of passengers carried by airlines registered in Turkey grew by a CAGR of 8.14% from 1983 to 2002. In order to stimulate demand and create a more competitive environment, the Turkish government decided to deregulate the domestic market and give private airline companies the right to operate domestically. Since then, domestic competition and the entry of private carriers was effectively permitted in Turkey’s air transport market (Gerede, 2010).

As of 2013, 10 passenger and 3 cargo airline companies operate within Turkey. OAG data from July 2014 indicates the major players in the domestic market include: Turkish Airlines (59% of total seats); Pegasus Airlines (28.6%); Onur Air (7.9%); Atlasjet (4.4%); while a number of smaller carriers retain the remaining share. A recent study into this newly deregulated Turkish domestic market (Torlak et al., 2011) concluded that Turkish Airlines was the most competitive carrier across a range of criteria in comparison to the number of new entrants. Parallel to the development of the market, the number of actively used airports has increased from 25 to 52 between 2002 and 2014. Twelve of these airports are used for both international and domestic operations and the others for domestic services only (DGCA, 2011). Closely linked to the metronomic rise of Turkish Airlines, Istanbul Ataturk Airport has also become Europe’s fastest growing major airport. According to the Turkish General Directorate of State Airports (DHMI, 2014), the airport was handling just over 11 million passengers in 2002 but since then it has experienced double-digit growth in seven out of eleven years from 2003 to 2013, including a 14.2% growth rate in 2013 totalling 51.5 million passengers. According to OAG database, from this airport Turkish airlines recorded 75.8% of all flights and 76.1% of all seats by late 2013. It served 201 routes from Istanbul with 159 of those being International. It operated the highest number of destinations non-stop from a single airport than any other carrier in Europe (TK, 2014a). The main airports in terms of passenger throughput and year-on-year growth are shown in Figure 2. 150 million passengers passed through Turkish airports in 2013, while the 3 largest airports (Istanbul Ataturk, Antalya and Istanbul’s Sabiha Gökçen⁴) make up 65% share of the traffic share in Turkey. In terms of airport capacity, Istanbul’s two

⁴ Sabiha Gökçen Airport is used mostly by charter and low-cost carriers.
major airports have found it difficult to cater for such a large increase in demand for air services to/from the Istanbul metropolitan area. A new airport for Istanbul will be built in the capital accommodating 150 million passengers rendering it the accolade of being one of the largest airports in the world.

3. Network Development of Turkish Airlines

Figure 3 shows that between 1993 and 2002, the number of domestic passengers carried by Turkish Airlines was stagnant, while international passengers only increased marginally. However, since 2003, Turkish Airlines recorded double digit increases in both domestic and international passenger numbers. The number of domestic passengers increased from 5.03 million in 2003 to 20.05 million by 2013 (that is, 14.8% average annual growth rate), while international passengers increased from 5.4 million to 28.21 million (that is, 18.0% average annual growth rate) over the same period (TK, 2002 to 2014). Furthermore, load factors for domestic operations increased from 72.2% in 2003 to 79.7% by 2013, while international passenger load factor increased from 66.0% to 78.9% during the same period (TK, 2004; TK, 2014a).

The phenomenal growth of Turkish Airlines’ passenger traffic was generated by its rapid network expansion. Its hub airport (IST) is conveniently located on the main corridor between Europe, Asia and the Middle East. One of its main missions over the last ten years was to make Istanbul airport into a global hub (Moreno, 2010). Table 1 provides a summary of Turkish Airlines’ network development by major geographical regions. Europe is Turkish Airlines’ largest international network and represented 39.7% of all international one-way seats in 2014. The company flew to 97 destinations
across Europe by 2014, compared to 48 in 2003. Western Europe is the largest part of TK’s European network constituting 73.39% of all TK’s European capacity in 2014. The number of destinations served by Turkish Airlines to Eastern and Central Europe has more than doubled in the past decade. In these areas of Europe, Turkish Airlines have been developing a niche for passengers from other continents wishing to make convenient connections at IST when travelling to final destinations in Eastern and Southern Europe.

The Middle East network is TK’s second largest international network, representing 15% of all passengers (TK, 2014a). Between 2003 and 2014, the seat capacity of TK’s Middle East network grew by 20% per annum, despite the dominance of the Gulf based carriers - the number of destinations that it served increased from 10 to 30 including six cities in Iraq and two in Afghanistan. Between 2003 and 2013, the number of passengers in the region increased from 0.54 million to 4.23 million with a CAGR of 22.8%. Saudi Arabia alone constitutes 25.5% of the whole of TK’s Middle East capacity, the biggest share of TK’s Middle East network. In addition to its geographic location, other factors such as religion and mutual cultural background have helped TK to increase its capacity in the Middle East. For example, in 2013 the company carried around 300,000 Hajj and Umrah passengers (TK, 2014a).

The Asian network is TK’s third largest and in 2013, this region represented 12% of all passengers (TK, 2014a). Passenger numbers in the region increased from 0.54 million in 2003 to 3.39 million by 2013 with a CAGR of 20.2%. The Chinese market is a major focus as it constitutes 14% of all of TK’s Asian capacity, the biggest share of its Asian network. It has continued to spread its footprint by opening routes to Tajikistan, Indonesia, Bangladesh Vietnam and Japan – its Available Seat Kilometres (ASKs) and
Revenue Passenger Kilometres (RPKs) to Asia more than doubled from 2009 to 2013 alone (TK, 2014a).

Africa constitutes 8% of all its international passengers (TK, 2014a). In terms of passenger numbers, Africa is the fastest growing region in TK’s international network. The number of passengers in the region increased from 200,000 in 2003 to 2.26 million by 2013 (TK, 2004; TK, 2014a). Egypt and South Africa constitute 21.2% of the whole of TK’s Africa capacity and by 2014, TK flew to 32 destinations in the region including Mogadishu, where it was the first major commercial airline outside of East Africa in more than 20 years to operate to war-torn Somalia (TK, 2014a), which clearly shows its ambitious desire to connect the globe and become a global challenger.

The Americas (including North America and Latin America) is its smallest market and constitutes just 6% of its international passengers. It transported 200,000 passengers to/from the Americas in 2003 which increased by more than 8 times by 2013 with a CAGR of 23.8% (TK, 2004; TK, 2014a). The Istanbul-New York JFK service for example is operated with three daily flights offering over 13,000 weekly seats. In 2013, its plans were to continue to expand rapidly as it was set to add Atlanta, Bogota, Boston, Caracas, Havana, Mexico City, Montreal and San Francisco in addition to its existing 8 routes in the Americas market (TK, 2014a), thus implying that it is quickly becoming a major threat to all major incumbents worldwide as it seeks to cannibalise, reshape and redirect the traditional traffic flows between East and West.

By the end of 2013, the airline flew to 202 international destinations in 105 different countries, becoming the largest airline in Europe and the 4th largest airline worldwide by flight network (TK, 2014a). It was also the second largest Star Alliance hub airport operator in the world in terms of total seats per week in December 2013 with 964 thousand seats beaten only by Frankfurt with 1.13 million seats per week (CAPA, 2013a). It is quite clear from the preceding analysis that Turkish Airlines wishes to
focus its network development on organic growth and increase its non-stop services to ensure a presence in all continents and international markets. In parallel to its network development, Turkish Airlines expanded its fleet with the aim of improving the hub position of Istanbul and extend its long-haul network. In 2004, TK ordered 51 aircraft, including 15 B737-800, 5 A330-200, 12 A321-200 and 19 A320-200 - the biggest aircraft order in the company’s history at that time (TK, 2005). In line with its traffic growth, the company’s fleet increased from 65 to 233 aircraft between 2003 and 2013 (TK, 2004; TK, 2014a). According to TK’s 2012-2021 fleet expansion plan, the airline is continuing to develop its fleet and aims to reach 423 aircraft by 2021 (TK, 2011b; TK, 2011c). From December 2003 to July 2011, TK increased its long and short-haul seat capacity with a CAGR of 17.8% and 14.1% respectively, which clearly reiterates the company’s focus on long haul services (TK, 2004; TK, 2011c).

While in 2003 the company focused heavily on European routes, it has expanded its route network particularly to/from the Middle East, Africa and Asia since then. Table 2 shows the weekly frequency of departures in the first week of July 2003, 2008 and 2014. Between 2003 and 2014 the airline increased its weekly departures from IST to: the Middle-East by 518%; from Asia by 541%; and from Africa by 1,045% whilst ensuring it did not neglect its traditionally strong European network (314% growth between 2003 and 2014). This reflects the carrier’s strategy to improve its intercontinental connectivity through its Istanbul hub and give its loyal passengers an increasing array of options to and from Asian, African and Middle-Eastern destinations.

The rapid network expansion of Turkish Airlines has completely transformed its hub operation from a wave mechanism in 2003 into a rolling hub configuration by 2014. Figure 4 illustrates TK’s wave type hub configuration at IST in the first week of July 2003. Four waves can be identified:
• **In wave 1:** TK’s 07:00–08:00 Middle East, Domestic and Far East flights fed to European flights between 08:00 and 10:00.

• **In wave 2:** TK’s 11:00-12:00 Domestic flights fed to European, Middle Eastern and African flights between 12:00 and 15:00.

• **In wave 3:** TK’s 15:00-16:00 Domestic and European flights fed to Far East flights between 16:00 and 20:00.

• **In wave 4:** TK’s 20:00-21:00 European, Domestic and African flights fed to Middle East and Domestic flights between 21:00 and 00:00.

Figure 4 shows the TK’s new styled rolling type hub configuration at IST in the first week of July 2014, by which connections become a by-product of the system. It can be seen that the company increased its number of weekly seats compared to 2003 but much more importantly, offered more connections during the day. With this hub configuration, TK provides its passengers with more flexibility when choosing departure times as there are more frequent flights to each destination. As a consequence of this hub configuration development, Turkish Airlines increased the number of passengers transferring from an international to an international flight by 34% per annum, from 1.13 million in 2005 to 11.62 million in 2013. Together with domestic to international and international to international transfer passengers, Turkish Airlines carried 18.8 million transfer passengers in total, accounting for 39% of total passenger volumes in 2013 (TK, 2014b). Moreover, the company believes that there is ample opportunity for further improvement and aims to raise its ratio of international transfer passengers to total international passengers by more than 50% in the medium-term (Moreno, 2010). In a study of hub efficiency in Europe, the Middle East and North Africa, Nenem and Ozkan-Gunay (2012) concluded that Istanbul has the most efficient hub for the majority of transfer passengers.
One of the significant differences between TK’s 2003 and 2014 hub configuration is the density of its departures between 23:00 and 02:00. Turkish Airlines added a number of new flights to the Middle East and Far East in this time period. Due to the time differences between West and East, the airline uses its aircraft to fly eastwards during the night, returning back to Istanbul between 05:00 and 07:00. These flights help the company in three ways. Firstly, the company increases the utilisation of its aircraft by using them during the night. Secondly, the airline is able to provide a convenient connection for passengers travelling from the Middle East and Far East to Europe with its early morning European flights. Thirdly, slots at the middle night are used to relieve the congestion of TK’s hub in Istanbul. The company’s well designed hub configuration partially explains the constant increase of its aircraft utilisation. TK increased its average aircraft utilisation from 10:07 block hours/day in 2003 to 12:40 by 2013 (TK, 2014a). Not surprisingly therefore, Turkish Airline’s A320 and A321 aircraft utilisation is higher than that of Europe’s main flag carriers (see Figure 6).

Furthermore, due to its geographical location, Turkish Airlines has been able to expand its network from Europe-Asia, Europe-Africa and Europe-Middle-East, establishing itself as a connecting carrier for passengers travelling west to east and vice-versa. This, in turn, enables the company to take advantage of Istanbul Ataturk Airport’s unrestricted operational facility of being a 24-hour entity, which gives TK the distinct advantage of being able to raise its aircraft utilisation by performing night flights towards the East. Therefore, the company’s narrow-body aircraft utilisation was significantly higher than its major competitors with these economies of scale resulting in lower unit costs.
A factor which has significantly contributed to Turkish Airlines’ hub-and-spoke network is its geographical advantage: a three-hour flight from IST covers 50 different countries. This geographic position helps TK to use narrow-body aircraft to feed its hub. Illustratively, the airline can reach 172 out of 201 international destinations with its narrow-body fleet which contributes significantly to its load factors and aircraft utilisation (TK, 2014b). As a result, TK can offer far more frequent flights than its competitors, particularly in Europe and the Middle East. Additionally, the company is able to serve smaller cities where the demand is not feasible for wide-body aircraft. As illustrated in Table 3, Turkish Airlines served 97 different destinations from its main base to Europe, while Emirates and Qatar only operated to 35 and 29 destinations respectively from their hubs in the Gulf region in July 2014. The number of European destinations served by TK even exceeded the largest European Carrier, Lufthansa (84 destinations), far more than the other major European carriers such as Air France (54 destinations), British Airways (59 destinations) and KLM (68 destinations). Its presence in the Middle-East is particularly striking as Turkish Airlines serves more destinations (30 destinations) than Emirates (15 destinations) or Qatar Airlines (26 destinations). However its penetration in the Asian market is relatively weaker than the Gulf carriers, though it performs much better than the major European incumbents.

Summing up, due to the geographical location of Istanbul, Turkish Airlines can expand their networks by serving small cities that cannot be operated feasibly with wide-body aircraft and are adding more frequencies to their main destinations than their foreign rivals which enable the incumbent to gain a competitive advantage. This is one of the main underpinning strategies that have amplified Turkish Airlines to become a global ‘super connector’ as it serves more cities than any other airline in the world. Particularly after 2003, TK began exploiting this advantage as the main strategy and it is now bigger than Delta Air Lines for single-hub connections. Istanbul Ataturk Airport has been developed as a hub for European passengers going on to destinations both
eastwards in Asia and southwards, and vice versa. While in 2003 the company focused heavily on European routes, it has expanded its route network particularly to/from the Middle East, Africa and Asia. Creating a strong hub significantly affected the transfer passenger ratio of Turkish Airlines. Given the fact that 42% of the company’s passengers are still direct domestic passengers, 39% of total transfer passenger ratio is significantly high in the company’s environment condition (TK, 2014b).

So far TK has been ring fenced from the threat of European low-cost carriers and from the Gulf carriers because of the bilateral mechanism while these threats have forced the European and Asian majors to continuously restructure and redesign their business models. This has helped Turkish Airlines to flourish as its market share at Istanbul Ataturk Airport was increased from 71.6% in 2003 to around 76% by 2013 according to OAG database.

Turkey’s enormous domestic market, which is much bigger than that of its Gulf competitors, is an added competency that strengthens its strategic capability. According to Goldman Sachs (2010), the ratio of domestic passengers to total population in Turkey increased from 6.6% to 34.6% between 2003 and 2010 while the same figure was 96% for EU-27 in 2010. With a young and large population base and fast economic development, there appears to be substantial future potential growth of the Turkish domestic market.

4. The competitive cost structure of Turkish Airlines

Turkish Airlines have benefited from establishing subsidiary companies and forming partnerships with various stakeholders to support its operations. Main subsidiaries include Turkish Technic, HABOM (Maintenance Repair and Overhaul Centre), Goodrich THY Technic Service Centre, Turkish Engine Centre, Turkish Opet, Turkish Do&Co, and TGS Ground Services. These subsidiaries have helped the airline enhance the quality of service through specialisation. Furthermore, Turkish Airlines’s scale has
reached the point where subsidiary companies have become viable and effective in reducing its overall cost. The growing size of company also helps to gain purchasing power over its suppliers. Figure 7 compares the fuel, personnel, and other unit costs of Turkish Airlines against the main legacy carriers in Europe, Asia and the Gulf region.

With a total unit cost of 8.0 US-cents per ASK, Turkish Airlines has the lowest unit cost of the selected airlines alongside with Emirates. Fuel and labour cost constitutes the most substantial proportion of an airline’s operating costs. Figure 7 reveals that these two items constituted 55% of TK’s operating costs for 2013 but the airline has much improved operating economics over European flag carriers in these areas. These cost advantages will now be further analysed.

4.1 Fuel cost advantages

Over the last decade, fuel cost has become a particularly significant part of an airline’s operational costs. The price of jet kerosene was increased from US$50 per barrel in 2004 to US$126 per barrel in 2013 (IATA, 2014). Figure 7 shows that the fuel cost represented 38% of Turkish Airlines’ operating costs in 2013, nevertheless, its fuel cost which was at 3.0 US-cents per ASK, is less than most of its peers. The use of efficient aircraft has become the mantra adopted by Turkish Airlines in their pursuit of reducing fuel costs. In 2004, the average age of the fleet was 9 years but this was reduced to 6.7 years by 2013 and by 2015 the average age of the fleet will be around 5 years (TK, 2014a; TK, 2005). Figure 8 shows that the company has a relatively young fleet compared to its main flag carrier competitors which has a large knock-on effect in fuel efficiency. In 2006, TK phased out all of its RJ-100 aircraft, replacing them with the more fuel efficient A319-100 (TK, 2007). TK started a project with the IATA Green Team in April 2008 in order to improve its fuel efficiency. This project helped to reduce TK’s fuel consumption by 20,455 tonnes in 2010 (TK, 2011a). As a result of these
combined actions, the airline’s average fuel consumption dropped by almost 10% from 2005 to 2010. It also launched a joint venture company named “Turkish Opet Aviation Fuels” with OPET, the leading oil company in Turkey with a $75m investment budget in late 2009 whereby it will provide fuel storage and refuelling services (OPET, 2010).

4.2 Labour cost advantages

Labour is the second biggest operating cost item for many airlines yet it fluctuated quite widely between 6.5% and 32.1% for the world’s low-cost and full service carriers in 2012 (CAPA, 2013b). Turkish airlines registered a personnel cost percentage of 17% of total expenses in 2013 (TK, 2014a), which is at the low end of full-service airline range with the majority of carriers achieving a lower percentage being low-cost carriers. Incumbents such as Emirates, however, also have the advantage of low labour costs due to their location, close to cheap labour markets such as India, Pakistan, Sri Lanka, Bangladesh and Nepal, where these carriers use this advantage to carry out their labour intensive tasks such as ground handling, maintenance and call centres (O’Connell, 2011). Meanwhile European flag carriers operate their businesses out of the most expensive cities in the world, such as Amsterdam, Paris and London, which demand high salaries and are backed by strong unions - this great disparity between labour costs across the globe damages the competitiveness and operating economics of those carriers based in Western Europe. Istanbul, the main base of TK, has a lower cost of living compared to most European cities and this facilitates in keeping the cost of labour low. Turkish Airlines has also increased the productivity of its employees significantly as it carried 2,084 passengers for each employee in 2013, up from 1,013 passengers per employee in 2003 (TK, 2004; TK, 2014a). Figure 9 shows that TK’s ratio of passenger to employee is higher than that of the main flag carriers in Europe, Asia and the Gulf region.

6 Illustratively, the cost of living index at Istanbul was 83.9 as opposed to 95.3 at Frankfurt, 120.5 at London and Paris, and 126.8 at Amsterdam (Numbeo, 2011).
4.3 Other costs

Among the other cost items, a particularly important one is aircraft ownership costs. Turkish Airlines survived the 2008 Financial Crisis with a strong balance sheet. It was considered as an airline with the best financial health status in 2009 (Aviation week & space and technology, 2009). Its strong financial position enabled the company to purchase a large number of aircraft at significantly discounted prices. The economic situation also helped in slowing down the number of backlogged aircraft and resulted in lowering the financial cost of acquiring aircraft in the long run. The company has increased its fleet size to 232 at the end of 2013 which is 52 aircraft more than was planned in 2009. Additionally, the company has the advantage of being able to secure funding through Export Credit Agencies such as the Ex-Im bank which offers low rates of interest.

5. Competitive fares of Turkish Airlines

Turkish Airlines has also managed to position itself competitively in terms of air fares in comparison to its main counterparts. Being able to use its strategic geographical location and cost discipline (see Section 4) to good effect, the company has been able to offer its passengers value for money on an increasing number of Origin-Destination (O&D) markets. Figure 10 shows average fare levels across all Europe-Asia O&D combinations during the observed period January 2011 to December 2012 for a selection of major airlines. It is clear from this data that Turkish Airlines is able to sustain a competitive pricing position at a time of heavy investment in its fleet as well as its network and comfort based service features.
This notion is supported by further O&D fare analysis presented in Figure 11, which compares the same six majors including Turkish Airlines over nine randomly selected O&D pairs between Europe and Asia (bi-directional). It was found for the January 2011 to December 2012 period that the company persistently offered the most competitive fares on those markets followed closely by Emirates with Cathay Pacific charging the highest fares on average. In a recent interview with Turkish Airline’s CEO Temel Kotil, the carrier’s ability to offer lower fares to the result of a combination of low unit cost levels together with its high aircraft utilisation and the low average fleet age of six years (Thomas, 2013).

Domestically, there was an increase in the number of players in Turkey after 2003 with Pegasus, Onur Air, Atlasjet and Sun Express all commencing operations in the following three years. The more competitive environment has contributed to the growth of the domestic aviation market in Turkey, however, Turkish Airlines who used to monopolise the domestic market before 2003 witnessed its market share decline to 59% by 2014 accordingly to OAG data. This has underpinned Turkish Airlines’ strategic decision to shift its focus from domestic to international operations. Nevertheless, the ability of these new carriers to compete effectively with the incumbent Turkish Airlines was limited by the sheer size of Turkish Airlines’ fleet and its ability to offer through connections to a wide range of international destinations (Kilinc et al, 2008).

In the domestic market, Turkish Airlines is perceived to be more expensive than its competitors. To compete effectively with those new airlines, Turkish Airlines founded Anadolu Jet in April 2008 as its low-cost brand to complement its domestic network coverage with Ankara Esenboga Airport as its main base. Anadolu Jet adopts a classical
low-cost business model with high seat density aircraft to reduce its unit costs\(^7\). Moreover, Anadolu Jet uses Sabiha Gokcen airport as a second base to compete with Pegasus Airlines and it also relieves the congestion of Turkish Airlines’ domestic flights out of Istanbul Ataturk Airport. Until the completion of the third airport in Istanbul, Turkish Airlines is bound to shift some of its fleet to Sabiha Gokcen Airport in order to sustain its interim growth.

When comparing TKs pricing strategy on intercontinental and domestic markets it is clear that a differentiated approach to pricing has paid off for the carrier. Its aggressive cost leadership position has been transcribed to generate low fares, which were applied on intercontinental markets making it difficult for other international carriers to compete against. Meanwhile on domestic markets it was able to take advantage of scale and scope (connectivity) economies and offered fare parity when compared to other private carriers, which had two major weaknesses as firstly, they were unable to provide such connectivity permutations and secondly they had higher cost bases.

6. **Strong leverage of TK service quality and brand**

Parallel to its substantial growth and network development, the airline has also focused on investments that continually improve its service quality and global brand awareness, particularly after 2006. According to its vision statement, the company aims to provide the “most envied service worldwide” (TK, 2010). In order to achieve this goal, various service development measures have been implemented. It initiated an enhanced service quality of its on-board products. The latest In-Flight Entertainment (IFE) technology was installed which allows passengers to access their frequent-flyer accounts and to have the ability to provide online feedback about their flight via a ‘customer service’ function. It also has an embedded connectivity platform which enables passengers to send and receive email and text messages. Skytrax and the World Airline Entertainment

\(^7\) For example, Anadolu Jet has 189 seats on its B737-800 aircraft while the number of seats on the same type of aircraft for Turkish Airlines ranges from 151 to 165.
Association (WAEA) awarded it the merit of 3rd place for its multiple functionality in 2008 (TK, 2008). It also changed the service features for its on-board catering through its subsidiary company known as Turkish Do&Co. Cabin crews have been trained in meal presentation and catering service concepts. The company aims to draw world attention to the richness of Turkish cuisine and promoted the “Flying Chef” concept, which is on-board all of their long haul flights for First and Business class. The company believes that it is playing an important role in demonstrating the uniqueness of Turkish hospitality to the world. Due to all these efforts the company has raised its customer satisfaction significantly, achieving 96% satisfaction with its on-board catering services by 2010. Furthermore, the company won the Skytrax award for the “Best Meals in Economy Class” in 2010 and “Best catering in business class” in 2013. (TK, 2011b, TK, 2014a).

Star Alliance membership also played an important role in the development of TK’s brand awareness and service quality from a global perspective. The company finalised its membership process and became the 20th member of Star Alliance on 1st of April 2008. The alliance allows TK’s passengers to reach more than 1,000 destinations and to use more than 1,000 CIP (CommerciaIly Important People) lounges worldwide. In addition, the company adjusted its Frequent Flyer Programme according to Star Alliance rules, allowing TK’s passengers to gain or use their miles across any member airline of Star Alliance. The company increased the number of business passengers by 19% in the first year of its alliance membership (TK, 2009).

The company substantially raised its advertisement budget in order to create a global brand from 2008 onwards. It used a combination of top ranked sports personnel such as: Basketball star Kobe Bryant; world’s best soccer player Lionel Messi; together with the world’s number one female tennis player Caroline Wozniacki and mixed it with Hollywood movie stars such as Kevin Costner who all act as brand ambassadors (TK, 2011b). In 2009 and 2010, the company also drew up many important sponsorship agreements which are a vital part of the airline’s marketing strategy. For example, the
company sponsored the European basketball league in order to increase its recognition in Europe. Additionally, sponsorships of two of the world’s foremost football clubs, FC Barcelona and Manchester United, aspire to increase the airline’s brand awareness worldwide. TK furthermore aims to increase its high quality brand perceptions with tennis and golf sponsorships. With these agreements the company has become one of the world’s most proactive airlines in sports sponsorship. In addition to sponsorships, as Figure 12 shows, the company spent 1.34% of its revenue on advertising, which amounted to around $252 million in 2013 (TK, 2014a. All these efforts and investments have contributed to the company receiving the most recognised global airline awards from Skytrax between 2009 and 2013 (Skytrax, 2014).

7. Summary and Conclusions

This paper examines the strategic transformation of Turkish Airlines with a particular focus on its network development, competitive cost structure, competitive fares as well as service quality and brand. Despite operating in one of the most challenging industries in the world, Turkish Airlines benefited from a number of macro and micro factors which have contributed to the company’s success. Particularly after 2003, Turkey’s robust economic growth stimulated the country’s aviation market. As a result of these developments, the country’s domestic market has grown 23.6% per annum over the last ten years and has become one of the fastest growing domestic markets in the world. Moreover, the size of the country and its demographic features has supported this growth.

As the flag carrier of Turkey, Turkish Airlines has gained some competitive advantages from these developments. In contrast to flag carriers in the Gulf and in Asia, the company can feed its international flights with a combination of international transfer passengers along with passengers from its large domestic market. Since Turkey is not a
member of European Single Aviation Market, the company is also protected from the possible threat of powerful low-cost carriers such as easyJet and Ryanair. These two factors have empowered the airline at its main base in Istanbul Atatürk Airport.

Tourism development in the country has also contributed to its success. Turkey’s long summer season, natural beauty and historical & cultural heritage make the country an attractive destination for tourism. Particularly over the last ten years, the government of Turkey has attempted to stimulate tourism demand by removing tourist visa restrictions and simplifying the visa application process. Furthermore, more than 4.5 million Turkish citizens are residing abroad and their frequent trips to their motherland stimulate demand for flights, accommodation, dining and other tourist amenities. All these features have substantially helped the development of Turkish Airlines.

In addition to its point-to-point traffic, the airline has used the advantages of Turkey’s geographical position to rapidly develop its hub and spoke network. Due to the fact that Istanbul is on the crossroads of Europe, Asia, the Middle-East and Africa, Turkish Airlines is able to operate to more than 50 countries with narrow-body aircraft and feed its long-haul network. As a result, the company can offer more frequencies than its competitors and use their narrow-body aircraft more efficiently.

The competitive cost structure of Turkish Airlines also plays an important role. In comparison to European flag carriers, it was found that Turkish Airlines uses a relatively young fleet helping the airline to keep its fuel cost at a competitive level. Moreover, relatively cheap labour in Turkey brings an advantage to the airline against its European competitors. Additionally, the rolling hub and spoke development increases the company’s aircraft utilisation, also contributing to a reduction in personnel costs. In parallel to these developments, Turkish Airlines is also aiming to create a global brand by significantly increasing its advertisement budget and forge sport sponsorship partnerships. The capacity of Istanbul Atatürk Airport is one of the biggest
threats facing the expansion plans of Turkish Airlines as the airport has witnessed exponential growth with 12.1 million passengers using the facility in 2003, rising to 51.5 million by 2013 and has reached saturation point. The associated risks which accompany this predicament include congestion, delays and dissatisfied passengers. If the new proposed airport with a capacity for 150 million passengers takes longer to materialise than anticipated, it will create big problems for Turkish Airlines. Other threatening issues facing the carrier include its lingering safety record, as a result of a spate of fatal incidents since 1971 (a total of six) and Turkey’s absence from the European Union, which precludes Turkey-EU citizens from free access to social and labour mobility, despite the fact that it currently acts as a protective barrier against major EU LCC’s wishing to set up competing services in Turkey. Overall, Turkish Airlines is set to become a new global challenger in an increasing competitive landscape – it is a profitable and formidable opponent that is reshaping the traditional international traffic flows between continents and is causing major concerns for entrenched incumbents as it attracts an increasing number of passengers with each passing year to its network.

Finally, the findings of this study, in documenting the phenomenal turnaround of a legacy carrier, can serve as a useful benchmark for other established legacy carriers struggling to find a strategic direction in today’s marketplace awash with a host of nimble, cost efficient low-cost and full-service competitors.
List of References

AF-KLM (Air France-KLM), (2014), Annual report 2013
Air Fleets.net (2013), Online airline fleets database, available at:
   http://www.airfleets.net/home/ (accessed on 03.04.2014)
Aviation Week & Space and Technology, (2009), “Top performing airlines: the best in
   bad times”, Aviation Week & Space and Technology, Vol.171, No.2, pp.46.
BA (British Airways), (2014), Annual report 2013
CAPA (2013a), Lufthansa ends codesharing with Turkish Airlines. A full rift would
   mean new strategies for each, available at:
   http://centreforaviation.com/analysis/lufthansa-ends-codesharing-with-turkish-
   airlines-a-full-rift-would-mean-new-strategies-for-each-142011 (accessed on
   30.05.2014)
CAPA (2013b) European airline labour productivity: CAPA rankings, available at:
   http://centreforaviation.com/analysis/european-airline-labour-productivity-cap-
   rankings-104204 (accessed on 31.05.14).
DGCA (2011), Republic of Turkey Ministry of Transport and Communication
   Directorate General of Civil Aviation, 2010 annual report, available at:
   on 10 May 2014).
EK (Emirates), (2014), Annual report 2013
Funding Universe (2013), History of Turkish Airlines Inc., available at:
   http://www.fundinguniverse.com/company-histories/turkish-airlines-inc-
   t%C3%BCrk-hava-
   yollari-a-o-history/(accessed on 23.08.2013).
   Developments and the Impacts of 1983 Liberalization, YÖNETİM VE EKONOMİ,
   17(2), pp64-91.
Goldman Sachs (2010), Turkey & Russia airlines: mispriced consumer exposure;
   initiate on Turkish Airlines as Buy, Goldman Sachs Global Investment Research.
IATA PaxIS, International Air Transport Association Passenger Intelligence Services,
   Billing and Settlement Plan (BSP) Subscription only tool.
IATA WATS (2013), International Air Transport Association World Air Transport
IATA (2014), IATA Profit Forecast, available at: www.iata.org/economics (accessed on
   27. 04. 2014).
ICAO (2014), Air Carrier Traffic, ICAO Data+
IMF (2014a), World economic outlook database, available at:
   .y=6&sy=2002&ey=2018&scsm=1&ssd=1&sort=country&ds=.&br=1&c=186&s=N
   GDPD&grp=0&a= (accessed on 27.04.2014).

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LH (Lufthansa), (2014), *Annual report 2013*


OAG (Official Airline Guide), airline capacity database, Subscription only.


SQ (Singapore Airlines), (2014), *Annual report 2013*


TK (Turkish Airlines), (2005), *Annual report 2004*, available at:
(accessed on 06.07.2011).

(accessed on 03.07.2011).

(accessed on 07.07.2011).

(accessed on 08.07.2011).

(accessed on 09.07.2011).


(accessed on 13.05.2014).


(accessed on 15 June 2013).


Yeditepe University (2010), Accessed through slideshare http://www.slideshare.net/dimitrikopulo/thy-case, May 29th
Figure 1: Turkish Airlines total passengers and net income

Source: Turkish Airlines annual reports (compiled by the authors)
Figure 2: Main airports in Turkey by passenger throughput in 2013 and percentage growth between 2012 and 2013

Source: Republic of Turkey, General Directorate of State Airports Authority (DHMI) (compiled by the authors)
Figure 3: TK’s number of domestic and international passengers (1993 to 2013)

Source: Turkish Airlines annual reports (compiled by the authors)
Figure 4: TK’s hub configuration at IST in 2003 (modelled on data in the first week of July 2003)

Source: OAG (Compiled by the authors)
Figure 5: TK’s hub configuration at IST in 2014 (modelled on data in the first week of July 2014)

Source: OAG (Compiled by the authors)
Figure 6: TK and main European flag carriers’ A320 and A321 aircraft utilisation in 2012

Source: IATA WATS 2013 (compiled by the authors)
Figure 7: The unit costs of selected carriers in 2013

Notes:
(1) * Lufthansa passengers 2013 9M results, others based on Group financials
(2) **April-December 2013 9M results
(3) *** 2012 FY results
(4) AF-KL=Air France and KLM; LH=Lufthansa; IAG=parent company of British Airways and Iberia; SQ= Singapore Airlines; UA= United Airlines; DL=Delta Air Lines; AA=American Airlines; EK=Emirates; TK=Turkish Airlines

Source: airline annual reports (compiled by the authors)
Figure 8: Average fleet age (years) of different flag carriers by 2013

Note: BA=British Airways; LH=Lufthansa; AF=Air France; SQ=Singapore Airlines; TK=Turkish Airlines; EK=Emirates; QR=Qatar Airways

Source: Airfleets.net (compiled by the authors)
Figure 9: Passenger to employee ratio of various flag carriers in 2012/13

Notes:

(1) TK data is based on its latest annual presentation (2013), * March 2013 results, ** 2012 figures

(2) TK=Turkish Airlines, LH=Lufthansa; SQ=Singapore Airlines; EK=Emirates; QR=Qatar Airways; BA=British Airlines; AF-KLM=Air France and KLM

Source: Flight global (Compiled by the author)
Figure 10: Comparison of average fares (all classes) across a selection of network carriers (Jan 11-Dec 12)

Note: TK=Turkish Airlines; LH=Lufthansa; AF=Air France; BA=British Airways; CX=Cathay Pacific; EK=Emirates

Source: IATA PaxIS (compiled by the authors)
Figure 11: Average fare comparison for a selection of network carriers across a sample of O&D airports (Jan 11-Dec 12)

Notes:

(1) O&D airports included in the sample: MAN: Manchester, NRT: Tokyo, HKG: Hong Kong, PEK: Beijing, FCO: Rome, CPH: Copenhagen.

(2) TK=Turkish Airlines; LH=Lufthansa; EK=Emirates; CX=Cathay Pacific; BA=British Airways; AF=Air France

Source: IATA PaxIS Dynamic Tables (compiled by the authors)
Figure 12: TK’s advertising budget as a percentage of its total revenue (2004 to 2013)

Source: Turkish Airlines annual reports (compiled by the authors)
Table 1: Summary of TK’s capacity development from Istanbul Ataturk Airport by major world regions (2003 to 2014)

<table>
<thead>
<tr>
<th>Passenger operation</th>
<th>Destinations</th>
<th>Seat one-way</th>
<th>Seat capacity growth (%)</th>
<th>CAGR (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Europe : Eastern/Central Europe</td>
<td>17</td>
<td>37</td>
<td>497,473</td>
<td>2,875,468</td>
</tr>
<tr>
<td>Europe : Western Europe</td>
<td>31</td>
<td>60</td>
<td>1,787,709</td>
<td>7,907,037</td>
</tr>
<tr>
<td>Total Europe</td>
<td>48</td>
<td>97</td>
<td>2,285,182</td>
<td>10,782,505</td>
</tr>
<tr>
<td>Middle East</td>
<td>10</td>
<td>30</td>
<td>378,496</td>
<td>2,907,469</td>
</tr>
<tr>
<td>Asia</td>
<td>11</td>
<td>29</td>
<td>387,085</td>
<td>2,552,339</td>
</tr>
<tr>
<td>Africa</td>
<td>5</td>
<td>32</td>
<td>144,586</td>
<td>1,858,379</td>
</tr>
<tr>
<td>Americas</td>
<td>2</td>
<td>9</td>
<td>146,069</td>
<td>1,034,781</td>
</tr>
<tr>
<td>Total International</td>
<td>76</td>
<td>197</td>
<td>3,341,418</td>
<td>19,135,473</td>
</tr>
<tr>
<td>Total Domestic</td>
<td>20</td>
<td>37</td>
<td>2,701,780</td>
<td>7,997,422</td>
</tr>
<tr>
<td>Total</td>
<td>96</td>
<td>234</td>
<td>6,043,198</td>
<td>27,132,895</td>
</tr>
</tbody>
</table>

Source: OAG (Compiled by the authors)
Table 2: TK weekly departures from IST to each listed region in the first week of July 2003, 2008 and 2014

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>20</td>
<td>40</td>
<td>229</td>
<td>100%</td>
<td>473%</td>
<td>1045%</td>
</tr>
<tr>
<td>Americas</td>
<td>11</td>
<td>13</td>
<td>72</td>
<td>18%</td>
<td>454%</td>
<td>555%</td>
</tr>
<tr>
<td>Asia</td>
<td>32</td>
<td>79</td>
<td>205</td>
<td>147%</td>
<td>159%</td>
<td>541%</td>
</tr>
<tr>
<td>Domestic</td>
<td>418</td>
<td>712</td>
<td>1,048</td>
<td>70%</td>
<td>47%</td>
<td>151%</td>
</tr>
<tr>
<td>Europe</td>
<td>319</td>
<td>582</td>
<td>1,322</td>
<td>82%</td>
<td>127%</td>
<td>314%</td>
</tr>
<tr>
<td>Middle East</td>
<td>51</td>
<td>117</td>
<td>315</td>
<td>129%</td>
<td>169%</td>
<td>518%</td>
</tr>
<tr>
<td>Total</td>
<td>851</td>
<td>1,543</td>
<td>3,191</td>
<td>81%</td>
<td>107%</td>
<td>275%</td>
</tr>
</tbody>
</table>

Source: OAG (Compiled by the authors)
Table 3: Number of destinations and weekly flights of various flag carriers from their main base in the first week of July 2014

<table>
<thead>
<tr>
<th>Airlines</th>
<th>Domestic</th>
<th>Europe</th>
<th>M.East</th>
<th>Asia</th>
<th>Africa</th>
<th>Americas</th>
<th>Australia</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>LH</td>
<td>13</td>
<td>635</td>
<td>84</td>
<td>1,927</td>
<td>12</td>
<td>80</td>
<td>19</td>
<td>120</td>
</tr>
<tr>
<td>TK</td>
<td>37</td>
<td>1,048</td>
<td>97</td>
<td>1,322</td>
<td>30</td>
<td>315</td>
<td>29</td>
<td>205</td>
</tr>
<tr>
<td>AF</td>
<td>13</td>
<td>355</td>
<td>54</td>
<td>1,413</td>
<td>5</td>
<td>50</td>
<td>17</td>
<td>127</td>
</tr>
<tr>
<td>KLM</td>
<td>0</td>
<td>0</td>
<td>68</td>
<td>1,916</td>
<td>6</td>
<td>33</td>
<td>16</td>
<td>104</td>
</tr>
<tr>
<td>BA</td>
<td>7</td>
<td>352</td>
<td>59</td>
<td>1,461</td>
<td>9</td>
<td>78</td>
<td>15</td>
<td>126</td>
</tr>
<tr>
<td>EK</td>
<td>0</td>
<td>0</td>
<td>35</td>
<td>369</td>
<td>15</td>
<td>187</td>
<td>35</td>
<td>474</td>
</tr>
<tr>
<td>QR</td>
<td>0</td>
<td>0</td>
<td>29</td>
<td>287</td>
<td>26</td>
<td>384</td>
<td>39</td>
<td>372</td>
</tr>
<tr>
<td>SQ</td>
<td>0</td>
<td>0</td>
<td>13</td>
<td>102</td>
<td>2</td>
<td>10</td>
<td>30</td>
<td>514</td>
</tr>
</tbody>
</table>

Note: LH=Lufthansa; TK=Turkish Airlines; AF=Air France; BA=British Airways; EK=Emirates; QR=Qatar Airways; SQ=Singapore Airlines

Source: OAG (compiled by the authors)