



# ECONOMIC BENEFITS FROM AIR TRANSPORT IN ARGENTINA 2008





## EXECUTIVE SUMMARY

- Air transport provides Argentina with the connections to overseas economies that are essential for the country's economy to function with today's interconnected markets and global supply chains. It also played an important cyclical role in supporting the country's economic growth since the financial crisis of the early 2000s. From 2002 to 2007 GDP in the air transport industry grew by over 60% in total in real terms, equivalent to almost 10% per year. During this period total air passengers increased by over 60%; international passengers almost doubled.
- The industry suffered significantly in 2008-2009 as the global economic crisis hit domestic and international passenger revenues, while the spike in oil prices in the early part of that period raised fuel costs. Argentina's national carrier, Aerolineas, was nationalized in late 2008 following financial difficulties. Overall, air transport GDP fell by an estimated 31% in 2008 in real terms. But even with this sharp drop the industry still contributed more in real terms to Argentina GDP in 2008 than it did in 2002.
- Key factors affecting the Argentina air transport industry in 2008 and 2009 – the global economic crisis and oil price spike – also affected the air transport industry worldwide. IATA estimates that the commercial airline industry made a loss of US\$15.9 billion worldwide in 2008 and US\$9.4 in 2009. After a substantial dip during the recession, capacity was being added again to Argentina's aviation market by the middle of 2009 and passenger traffic had started to pick up towards the end of the year. By the end of the first quarter of 2010, passenger capacity was up 10-15% compared to pre-recession 2007 levels although passenger numbers remained subdued by the still difficult economic conditions.
- Air transport not only directly contributes to the country's GDP by generating wages, profits and tax payments, but also supports jobs and value-added in the wider economy through its supply chain. More importantly it is a key infrastructure asset for the country, connecting businesses and people to key overseas markets and suppliers, facilitating the growth of exports which form a crucial part of the economy.
- The demand-side and supply-side benefits generated and supported by air transport are shown in Table ES1.

**Table ES1: Economic benefits from air transport in Argentina, 2008**

	Impact (US\$)	% of Argentina GDP
<b>Economic benefits to passengers (consumer surplus, 2009)</b>	\$2,080 million	0.7%
<b>Supply-side benefits from a 10% increase in connectivity/GDP</b>	\$401 million	0.1%
<b>Demand-side benefits to GDP from air transport</b>	\$2,713 million	0.8%
- Air transport direct impact	\$522 million	0.2%
- Air transport indirect and induced impacts	\$450 million	0.1%
- Air transport facilitated tourism	\$1,740 million	0.5%
<b>Jobs supported by air transport (inc. tourism impact)</b>	161,000 jobs	1.0% of employment
<b>Wage income generated by air transport (inc. tourism impact)</b>	\$1,113 million	1.1% of income
<b>Tax revenues generated by air transport (inc. tourism impact)</b>	\$284 million	1.0% of revenues
<b>Export earnings generated by air transport (inc. tourism impact)</b>	\$3,302 million	4.1% of earnings

*Note: Figures may not sum due to rounding*

*Source: Oxford Economics and IATA estimates*

- The market for passengers flying to, from and within Argentina totaled US\$4.17 billion in 2009. This is estimated to generate direct economic benefits to passengers (consumer surplus) of **US\$2.08 billion**, equivalent to 0.7% of GDP.
- For a country such as Argentina, air transport connections to key markets are vital for the productive capacity of the economy and long-term economic development. **Argentina saw its connectivity rise by 12%** between 2002 and 2009, which we measure as a combination of the number of frequencies and destinations to important overseas markets. This increase would have been greater but for the severity of the 2008-2009 recession. Every 10% improvement in connectivity, relative to GDP, is estimated to boost the economy's long-run productive potential by US\$401 million.
- Although the connectivity of Argentina has increased since 2002, it still remains relatively low (as a proportion of GDP) compared to countries like Mexico. This highlights the **substantial economic benefits that could be available through further increases in Argentina's connectivity levels.**

- Air transport's direct contribution to GDP was estimated to be **US\$522 million** in 2008, with a larger contribution of **US\$972 million** after including the indirect and induced benefits created by the demand it generates in other sectors.
- Prior to the difficulties suffered by the industry in 2008 and 2009, the direct air transport GDP impact had risen by around US\$408 million from 2002-2007 to reach an estimated US\$648 million in 2007 (both figures in current price terms). While the impact including indirect and induced effects had increased by an estimated US\$760 million over this period to equal US\$1.2 billion in 2007. The severity of the recession in 2008 and 2009 caused some decline from that level, though there has subsequently been some upturn through to early 2010.
- The industry's economic influence extends even further than its supply chain. Air transport also facilitates and supports the significant tourism industry. Over 4.6 million tourists arrived in Argentina in 2008, of whom 55% (2.6 million) arrived by air. The impact from this air travel-related tourism is estimated to have boosted Argentina's GDP by a further **US\$1.7 billion** in 2008, equivalent to over 0.5% of its GDP.
- The global recession halted the rapid growth in tourism to Argentina in 2008. Total visitor numbers grew by only 0.8% on the previous year, compared with an average of 23% per year from 2002-2007. Meanwhile tourists arriving by air increased by only 2.3% in 2008, down from an average of 11% between 2002 and 2007. This environment subdued the contribution from air-related tourism GDP in 2008, though it still managed to grow by an estimated 6% on the previous year.
- In 2009 total tourist arrivals to Argentina fell by almost 9% and related tourism receipts by 16%. This will have further reduced the contribution of tourism to GDP, although signs of recovery are already evident in 2010. These cyclical declines should be reversed as the economic upturn in South America gathers pace.
- Adding the demand-side contributions from air transport to those facilitated in tourism gives a **total demand-side value-added of US\$2.7 billion, equivalent to 0.8% of Argentina's GDP in 2008**. On this basis the air industry **supports 161,000 jobs in Argentina, 1.0% of total employment in the economy**. Further contributions are made in the form of wages (1.1% of economy total), taxes (1.0%) and exports (4.1%).
- These contributions could be higher. The World Economic Forum's 2009 Global Enabling Trade report, which assesses countries according to factors affecting the free-flow of trade, ranks Argentina as 97th of 121 countries. The quality of air transport infrastructure is marked as a competitive disadvantage reducing Argentina's trade competitiveness. An improvement in air infrastructure could encourage more trade and likely lead to significant benefits to the Argentinean economy.
- **The importance of investing in improved connections to major overseas markets is shown by an analysis of the addition of a new service from Buenos Aires to Houston airport.** This service generated over 23,000 passengers each way in 2008, representing around 0.3% of overall traffic to, from and within Argentina. This service alone is estimated to generate at least US\$8 million in consumer surplus for passengers, US\$5 million for GDP and supports almost 140 jobs. It also generates around US\$2 million in wage income and US\$700,000 in additional tax revenues for the government.
- **The importance of keeping airport charges and taxes in line with efficient costs is shown** by estimating the impact of an hypothetical 50% increase in the passenger departure charge from its current average level of US\$28.3 per departing passenger. It is estimated that this would add 2.1% to the average return fare, reducing passenger departures by 166,000. This would cause economic costs to passengers, due to higher travel costs, totalling US\$56 million. There would also be wider costs to Argentina's economy, with GDP down \$39 million, a loss of almost 1000 jobs, wage income down US\$14 million and tax revenues down \$5 million.
- **Further liberalization** of restrictive elements of Argentina's bilateral air service agreements and the relaxation of airline ownership and control restrictions could yield significant additional economic benefits. Realising these benefits requires cooperation with bilateral partners as well as action by Government on domestic law affecting airline ownership restrictions.

# ECONOMIC GROWTH IN ARGENTINA

Argentina's economy has been marked by its turbulence in recent years. Real GDP growth averaged 7.7% between 1991-1994, as a wave of free-market reforms and a fixed exchange rate helped to attract vast inflows of foreign capital. However, the economy was badly affected by the knock-on effects from the Mexican "Tequila Crisis", with the economy contracting by 2.9% during 1995.

This was followed by a more prolonged spell of economic weakness, with output contracting for four consecutive years between 1999 and 2002, with a combination of factors leading eventually to a run on US dollar deposits, debt default and economic collapse as GDP sank by 10.9% in 2002. The government ended the 1-to-1 exchange rate peg to the US dollar and the peso devalued by 70%. The economy then experienced a vigorous rebound with growth averaging 8.7% per year between 2003 and 2008, with an associated sharp fall in the unemployment rate.

This economic expansion was brought to an abrupt halt by the recent global financial crisis. Domestic demand slumped, more than offsetting accommodative fiscal policy, whilst capital flight intensified on concerns over the country's ability to finance its external obligations. Real GDP fell 0.8% on the year in 2009Q2 and 0.3% in 2009Q3, the first quarter-on-quarter declines since the domestic crisis in 2002.

However the scale of the downturn has been much less severe than in other countries, supported by a positive trade balance. We estimate GDP growth was 0.8% in 2009. A recovery in 2010 is expected with real GDP growth of 3.8%. The positive outlook is supported by two factors. First, the acceleration in Chinese growth is likely to persist, benefitting Argentina via increased demand for grain and other commodities. Second, a strong performance in Brazil should boost the Argentine manufacturing sector.

**Table 1: Argentina GDP by Sector**

Sector	Share of GDP 2008 (%)	2007 real growth (%)	2008 real growth (%)
Agriculture and Fishing	5.0	9.8	-2.5
Mining	1.4	-0.5	1.1
Manufacturing	16.1	7.6	4.5
Electricity, Gas and Water supply	2.6	5.7	3.4
Construction	6.2	9.9	3.7
Retail, wholesale, Restaurants and Hotels	15.5	10.7	7.9
<b>Transport, storage and communication</b>	<b>11.0</b>	<b>13.7</b>	<b>12.1</b>
Financial Services	5.3	18.6	17.4
Real estate, renting and business	12.8	4.7	6.3
Public Sector and other services	17.3	5.0	4.9
Taxes & other adjustments	7.0	11.8	12.6
<b>Total</b>	<b>100</b>	<b>8.7</b>	<b>6.8</b>

Source: INEI

The Argentinean economy is now dominated by the service sector which accounted for almost two thirds of real GDP in 2008. Meanwhile manufacturing's share of real output was just over 16% compared to construction's 6.2% with the primary sector accounting for the majority of the remainder. An examination of sectoral growth rates in recent years indicates that it has been service industries which have typically been the most dynamic, with both transport, storage & communications and financial services recording strong double-digit growth in each year since 2005.

It is clear that the rapid expansion of the transport, storage and communications sector has been a key driving force in real GDP growth. During the period 1993-2008 the sector grew at an average annualized rate of 6.6% per year, significantly faster than real GDP which expanded at an average rate of 3.3% during the same period. This resulted in the sector's share of real GDP rising from 6.8% in 1993 to 11.0% in 2008.

**Figure 1: Argentina GDP, Transport and Air Transport Growth**



Source: Dirección Nacional de Cuentas Nacionales; INDEC

Air transport made a direct contribution through its added value of US\$522 million to Argentina GDP in 2008 in current prices. However the industry contracted by 31% in 2008, hit by falling passenger revenues due to the global economic crisis and the spike in oil prices raising fuel costs. Argentina's national carrier, Aerolineas, was nationalized in late 2008 following financial difficulties. Even with this sharp drop the industry still contributed more to Argentina GDP in 2008 than it did in 2002, due to strong overall growth of 60% between 2002 and 2007.

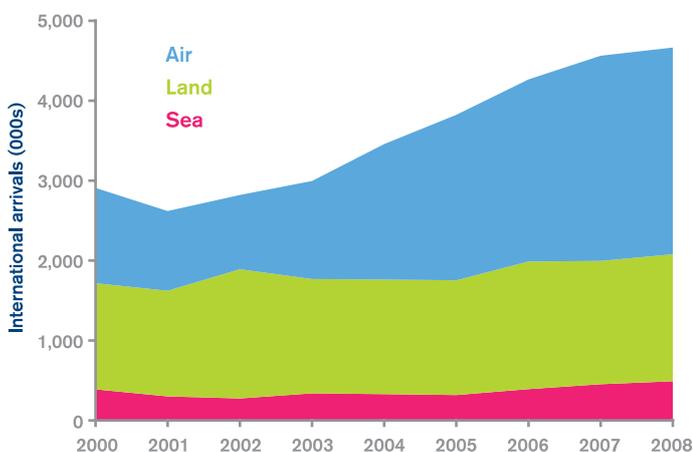
Air transport capacity in the Argentina market fell through 2008 in response to recession but by early 2009 was beginning to expand again. By early 2010 capacity was around 10-15% higher than 2007 levels and it is likely that GDP contribution from the industry has recovered in line.

The fast-growing tourist sector has also been an important contributor to GDP growth over the last decade, having grown by almost 50% in real terms in the five years to 2008. In the section below we discuss the essential role the aviation industry has played in driving this growth.

# LINKING ARGENTINA'S ECONOMY TO THE WORLD

Argentina is a very large country located in the southern part of South America. Demand for flights within Argentina, though broadly stable since 2005, was over 30% higher in 2008 compared with 2002. Meanwhile growth in international visitors arriving by air has been rapid – the total number of foreign visitors arriving at Argentinean airports rose by 1.8 times from 2002-2008. But according to the World Economic Forum Travel & Tourism Competitiveness Report<sup>1</sup>, the quality of air transport infrastructure (as measured by executive opinion) has declined from a score of 3.8 in 2006 to 3.1 in 2008. Further investment in air transport will be required to maintain service standards.

**Figure 2: Non-Resident Arrivals by Mode of Transport (000s)**



Source: Dirección de Estudios de Mercado y Estadística - Secretaría de Turismo de la Nación

Foreign visits to Argentina have grown rapidly in recent years, rising by almost two-thirds between 2002 and 2008 to over 4.6 million arrivals. Visitors are drawn by the country's blend of culture and spectacular landscapes, and the increasing integration of the economy with world markets. Tourists can experience Argentina's rich culture of music, dance and art in Buenos Aires and other cities. While the country's vast and diverse geography contains five UNESCO World Heritage sites of exceptional natural beauty, from the waterfalls of the sub-tropical Iguazu National Park in the north, to the glaciers of Patagonia in the south.

Air transport is the dominant mode of arrival for foreign visitors as of 2008 and has been the main source of the increase in foreign arrivals since 2002. 55% of tourists (2.6 million) arrived by air in 2008, compared with just 33% in 2002. 1.6 million of the 1.8 million increase in total foreign arrivals came from passengers travelling by air.

The global financial crisis however slowed the expansion of tourism as individuals and businesses cut back on travel. Total visitor numbers grew by only 0.8% in 2008 on the previous year, compared with an average of 23% per year from 2002-2007. Foreign air arrivals increased by only 2.3% in 2008, down from an average of 11% between 2002 and 2007. In 2009 total visitor numbers to Argentina fell by almost 9% and related tourism receipts by 16%. In the latter part of 2009 and early 2010 there has been some pick up as the economy began to turn up.

Over half of all tourists - an estimated 57% in 2007 - come from South America. With most of the rest either from Europe or North America. The rest of the world (including Asia) accounted for just 1.5% of all foreign visits to Argentina. However, that proportion is set to grow, with fast growing emerging markets, particularly China and India, expected to act as key drivers of global visitor growth over the next twenty years.

The importance of Asia as a future source of inbound growth underscores the importance of developing high-class air transport infrastructure and services required to cope with growing demand from long distance travelers. In the "Travel & Tourism Competitiveness Report 2009"<sup>3</sup>, Argentina was placed 72<sup>nd</sup> out of 133 countries in terms of overall air transport infrastructure and only 123<sup>rd</sup> with respect to quality of air transport infrastructure. These reasons highlight the need for further investment in air transport infrastructure, essential to the long-term growth of the tourism industry in Argentina.

<sup>1</sup> "Travel & Tourism Competitiveness Report 2009", World Economic Forum, 2009.

<sup>2</sup> World Tourism Barometer, UNTWO, April 2010

## INTERNATIONAL AIR TRAFFIC IS GROWING AT A FASTER RATE THAN GDP

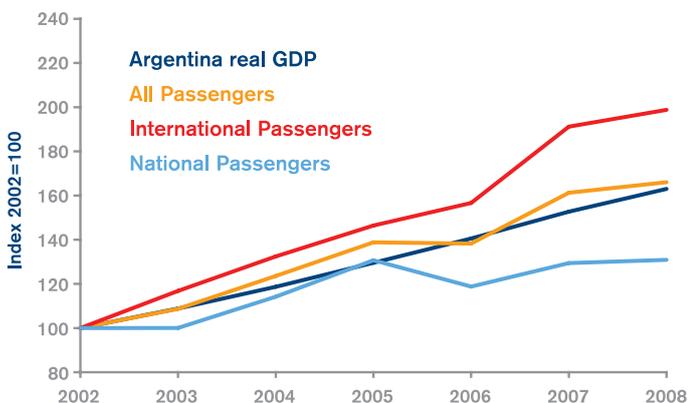
International air passenger numbers doubled from 2002-2008, growing at an average rate 12.1% per year. Over the same period real GDP in Argentina has grown by 8.5% on average.

The rise in international passengers will have significantly boosted activity in air transport services and air-dependent tourism, increasing their contributions to Argentina GDP. These two channels of benefits are examined in subsequent sections of this report.

The increase in domestic passengers has been more moderate, with levels broadly stable from 2005-2008. Nevertheless, the number of domestic passengers rose by 30% between 2002 and 2008, equivalent to 4.6% per year on average.

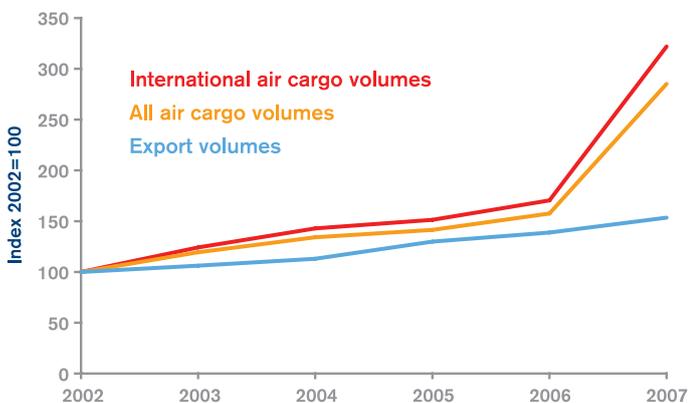
In 2009 international passenger numbers fell by 10%, however growth over the period 2010-2013 is expected to average 4.7% per year<sup>4</sup>, outpacing GDP growth forecasts in the vicinity of 3.0-3.5% over the same period<sup>5</sup>.

**Figure 3: Argentina GDP and International Air Passenger Traffic**



Source: Dirección Nacional de Tráfico Aerocomercial y Encuesta, INDEC.

**Figure 4: Argentina Cargo and Export volumes**



Source: Dirección Nacional de Tráfico Aerocomercial y Encuesta, INDEC.

## A SIGNIFICANT CONTRIBUTOR TO ARGENTINA'S EXPORTS

Exports are an important component of Argentina's economy, valued at about 13% of GDP in 2008. Export growth and trade surpluses have played a significant role in the recovery of the economy since the financial crisis of 2001-2002. Food and agricultural products made up over 40% of exports in 2007, followed by manufacturing exports at just over 25%.

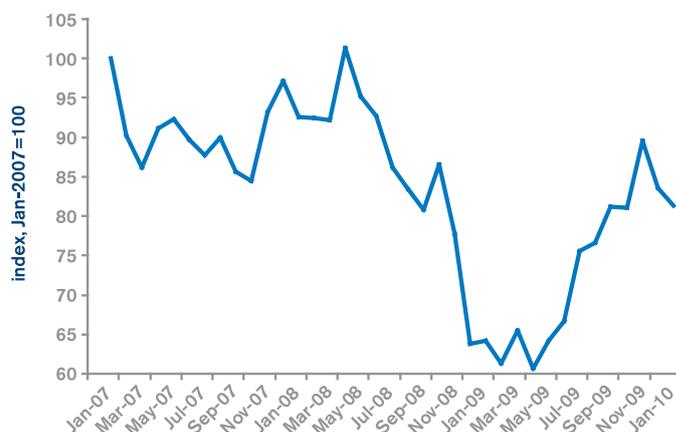
Air transportation has been crucial to the expansion of exports in Argentina. This growth has been underpinned by strong growth in air cargo. Globally air transport carries only 0.5% of world exports by weight but 35% by value<sup>6</sup>, so in terms of economic contribution air transport is a key mode. Before the recent global financial crisis international air cargo volumes had risen by 3.2 times between 2002 and 2007 (see Figure 5).

After suffering a precipitous fall during the recession, air cargo was approaching its pre-recession levels by early 2010 (see Figure 6). Airlines surveyed in July 2009 expected an annual growth rate of 3.4% over the period 2010-2013<sup>7</sup>. This is likely to be a conservative outlook affected by the extent of the fall being experienced at the time of the survey. The stronger than anticipated rebound in global trade and economic growth should see air cargo growth rates for the Argentina market well in excess of this.

Typically air transportation is more beneficial (i.e. cost-effective) to the movement of higher value goods, as they are lighter per unit weight of value. Air transport growth would therefore benefit Argentina's economy by facilitating growth in the export market while moving production towards more high-value goods. In "The Global Enabling Trade Report 2009"<sup>8</sup>, which measures the factors affecting the free-flow of trade, Argentina was ranked 97<sup>th</sup> out of 121 countries overall and the quality of air transport infrastructure was marked as a competitive disadvantage. Clearly there is much scope for the air infrastructure of Argentina to develop, from which the country could reap trade and economic benefits.

**Figure 5: Argentina market air freight tonnes, seasonally adjusted index**

Source: IATA ODS.



<sup>4</sup>Airline Industry Forecast 2009-2013, IATA, 2009.

<sup>5</sup>World Economic Outlook, IMF, April 2010.

<sup>6</sup>Global Cargo Market Projections for 2006, Colography Group, 2005.

<sup>7</sup>Airline Industry Forecast 2009-2013, IATA, 2009.

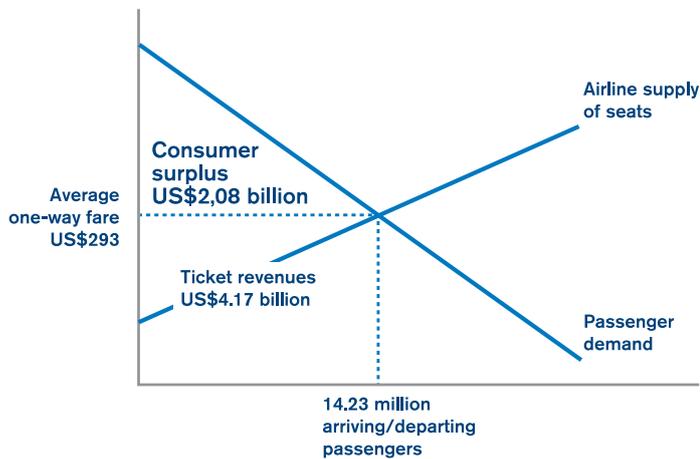
<sup>8</sup>"The Global Enabling Trade Report 2009", World Economic Forum, 2009.

## SIGNIFICANT ECONOMIC BENEFITS TO AIRLINE PASSENGERS

The key economic value from air transport is the benefit received by airline passengers and shippers themselves. Passengers are obviously willing to pay their air fare. But a large number of passengers will also value the trip far more than the cost of the fare, for the pleasure of the tourist visit or for the value of the business achieved through the trip.

Economists call the value received, over and above the cost of the fare, consumer surplus. The market for passengers flying to, from and within Argentina was estimated to total US\$4.17 billion in 2009, with an average one-way fare of US\$293 and 14.23 million passenger enplanements. Using an average price elasticity for passenger demand of minus 1, the consumer surplus for passengers is estimated to be worth US\$2.08 billion annually (see Figure 6)

Figure 6: The Consumer Surplus for Passengers, 2009



Source: Pax-IS Plus

## SUPPLY-SIDE BENEFITS FROM CONNECTIVITY

For a country such as Argentina, air transport connections to key markets are vital for long-term economic development and growth. This is the infrastructure asset that facilitates international trade, foreign direct investment and tourism, as well as less tangible benefits such as the exchange of ideas and the beneficial influences of overseas competition on productivity. As such, it is important to introduce or expand routes to major destinations within the global air transport network.

Over the last decade Argentina's international services remained concentrated on Latin and North America with a number of Transatlantic connections to major European hubs. (see Figures 7 & 8). By May 2009 carriers serving Argentina had rationalized some of their European routes, however new direct services to Johannesburg and Sydney stand out as notable additions.

Figure 7: International Routes, May 2002



Figure 8: International Routes, May 2009



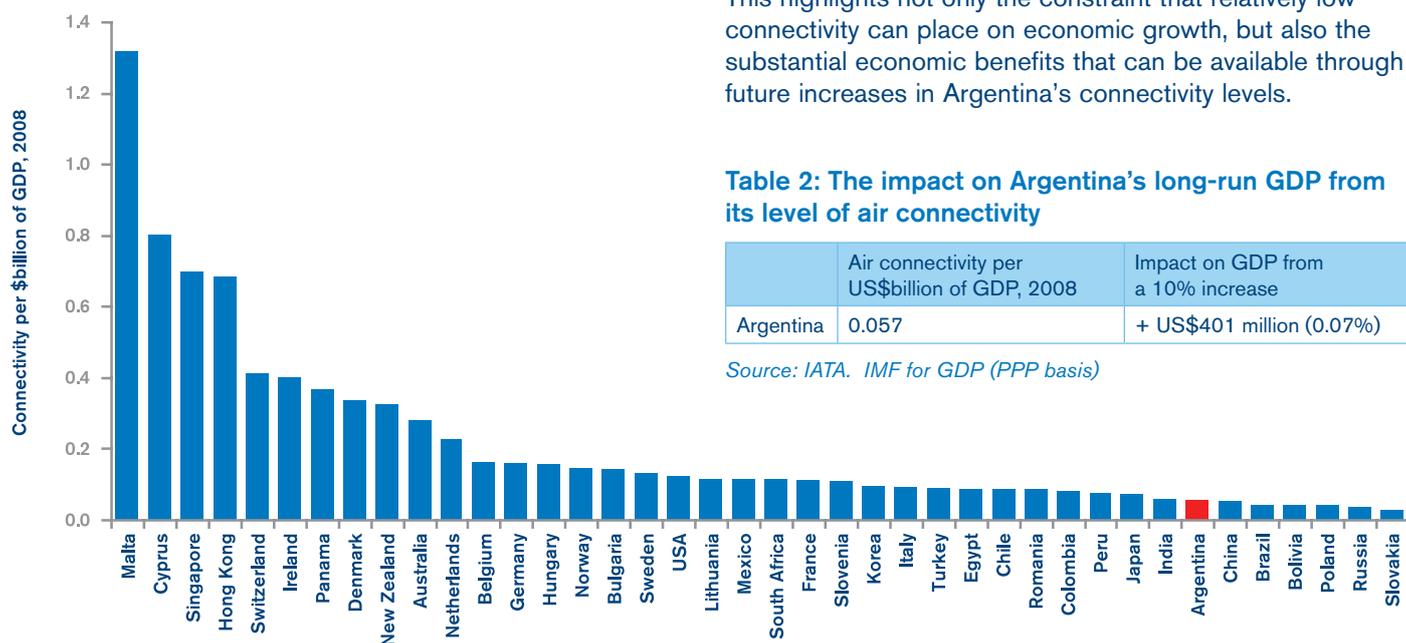
Source: SRS Analyser

The overall number of international routes increased by 11% between 2002 and 2009. This was largely due to new services from Buenos Aires, however some international connections from regional airports also contributed to the increase.

The overall frequency of international flights had increased by 34% in 2007 but by 2009 had dropped back to a rise of 14% compared to 2002 levels (see Figure 9) almost certainly due to the severity of the 2008-2009 recession, which is likely to be reversed as the economy recovers. The number of available seats followed a similar profile. Over this period seats per week rose by 69% and frequencies doubled between Buenos Aires and Madrid – a destination not only economically important in itself but also providing significant onward connections within the global airline network, providing greater access to a large number of new destinations and markets.

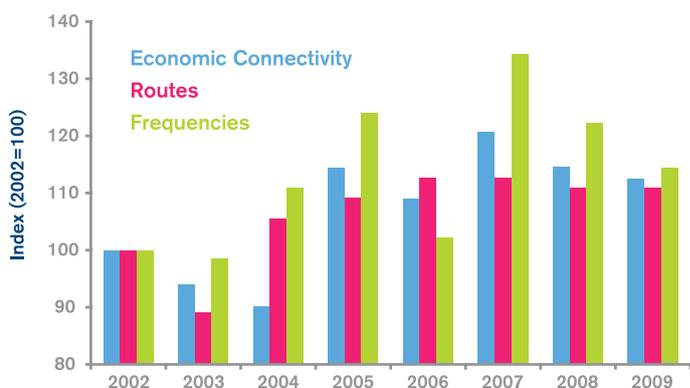
In terms of connectivity, i.e. weighting the number of available seats by the importance of the destination within the airline network, Argentina saw its connectivity rise by 12% between 2002 and 2009. The increase would have been greater but for the severity of the 2008-2009 recession. This increased connectivity creates substantial wider economic benefits for Argentina, providing a boost to its long-run productivity and GDP growth. Recent research<sup>9</sup> has shown that there is a significant link between air connectivity and business productivity and long-term GDP growth.

**Figure 10: Air Connectivity by Country**



<sup>9</sup>IATA Economic Briefing (2007), "Aviation Economic Benefits", see: [www.iata.org/economics](http://www.iata.org/economics)

**Figure 9: Argentina's Connectivity to the Global Air Network**



Source: SRS Analyser, IATA

Although the connectivity of Argentina has increased since 2002, it still remains relatively low (as a proportion of GDP) compared to other countries (see Figure 10). Argentina's GDP-weighted connectivity within the global airline network is below several other Latin American countries, such as Panama and Mexico. However, it is higher than Brazil.

There are several major economic factors that determine the long-run level and growth of a country's economy. Assets such as natural resources, larger well-educated populations and energy resources are critical. The level of air connectivity also has an impact on long-run economic performance – through providing the infrastructure enabling trade, tourism, foreign direct investment, competition and the exchange of ideas all of which can boost business productivity. IATA estimates that Argentina would see a US\$401 million per annum increase in its long-run GDP from each 10% increase in connectivity, relative to GDP. This highlights not only the constraint that relatively low connectivity can place on economic growth, but also the substantial economic benefits that can be available through future increases in Argentina's connectivity levels.

**Table 2: The impact on Argentina's long-run GDP from its level of air connectivity**

	Air connectivity per US\$billion of GDP, 2008	Impact on GDP from a 10% increase
Argentina	0.057	+ US\$401 million (0.07%)

Source: IATA. IMF for GDP (PPP basis)

Source: SRS Analyser, IATA

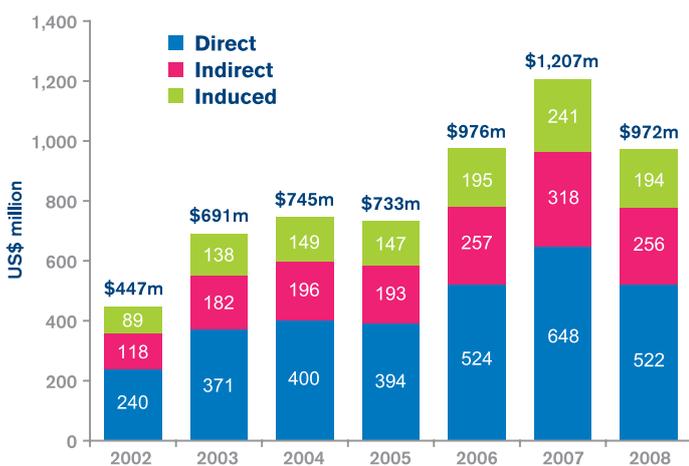
# DEMAND-SIDE BENEFITS FOR ARGENTINA'S ECONOMY

Air transport also has an important demand side contribution to Argentina's GDP through the value-added it creates, and the demand and employment that flows from that activity through its supply chain and into other industries.

The contribution of air transport to the Argentinean economy has increased since the financial crisis of the early 2000s. This is despite a significant fall in 2008 due to the global financial crisis, oil price spike and difficulties faced by the national carrier Aerolineas. Its direct impact, in terms of the benefits it creates through employment and economic activity in airlines and airports, was an estimated US\$522 million in 2008 (see Figure 11). This is over two times higher than the 2002 figure of US\$240 million in current prices.

Prior to the recent unprecedented economic conditions which have afflicted the industry, the direct GDP contribution had reached US\$648 million in 2007, 2.7 times higher than in 2002.

**Figure 11: Argentina Air Services – Economic Benefits**



Note: Figures may not sum due to rounding  
Source: Oxford Economics

In addition to the direct contribution to Argentina's GDP from the airline industry, there are further impacts through the employment and economic activity that is stimulated within the industry's supply chain (indirect impacts). Extra benefits are generated by the spending of wage income earned within the aviation industry and its supply chain on goods and services in other industries (induced impacts). The total value-added created by air services – including the direct, indirect and induced benefits – is estimated to have been about US\$972 million in 2008, equivalent to 0.3% of Argentina's total GDP. This total value-added has increased by almost US\$525 million in current terms since 2002 (see Table 3).

In 2007, before the crises affecting the Argentina air transport industry, the total GDP impact had reached US\$1.2 billion accounting for direct, indirect and induced effects. The severity of the recession in 2008 and 2009 caused some decline from that level. However, this cyclical decline should be reversed as the economy recovers.

Air services is a highly capital intensive industry, but nonetheless remains a large employer. It also generates a large number of additional jobs through the supply chain and consumer spending effects. 12,000 people were directly employed in air transport services in Argentina in 2008, and the industry supported over 36,000 jobs in the whole economy. Note that these numbers have been reduced, probably temporarily, by the severity of the recession in 2008-2009.

The jobs supported by air services are typically highly productive due to the high capital intensity of the industry and because of the specialist skills required in many job functions. Consequently, a large proportion of the employment generated has relatively high wages compared to many other sectors of the economy. Thus, air transport supported 0.2% of employment within Argentina in 2008, but a higher proportion of its wage income at 0.6% (see Table 4).

There is also a sizable contribution to taxation which supports Argentina government revenue. This is particularly important against a difficult fiscal backdrop. Argentina recorded a budget deficit in 2009 for the first time since 2002 and is expected to remain in deficit in 2010. While the country continues to struggle with high levels of foreign debt, a legacy of the financial crisis of the early 2000s - an estimated US\$15bn of debt payments are due this year.

Direct tax payments by the airline industry were estimated to be **US\$98 million** in 2008. Adding indirect and induced impacts generates a total contribution to Government tax revenues of **US\$137 million**, equivalent to around **0.5%** of Argentina's total tax revenues.

Air transport services also makes a contribution to export earnings both directly, through the activity of airlines, and indirectly through the facilitation of exports by other sectors of the economy. Air services is estimated to have directly generated US\$360 million of exports in 2008, equal to 0.4% of Argentina's total exports in the year.

**Table 3: Argentina Air Services – Economic Benefits**

	2002	2003	2004	2005	2006	2007	2008
<b>GDP (US\$mn)</b>							
Direct	240	371	400	394	524	648	522
Indirect	118	182	196	193	257	318	256
Induced	89	138	149	147	195	241	194
<b>TOTAL</b>	<b>447</b>	<b>691</b>	<b>745</b>	<b>733</b>	<b>976</b>	<b>1,207</b>	<b>972</b>
<b>Employment (jobs)</b>							
Direct	10,996	9,867	9,919	10,277	10,386	10,795	11,921
Indirect	13,150	11,800	11,861	12,290	12,420	12,909	14,256
Induced	12,089	15,311	14,832	12,554	14,799	15,308	9,971
<b>TOTAL</b>	<b>36,235</b>	<b>36,977</b>	<b>36,612</b>	<b>35,121</b>	<b>37,605</b>	<b>39,013</b>	<b>36,148</b>
<b>Wages (US\$mn)</b>							
Direct	101	119	132	143	244	348	445
Indirect	28	30	33	41	49	61	84
Induced	26	39	41	42	58	73	59
<b>TOTAL</b>	<b>155</b>	<b>187</b>	<b>206</b>	<b>225</b>	<b>351</b>	<b>482</b>	<b>588</b>
<b>Tax (US\$mn)</b>							
Direct	38	54	59	59	82	106	98
Indirect	7	13	17	17	22	28	22
Induced	5	10	13	13	17	21	17
<b>TOTAL</b>	<b>50</b>	<b>78</b>	<b>88</b>	<b>88</b>	<b>121</b>	<b>154</b>	<b>137</b>

Note: Figures may not sum due to rounding  
Source: Oxford Economics

**Table 4: Argentina Air Services – Total Economic Benefits (includes direct, indirect and induced effects)**

	GDP (US\$mn)	Employment (jobs)	Wages (US\$mn)	Taxes (US\$mn)	Exports (US\$mn)
<b>2002</b>	447	36,235	155	50	60
<b>2003</b>	691	36,977	187	78	123
<b>2004</b>	745	36,612	206	88	208
<b>2005</b>	733	35,121	225	88	260
<b>2006</b>	976	37,605	351	121	296
<b>2007</b>	1,207	39,013	482	154	377
<b>2008</b>	972	36,148	588	137	360
<b>Contribution to Argentina's Totals</b>					
	GDP	Employment	Wages	Taxes	Exports
<b>2002</b>	0.4%	0.3%	0.5%	0.8%	0.2%
<b>2003</b>	0.5%	0.3%	0.5%	0.8%	0.4%
<b>2004</b>	0.5%	0.2%	0.5%	0.7%	0.5%
<b>2005</b>	0.4%	0.2%	0.4%	0.6%	0.4%
<b>2006</b>	0.3%	0.2%	0.5%	0.4%	0.6%
<b>2007</b>	0.5%	0.2%	0.6%	0.7%	0.6%
<b>2008</b>	0.3%	0.2%	0.6%	0.5%	0.4%

Note: Figures may not sum due to rounding  
Source: Oxford Economics

## AIR TRANSPORT PROVIDES FURTHER BENEFITS FOR TOURISM

In addition to the direct and multiplier (indirect and induced) impacts generated from air transport services, the industry also plays a key role in facilitating growth in the Argentinean tourism industry. As reported previously, growth in total visitor numbers has been driven by tourists arriving by air (see Figure 2). Over 4.6 million tourists arrived in Argentina in 2008, of whom 55% arrived by air. This is up from an estimated 33% of visitors arriving by air in 2002. In 2008, tourists on average spent US\$989 during their visit. During the downturn in 2009 this fell to US\$912, meaning an almost 16% fall in tourism receipts last year<sup>10</sup>. This decline is expected to be reversed as the economic upturn continues through 2010.

The impact from tourists arriving by air is estimated to have boosted Argentina's GDP by over US\$1.7 billion in 2008, equivalent to around 0.5% of its GDP (see Table 5).

The global recession meant 2008 was a difficult year for the aviation and tourism industries. Total foreign visits to Argentina increased by only 2.3% in 2008 (see Figure 2), compared with 7% the previous year, while growth in air arrivals was only 0.8%. For this reason air-related tourism GDP rose by only 5.5% in current prices, and actually fell by 11.3% when adjusted for inflation. Against this backdrop the contribution of air-related tourism to Argentina GDP fell from 0.6% in 2007 to 0.5% in 2008. In 2009 total visitor numbers to Argentina fell by almost 9% which will have reduced the GDP impact of tourism from 2008 levels.

Tourism is labor rather than capital intensive. Tourism related to air travelers is estimated to have supported over 124,000 jobs in 2008, equivalent to 0.7% of all the jobs in Argentina and higher than the corresponding GDP share.

Total wage income from aviation-related tourism was an estimated US\$525 million in 2008, equal to 0.5% of total wage income in Argentina.

Tax income generated by this tourism was an estimated US\$148 million in 2008 or 0.5% of the whole economy. Air-related tourism also generated considerable export income of US\$2.9 billion, 3.7% of the total for Argentina.

## TOTAL DEMAND-SIDE BENEFITS FOR ARGENTINA'S ECONOMY

Adding together the demand-side contributions of air transport services and air-related tourism gives an estimated total demand-side value added of US\$2.7 billion in 2008, equivalent to 0.8% of Argentina's GDP (see Table 6). This supports around 161,000 jobs (1.0% of all employment in the country), providing wage income of US\$1.1 billion (1.1% share of the economy's total). The overall contribution to taxes was US\$284 million in 2008, or 1% of total tax revenue in Argentina. Air-related exports amounted to US\$3.3 billion, which was 4.1% of total exports in the country.

**Table 5: Argentina Air Services: Tourism Impact (includes contribution of air travelers' expenditure)**

	GDP (US\$m)	Employment (jobs)	Wages (US\$m)	Taxes (US\$m)	Exports (US\$m)
2002	342	64,456	99	20	565
2003	531	82,051	149	39	944
2004	706	97,945	196	60	1,305
2005	1,019	121,535	290	88	1,737
2006	1,233	130,331	366	105	2,082
2007	1,648	145,727	497	143	2,803
2008	1,740	124,394	525	148	2,942
Contribution to Argentina's Totals					
	GDP	Employment	Wages	Taxes	Exports
2002	0.3%	0.5%	0.3%	0.3%	1.9%
2003	0.4%	0.6%	0.4%	0.4%	2.8%
2004	0.5%	0.6%	0.5%	0.5%	3.3%
2005	0.6%	0.8%	0.6%	0.6%	3.8%
2006	0.6%	0.8%	0.6%	0.6%	3.9%
2007	0.6%	0.9%	0.6%	0.6%	4.3%
2008	0.5%	0.7%	0.5%	0.5%	3.7%

Source: Oxford Economics

<sup>10</sup>World Tourism Barometer, UNTWO, April 2010.

**Table 6: Demand-side contributions from air transport services and tourism**

	GDP (US\$m)	Employment (jobs)	Wages (US\$m)	Taxes (US\$m)	Exports (US\$m)
2002	788	100,691	254	70	624
2003	1,222	119,029	336	117	1,067
2004	1,452	134,557	402	148	1,513
2005	1,752	156,656	515	176	1,996
2006	2,209	167,936	717	225	2,379
2007	2,855	184,740	979	297	3,180
2008	2,713	160,542	1,113	284	3,302
Contribution to Argentina's Totals					
	GDP	Employment	Wages	Taxes	Exports
2002	0.8%	0.7%	0.9%	1.2%	2.2%
2003	0.9%	0.8%	0.9%	1.2%	3.2%
2004	0.9%	0.9%	0.9%	1.1%	3.8%
2005	1.0%	1.0%	1.0%	1.1%	4.3%
2006	1.0%	1.0%	1.1%	1.2%	4.5%
2007	1.1%	1.1%	1.2%	1.3%	4.9%
2008	0.8%	1.0%	1.1%	1.0%	4.1%

Source: Oxford Economics

The demand-side contribution from air transport increased significantly from 2002 to 2007 with respect to every measure (GDP, employment etc), both in absolute terms and in the proportional contribution to the whole Argentina economy. The unprecedented economic conditions faced by air transport industry in 2008 and 2009 meant that its total GDP, employment and tax contribution fell in 2008 in level terms, while the percentage contribution fell according to all demand measures.

## ESTIMATING THE BENEFITS FROM NEW SERVICES

The bulk of Argentina's international connectivity stems from services to and from Buenos Aires and there have been a number of new routes established to this gateway since 2000. One of the key new routes is from Ezeiza to Houston airport in the United States. This route increases Argentina's international connectivity by close to 2% and provides a significant economic contribution within the overall totals (see Table 7).

In 2008, the route from Buenos Aires to Houston was estimated to have over 23,000 departing passengers (with a similar number on the IAH-EZE leg), representing around 0.3% of the overall total of passengers to, from and within Argentina. Because this route connects two important centers of economic activity, the benefits of this service are likely to be proportionately greater than from those linking less economically significant locations.

However, in the absence of more detailed estimates, assuming a linear impact for a change in passengers can provide an indication of the minimum benefits associated with the route. Table 7 shows that the EZE-IAH route creates at least \$8 million of consumer surplus for passengers, \$5 million for GDP and boosts employment by around 140 jobs. It also creates wage income of around \$2 million and \$700,000 of additional tax revenue for the government.

**Table 7: The economic contribution in 2008 of the EZE – IAH route**

	2008	Estimated contribution of the EZE - IAH route in 2008
Departing passengers	7,420,129	23,170
Economic benefits to passengers (US\$m)	2,502	8
Boost to GDP (US\$m)	1,758	5
Boost to Employment	44,205	138
Boost to Wage Income (US\$m)	635	2
Boost to Tax Revenues (US\$m)	218	0.7

Source: Oxford Economics, IATA

## ESTIMATING THE ECONOMIC COST OF CHARGES

It is important that airport charges and taxes are kept closely in line with the efficient cost of providing services at the airport. Otherwise, increases in airport charges and taxes can have a negative impact in terms of offsetting any revenue through a significant reduction in the economic benefits that aviation generates. By way of illustration, we consider the impact of a hypothetical 50% increase in departure charges on passengers at Ezeiza airport in Buenos Aires (see Table 8). Currently, the charges average around US\$28.3 per international and domestic departure, equating to 4.2% of the average return fare.

A 50% rise in departure charges would raise the cost of travelling to and within Argentina by 2.1%. Recent research<sup>12</sup> shows that on average there will be a 11% fall in passenger numbers for every 10% rise in air fares for the markets making up the bulk of traffic to/from Argentina. Therefore, a 2.1% increase in fares would see a reduction of more than 166,000 in passenger departures and tourist arrivals by air.

There would be an increase in revenues from the departure charge of \$98 million but much if not all of this would be offset by the economic costs to passengers and the wider economy in Argentina. The direct impact on passengers is estimated to be a loss of economic benefit (consumer surplus), due to higher travel costs, of \$56 million.

The impact of reduced air traffic and the reduced spending of these passengers is estimated to reduce annual GDP in Argentina by \$39 million, cause a loss of 992 jobs, reduce wage income by \$14 million, and reduce Government tax revenues by \$5 million as a result of lower corporate and income tax payments.

## ESTIMATING THE BENEFITS FROM LIBERALIZATION

Many of the air service agreements to which Argentina is a signatory remain restrictive in nature, with many having limits on capacity, designated airports and, in some cases, approved airlines and pricing. Further liberalization of these agreements, as well as relaxation of ownership and control regulations could yield significant further economic benefits for Argentina.

A study conducted to estimate economic benefits from further liberalization in Chile<sup>13</sup> – already one of the most liberal in the region – showed that full liberalization of market access conditions could boost international traffic by 24%. This would drive the creation of over 35,000 jobs and contribute significantly to GDP. A similar study for Peru showed that liberalization had the potential to increase air passenger markets by 56%.

The economic benefits for Argentina from liberalization could be in the same order of magnitude. Realising these benefits would require cooperation with bilateral partners as well as action by Government on domestic law affecting airline ownership restrictions.

**Table 8: The economic costs of higher airport passenger departure charges**

	2008	50% rise in charges	Change
Aeronautical charge per passenger	28.3	42.4	14.1
As a % of average return fare	4.2%	6.3%	2.1 pts
Departing passengers	7,420,129	7,253,683	-166,447 (-2.2%)
Economic benefits to passengers (\$mn)	2,502	2,446	-56
Boost to GDP (\$mn)	1,758	1,719	-39
Boost to Employment (jobs)	44,205	43,213	-992
Boost to Wage income (\$mn)	635	621	-14
Boost to Tax revenue (\$mn)	218	213	-5

Source: Oxford Economics, IATA

<sup>12</sup>IATA Economic Briefing (2008), "Air Travel Demand", see: [www.iata.org/economics](http://www.iata.org/economics)

<sup>13</sup>The Impact of International Air Service Agreement Liberalization on Chile, InterVISTAS, 2009.

## NOTE ON METHODOLOGY

- Economic benefits to passengers are estimated as shown in Figure 7.
- Supply-side benefits from connectivity were estimated based on the methodology published in 'Airline Economic Benefits: IATA Economic Briefing No.8, July 2007'.
- Demand-side benefits to GDP and benefits from tourism were estimated by Oxford Economics using their global economic model and satellite models.
- The benefits from new services was estimated by measuring the addition to passenger numbers and using the analysis provided by Oxford Economics, assuming a linear impact from a percentage increase in passenger numbers.
- The economic cost of charges were estimated as explained in the last section together with the use of the analysis provided by Oxford Economics, assuming a linear impact from a percentage increase in passenger numbers.
- Benefits from further liberalization are drawn from research conducted by InterVISTAS-EU Consulting on 'The Impact of Air Service Liberalization on Chile', 2009.

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