The Economic Activity Dependent on Overseas Flights at LAX

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Executive Summary

International flights arriving at LAX from overseas made a substantial contribution to the economy of Southern California, adding $82.1 billion in total economic output, plus 363,700 direct and indirect jobs with annual wages of $19.3 billion in Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura Counties in 2006.

Over the course of 2006, an average transoceanic flight traveling round-trip from LAX every day added $623 million in economic output and sustained 3,120 direct and indirect jobs in Southern California with $156 million in wages. The economic output, jobs, and wages come from four sources: the production and transportation of freight exports (carried in the belly of the plane), the transportation of freight imports, the operation of the airport itself, and the purchases made by international visitors on the flights. Freight exports (which are generally high-value items) accounted for over 80% of the annual economic activity generated by international flights at LAX.

The total economic impact could have been higher. LAX lost market share relative to competitor airports, measured as the percentage of all passengers on non-stop transoceanic flights to the United States who arrived at LAX, 2000-2006. If the airport's market share had held steady at its 2000 level, LAX would have had about 9 more daily transoceanic flights in 2006. The additional flights would have added up to $5.6 billion more in economic output, along with up to 28,100 direct and indirect jobs with annual wages of $1.4 billion.

Still more economic activity is at stake as international carriers plan routes for their new long-range Airbus and Boeing aircraft scheduled for delivery during the next five years. Several of these carriers are seriously considering deploying their new aircraft at other U.S. gateways if they do not see improvements to facilities at LAX. Market trends suggest LAX could capture 11 new daily transoceanic flights by 2012. The economic gains to Southern California would be (in 2007 dollars) up to $6.9 billion in additional regional economic output, along with up to 34,300 direct and indirect jobs and $1.7 billion in total wages.

The economic activity tied to discretionary passenger travel is most at-risk should Southern California have to rely on connecting flights instead direct flights to and from LAX. Tourists may choose more convenient or lower priced alternative destinations and travel firms may offer packages to cities with direct connections. Business travel can also be discretionary, particularly at the point when firms are selecting a site for their overseas operations. A lack of direct overseas flights could make the region less attractive to firms entering the U.S. market.

The economic activity tied to air cargo is less vulnerable, but still at-risk, particularly over time. In the near term, having to make connecting flights is less problematic for air cargo than for passengers. In the longer term, however, a lack of direct flights may dissuade manufacturers that rely on air cargo from moving to (or expanding) in Southern California, which is already considered a high-cost location for businesses. Such manufacturers tend to create good paying jobs that have a strong multiplier effect (creating numerous indirect jobs), meaning that losses in this area would be acutely felt.

BACKGROUND

The latest aircraft from Airbus and Boeing introduce two competitive threats for LAX, both of which are intricately bound up in the failure to modernize the airport. First, the infrastructure at LAX is not yet capable of handling regular service for the 550-passenger Airbus A-380. Runways, taxiways and gates will all have to be modified to accommodate this huge aircraft, while the gates, terminals and baggage handling system will have to be improved to handle so many passengers at once. Other U.S. gateway airports are ready now or will be ready soon to handle the A-380.

Second, LAX is physically capable of serving the new Boeing 787, but is not yet ready for the competitive pressure this aircraft will introduce. With its fuel efficient design and extremely long range, the B-787 could open up nonstop routes to far flung points around the globe. This long-range capability is a double-edged sword for LAX.

On one hand, the B-787 could open up direct service to new cities in existing markets (bypassing congested hubs) and to new markets that were previously unreachable (connecting Southern California to cities in India, for example). On the other hand, the extended range of the B-787 also means that many international airlines will for the first time have the option of bypassing LAX entirely. In this context, the problem is not so much the size of the gates, but their location, ease of use, decor and amenities. Airlines are more likely to add routes to attractive, modern airports where they can use direct 'contact' gates, rather than remote gates that require the extra time and hassle of a shuttle bus.

The competitive threats to LAX from the new Airbus and Boeing aircraft are already here. Some airlines that expect to take delivery of these planes over the next five years have said that they will add routes at rival airports instead of at LAX. Others have adopted a wait-and-see stance: they want to add routes to Southern California, but will not compromise passenger service and quality to do so.

Southern California can ill afford to lose the competition for overseas routes.

INTRODUCTION

Considerable economic activity is at stake when an airline chooses another international gateway instead of LAX for a daily overseas international flight. One daily transoceanic flight is defined as a round-trip flight between two airports, either leaving LAX and returning or stopping at LAX and returning home. This study examines the regional economic activity supported by international overseas air transportation through LAX.

The LAEDC worked with the consulting firms SH&E and HR&A on this report. SH&E provided detailed passenger data and used WISER data to estimate the total value of imported and exported goods by commodity on passenger flights to and from Europe, Asia and the Far East, and Australia and Oceania. They also analyzed flight patterns, estimated LAX market share and forecast future flight demand. HR&A used the IMPLAN model to estimate the jobs, wages and economic output associated with airport operations, visitor spending, imported goods, and exported goods. We proceed in four parts.

We begin by estimating the total (direct and indirect) economic output, jobs and wages sustained by transoceanic flights between LAX and three regions in 2006: Europe, Asia and the Far East, and Australia and Oceania. We include the economic activity in Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura Counties related to on-airport operations, local spending by overseas visitors and commercial cargo imported and exported in the belly holds of passenger aircraft. From the overall totals, we estimate the average output, jobs and wages per passenger and per ton of cargo. We use this information to create our benchmark measure for the rest of the study: the annual economic activity in Southern California associated with a typical daily transoceanic international flight at LAX.

In the second part of the study, we use the benchmark measure (annual economic activity per flight) to estimate the opportunity cost to the regional economy of LAX's slide in international market share, 2000-2006.

In the third part of the study, we use the benchmark to assess the potential economic gains should LAX capture additional daily overseas flights by modernizing the airport.

In the fourth section, we conclude with some remarks on the airport's importance to the regional economy.

Unless stated otherwise, all economic estimates in this report are based on calendar year 2006 activity at LAX. Dollar amounts are expressed in current (2007) dollars throughout.

MEASURING THE VALUE OF AN OVERSEAS FLIGHT

LAX is the primary international gateway for Southern California, from San Luis Obispo to the Mexican border. International flights arriving at LAX from overseas make a substantial contribution to the economy of Southern California, defined throughout this report as Los Angeles, Orange, Riverside, San Bernardino, San Diego and Ventura Counties. Four activities related to LAX generate significant regional economic impacts: airport operations; visitor spending; inbound cargo (imports); and outbound cargo (exports). We estimate the total impact of each, the direct impact using the best available data and the indirect impact using multipliers from the IMPLAN economic impact model.

> **Understanding Multiplier Effects**: In economic impact analysis, there are two types of impacts: direct and indirect. Direct impacts are associated with the initial activity under consideration. In this case, the direct impact includes on-airport workers and firms associated with international flights plus off-airport workers and firms associated with the people and products carried on those flights. The indirect impacts are created when the direct firms and workers buy goods and services in the local economy. For example, a ticket agent (a direct worker) buying a latte at an off-airport Starbucks sustains some tiny fraction of a barista's job (an indirect worker). Similarly, when a medical equipment exporter (a direct firm) hires an accounting firm or a law firm, it creates (indirect) jobs for accountants or attorneys. The IMPLAN economic impact model estimates the cumulative impact of all the indirect transactions as they ripple through the economy.

Airport Operations: From baggage handlers and ticket agents to air traffic controllers and airport security, thousands of workers are directly and indirectly employed by operations at LAX. Los Angeles World Airports provided data on the number of people working at the airport based on security badge counts. This information included the number of people working for all of the airlines, the concessionaires, contractors, and the airport administration. The badge counts did not distinguish between full-time and part-time workers.

For purposes of this study, we included everyone working for Air New Zealand, Singapore Airlines and the rest of the carriers serving LAX exclusively with overseas international flights. We excluded the employees of Southwest (with only domestic flights) and Alaska (with international flights to Canada and Mexico but not overseas) and all other carriers without an overseas route to LAX. For United, American and other carriers serving LAX with both domestic and international routes, the employee counts were pro-rated based on the ratio of international to domestic passengers served by the airline at LAX. A similar procedure was used for LAWA administrative staff, contractors, concessionaires, and security personnel based on the overall ratio of international to domestic passengers for the airport as a whole. In 2006, the jobs of an estimated 16,099 full-time and part-time workers at LAX were dependent on overseas international flights.

Visitor Spending: International visitors, on average, stay longer and spend more per trip than domestic visitors to Southern California. Here we focus on the economic impact of spending by international visitors who arrived at LAX from overseas and spent at least one night in the region. This means we did not include foreign visitors from North, Central and

South America. Nor did we include foreign visitors from the Caribbean (who comprise only a tiny fraction of the total). And owing to data limitations, we were unable to include foreign visitors arriving at LAX via another U.S. gateway airport such as San Francisco, Atlanta or one of the New York airports. There were 2.0 million visitors to the Southern California region who arrived at LAX from overseas in 2006 and did not catch a connecting flight: 410,915 from Australia and Oceania, 787,918 from Europe, and 840,259 from Asia and the Far East. Collectively, these international overseas visitors spent an estimated $1.656 billion in Southern California.

Inbound Air Cargo: Cargo arriving in the belly hold of overseas flights also contributes to the Southern California economy. The cargo creates work for the truckers and couriers who deliver it; for the warehouses that store it; and for the customs brokers and shippers who track and facilitate its movement. If the imported goods are ready for sale (as in the case of imported fruit or cut flowers), they create activity in the wholesale and retail sectors of the local economy. On the other hand, if the imported goods are production inputs (as in the case of computer components), then they may also contribute to local manufacturing jobs. This study conservatively counts *only* the transportation and warehousing components of the economic activity generated by inbound air cargo. In 2006, 535,600 metric tons of air cargo with an estimated value of $38.2 billion arrived at LAX.

Outbound Air Cargo: Los Angeles County is the largest manufacturing center in the U.S., and Southern California has the largest number of manufacturing jobs in the country after the state of Texas. The goods produced by Southern California manufacturers tend to be high in value relative to their weight, a characteristic that makes the economics of air freight particularly attractive. The Ports of Los Angeles and Long Beach together form the busiest container port complex in the U.S., responsible for $257 billion in imports in 2006. This far exceeds imports through LAX of $38.2 billion. On the export side, however, there is a marked difference. Air cargo exported via LAX was worth $42.0 billion in 2006, almost as much as the ports' $47.7 billion in exports.

THE ECONOMIC IMPACT OF ALL TRANSOCEANIC FLIGHTS AT LAX IN 2006

Annually, an average daily transoceanic flight at LAX:

- sustains 3,120 direct and indirect jobs in Southern California;
- generates $156 million in wages;
- adds $623 million to the region's economic output.

Economic output, also called business revenues, represents an activity's contribution to gross regional product. Table 1 describes the economic output dependent on activity related to international overseas flights arriving at LAX in 2006.

Table 1
Economic Output
Dependent on International Overseas Flights at LAX in 2006
(Millions of Dollars)

	Direct	Indirect	Total
Airport Operations	$3,106	$2,975	$6,081
Visitor Spending	$1,656	$1,363	$3,019
Air Cargo Imports	$127	$130	$257
Air Cargo Exports	$35,228	$37,538	$72,766
Total	$40,116	$42,006	$82,122

Source: HR&A, SH&E, LAEDC.

Measured by contribution to economic output, the most important function of transoceanic international flights at LAX is as a conduit for air cargo exports. Freight exported via LAX represented $72.8 billion of a total $82.1 billion in economic output associated with such flights in 2006. Airport operations contributed $6.1 billion in economic output; spending by international visitors to the region added $3.0 billion; and the transportation and warehousing activity associated with imports accounted for $257 million.

International flights at LAX are a stunningly important contributor to employment in Southern California, as shown in Table 2 on the next page. International flights at LAX sustained a total of 362,700 full-time and part-time jobs in the region in 2006. Airport operations accounted for 36,300 of the total jobs, and visitor spending sustained a further 33,200 jobs.

The real jobs engine, however, is the industries that rely on international flights leaving LAX to get their products to market. Air cargo exports via international flights at LAX reflected the collective output of 72,700 direct workers. The Southern California industries that export via LAX tend to be high-tech, high-wage manufacturing operations (such as electronics and bio-medical instruments) with rich multiplier effects – as evidenced by the 218,700 indirect jobs they sustained.

Table 2
Employment
Dependent on International Overseas Flights at LAX in 2006

	Direct	Indirect	Total
Airport Operations	16,100	20,200	36,300
Visitor Spending	23,100	10,000	33,200
Air Cargo Imports	1,000	900	1,900
Air Cargo Exports	72,700	218,700	291,400
Total	112,900	249,800	362,700

Source: HR&A, SH&E, LAEDC.

All of the employees described in Table 2 represent an enormous annual wage bill. Transoceanic flights at LAX were critical to employees with annual wages of $19.3 billion in 2006, as described in Table 3.

Table 3
Wages
Dependent on International Overseas Flights at LAX in 2006
(Millions of Dollars)

	Direct	Indirect	Total
Airport Operations	$1,178	$790	$1,968
Visitor Spending	$593	$391	$984
Air Cargo Imports	$34	$36	$70
Air Cargo Exports	$5,950	$10,299	$16,250
Total	$7,756	$11,516	$19,272

Source: HR&A, SH&E, LAEDC.

Airport operations accounted for $1.2 billion in direct wages and almost $2.0 in total wages in 2006. Visitor spending sustained employment that paid almost $1.0 billion in wages. The importance of the industries that rely on air freight can be seen in their relatively high wages: employment dependent on air cargo represents 64 percent of the direct employment, but almost 77 percent of the direct wages.

Table 4, on the next page, summarizes the findings from Tables 3, 4, and 5. The economic impact in the 6-county Southern California region of international transoceanic flights at LAX is enormous: $82.1 billion in total economic output in 2006, plus 363,700 direct and indirect jobs with annual wages of $19.3 billion.

Table 4 Summary Economic Impact Dependent on International Overseas Flights at LAX in 2006 (Millions of Dollars and Number of Jobs)			
	Direct	Indirect	Total
Economic Output	$40,116	$42,006	$82,122
Jobs	112,900	249,800	362,700
Wages	$7,756	$11,516	$19,272

Source: HR&A, SH&E, LAEDC.

The numbers described in Table 4 are in some respects simply too big to be readily understood. One way to make the numbers more accessible is to convert them to a per flight basis. To do so, all of the results in Tables 3 through 5 were estimated per passenger or per ton, as appropriate, and then multiplied by the expected number of passengers and tons of cargo per Boeing 747 and Boeing 767 aircraft. The results are presented in Table 5.

Table 5 Annual Economic Impact per Daily International Overseas Flight at LAX in 2006 (Millions of Dollars and Number of Jobs)			
	B-747	B-767	LAX Average
Seats	375	230	329
Economic Output	$647	$573	$623
Jobs	3,300	2,700	3,100
Wages	$164	$140	$156

Source: HR&A, SH&E, LAEDC.

A daily transoceanic flight to and from LAX using a Boeing 747 generated substantial economic activity in Southern California: $647 million in economic output, plus 3,300 jobs with wages of $164 million in 2006. These figures are based on a configuration of 375 seats; a load factor of 80 percent (of seats filled); and foreign visitors arriving (and staying) in Southern California comprising 38.7 percent of the total arriving passengers.[1] Based on actual activity at LAX, inbound aircraft are assumed to carry 11.15 tons of imports; outbound aircraft are assumed to carry 6.2 tons of exports.

A typical daily transoceanic flight to and from LAX using the smaller Boeing 767 generated somewhat less economic activity in Southern California: $573 million in economic output, plus 2,700 jobs with wages of $140 million in 2006. Assumptions for the B-767 were the same as those for the B-747, except that the number of seats was reduced to 230. (The assumed seat count is fewer than is typical for such aircraft at LAX). Interestingly, the

[1] The B-747 can be configured with up to 400 seats; most operated at LAX in 2006 had 350-375 seats. The new B-747-800 will seat up to 450. Load factors at for overseas routes at LAX in 2006 ranged from 70% on weak routes to 90% on a few strong routes. The average load factor on European routes was 81.8%; on routes to Asia and the Far East it was 78.9%; and for Australia and Oceania it was 75.2%. The FAA is forecasting future load factors of 80.3% on trans-Atlantic routes and 83.0% on trans-Pacific routes. The percentage of foreign visitors among arriving passengers is based on observed 2006 arrivals.

amount of commercial air cargo is about the same for both aircraft, since the extra cargo space in the B-747 is needed to accommodate the additional passengers' luggage.

The "LAX Average" column in Table 5 is a weighted average of the B-747 and B-767 columns based on the actual fleet mix that served LAX in 2006.

THE OPPORTUNITY COST OF LOST TRANSOCEANIC MARKET SHARE IN 2006

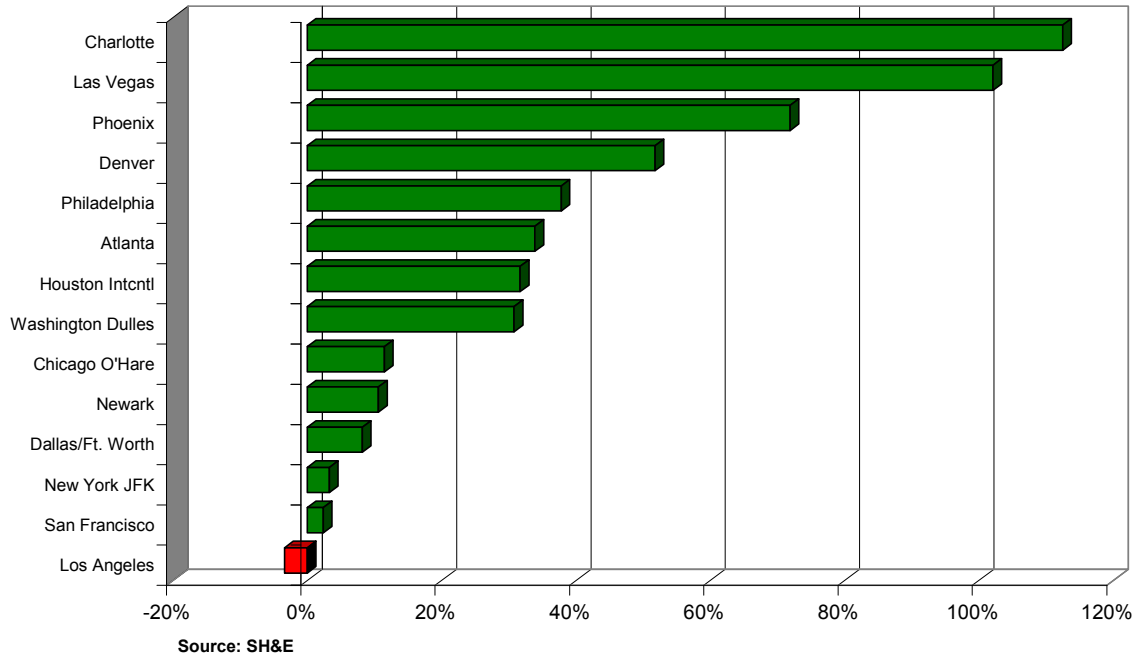
LAX could have hosted 9 additional daily transoceanic flights in 2006, representing an annual boost to the regional economy of:

- Up to 28,100 more direct and indirect jobs;
- Up to $1.4 billion in wages; and,
- Up to $5.6 billion in additional regional economic output.

LAX International Passenger Losses, 2000-2006

LAX was the 2nd largest U.S. gateway for international passengers in 2006, behind New York's JFK but ahead of Miami, Chicago O'Hare, Newark, Atlanta, San Francisco, Houston, Dallas/Forth Worth and Washington Dulles International. All of these gateways but two – Los Angeles and Miami – have seen an increase in their international air passenger traffic since 2000. (LAX and Miami had fewer international passengers in 2006 than in 2000.) The contrast is even starker if we add in some of the up-and-coming international gateway airports, such as Charlotte, Las Vegas, Phoenix and Denver. Figure 1 compares the percentage change in international air passenger traffic at major U.S. gateways, 2000-2006.[2]

Figure 1
Percent Change in Passengers on International Flights
2000-2006



Source: SH&E

[2] International air passenger traffic covers *all* passengers traveling on all international routes (not just overseas) and *includes U.S. citizens.*

The U.S. airline industry saw a dramatic decline in air travel post-9/11, and the drop in passengers on international routes was particularly sharp. In the intervening five years, international passenger traffic has recovered and surpassed 2000 levels at almost all major gateways other than LAX. Indeed, some of the largest airports have posted strong gains, with Newark and Chicago O'Hare up about 11 percent and Washington Dulles, Houston and Atlanta all up by more than 30 percent. From a much smaller base, Charlotte, Las Vegas, Phoenix and Denver have grown by half or more.

The recovery on international routes has been driven by U.S. citizens traveling abroad. Indeed, all of the top U.S. international airports saw a decline in the number of foreign passenger arrivals between 2000 and 2006; US Department of Commerce and US Immigration and Naturalization Services data suggest the total number of foreign passengers arriving at all U.S. airports fell by 18.6 percent during the period. Table 6 focuses on the overseas international passengers at LAX, 2000 to 2006.

Table 6
Passengers on Overseas International Flights Arriving at LAX
Percentage Change, 2000-2006

Flights Arriving From	Total Passengers	Visitors to U.S.	Visitors to So. Cal.
Europe	-9%	-20%	-19%
Asia/Far East	-8%	-35%	-34%
Australia & Oceania	-5%	-8%	4%
Total	-8%	-25%	-23%

Source: SH&E (US DOT T-100 Databank)

The number of passengers, including U.S. citizens, on overseas international flights arriving at LAX fell from 11.4 million to 10.5 million, 2000-2006, an 8 percent decline. Looking just at visitors to the U.S., the number of passengers fell by 25 percent from 3.4 million to 2.6 million during the same period. Here we can see that a precipitous drop in the number of foreigners on overseas flights from Asia and the Far East and from Europe to LAX was primarily responsible for the overall decline.

There was an almost identical drop in the number of foreign visitors to Southern California arriving on the overseas international flights, a category that excludes foreign visitors who entered the U.S. at LAX and then caught a connecting flight. This suggests that the overall decline was not just due to fewer passengers using LAX as a hub to connect to other points in the U.S. The exception to the negative trend is visitors from Australia & Oceania, whose overall numbers passing through LAX declined by 8 percent, 2000-2006, while the number of such visitors who arrived at LAX and stayed in the region actually increased by 4 percent.

LAX Market Share Losses, 2000-2006

Overall passenger traffic at LAX on international routes declined, 2000-2006, while the other top U.S. gateway airports (except for Miami) saw increases. The number of foreigners

arriving from overseas at U.S. airports declined during the same period, but the percentage drop at LAX was greater than for the nation as a whole. Thus, the 2000-2006 period saw LAX lose market share relative to competitor airports, measured as the percentage of all passengers on non-stop transoceanic flights to the United States who arrived at LAX. Estimating the lost market share suggests how much additional activity might have been routed through LAX had the airport held its ground relative to the other gateway airports.

SH&E calculated the change in LAX's share of all passengers on nonstop flights from each overseas country to mainland U.S. airports in 2000 and 2006. Next, they estimated how many total passengers would have arrived at LAX from each country in 2006 *had the airport's market share held steady at its 2000 level.* Then, they focused on the foreign visitors and in particular just the foreign visitors who stayed in Southern California. The implications of LAX's declining market share can be seen in Table 7. The change in the number of overseas visitors to Southern California arriving at LAX daily represents the number of additional passengers that would have been expected, on average, if LAX had not lost market share from 2000 to 2006.

Table 7
Estimated Increase in Overseas Visitors to So. Cal.
Arriving at LAX in 2006 Using 2000 Market Share

	Visitors Per Day (Average)
Europe	+258
Asia & the Far East	+545
Australia & Oceania	+113
Total*	+915

*May not sum due to rounding.
Source: SH&E

If LAX had not lost market share, there would have been an average of 258 additional visitors to Southern California arriving daily from Europe, principally from France, the Netherlands, and Italy. Similarly, there would have been 545 additional visitors daily from Asia and the Far East, mainly from Japan, but also from South Korea, China and Hong Kong. There also would have been another 113 visitors arriving daily from Australia and Oceania, most of them from New Zealand. Thus, LAX's declining market share, 2000-2006, translates into an average of 915 foreign visitors per day – roughly 334,000 people a year.

The average overseas flight at LAX has 329 passengers on board, just over 100 of whom are foreign visitors to Southern California. [The rest are U.S. citizens and foreigners who catch connecting flights at LAX.] This suggests that if LAX has maintained a steady market share, there would have been an additional 9 daily overseas international flights at LAX.

The market share loss at LAX was the result of carriers reducing service to LAX or withdrawing service entirely. For example, KLM reduced its service to LAX from Amsterdam by 3 flights per week and JAL reduced its service from Tokyo by 2 flights per week and Nagoya by 4 flights per week. Similarly, American and United canceled their respective daily nonstop flights to Paris; Alitalia canceled its 6 flights per week to Milan;

Malaysian discontinued all operations to Tokyo; and, Northwest dropped its daily LAX-Osaka flight. LAX also lost market share because carriers expanded their service more quickly elsewhere. For example, the frequency and capacity of flights from LAX to China increased, but not as much as the overall U.S.-to-China market.

The impact of lost market share equivalent to 9 daily nonstop overseas flights at LAX is hard to measure precisely. In the relative short period, 2000-2006, people may have been able to work around the lost capacity. Many of the passengers who wanted to get to Southern California on the routes with cancelled or reduced service probably shifted to connecting flights at other U.S. gateways. American withdrew its LAX-Paris service, for example, but increased its European service to Dallas and Chicago. Inbound and outbound air cargo could have been similarly re-routed or transferred to all-cargo air freighters.

Some of the would-be Southern California visitors, however, did not make the trip. Tourists on holiday – their flights by definition a discretionary purchase – may have chosen to go elsewhere with direct flights that were cheaper or more convenient. Air cargo shippers tend to be indifferent about connections – provided the packages reach their intended destination on time – but can be price sensitive. Reduced capacity, if it translated into higher prices, would be a concern.

We know, from Table 5, the total annual economic activity associated with the average daily overseas flight at LAX. Over time, we would expect each additional flight to have approximately the same effect. This means that the flights lost due to declining LAX market share represent a significant opportunity cost for the Southern California economy. Table 8 shows the upper bound of the potential annual economic gains had LAX added and retained service equivalent to 9 daily flights.

Table 8
Opportunity Cost of 9 Daily Overseas Flights
Lost Due to Declining Market Share
(Millions of Dollars and Number of Jobs)

	Avg. Flight	9 Flights*
Economic Output	$623	$5,611
Jobs	3,100	28,100
Wages	$156	$1,407

* May not appear to be 9 times the average flight due to rounding.
Source: HR&A, SH&E, LAEDC.

The opportunity cost of 9 daily nonstop overseas flights is substantial: Southern California could have added *up to* $5.6 billion in annual economic output plus 28,100 (full-time and part-time) possible jobs with cumulative wages of $1.4 billion.

WHAT COULD BE GAINED? THE ECONOMIC POTENTIAL OF FLIGHTS IN 2012

Current market trends suggest LAX could capture 11new daily transoceanic flights by 2012. The annual economic gains to Southern California would be (in 2007 dollars):

- Up to 34,300 direct and indirect jobs;
- Earnings up to $1.7 billion in total wages; and,
- Up to $6.9 billion in additional regional economic output.

By 2012, twenty international carriers currently operating at LAX are scheduled to take delivery of 86 new A-380 aircraft, 227 B-787 Dreamliners, and one B747-800. Collectively, these carriers account for 19 percent of total seat capacity at LAX and 45 percent of international seat capacity. Several of these carriers are seriously considering deploying their new aircraft on routes to other U.S. gateways if they do not see improvements to facilities at LAX, particularly with respect to the availability of contact gates.

Given the worrisome trend in LAX's market share, it is worth considering the annual economic impact associated with a daily overseas flight for each of the new aircraft. Since the B-787 and the A-380 have not yet entered service, Table 9 presents estimates based on the 2006 values per passenger and per ton of air cargo developed for Table 5.

Table 9
Estimated Annual Economic Impact
Per Daily International Overseas Flight at LAX Using the Newest Aircraft
(Millions of Dollars and Number of Jobs)

	B-787	A-380
Seats	240	525
Economic Output	$578	$723
Jobs	2,800	3,900
Wages	$142	$188

Source: HR&A, SH&E, LAEDC.

The only assumption that has changed from Table 5 is the number of seats. The B-787 Dreamliner will come in two variations: one configurable for 230-275 seats; the other for 275-325 seats. The estimates here were based on the low end of the range for both versions. The A-380 will probably be configured to carry 550 passengers on routes serving LAX; the estimates here were based on a 525-seat configuration.

A typical daily transoceanic flight to and from LAX using the B-787 would generate significant economic activity in Southern California: $578 million in annual economic output and 2,800 jobs with wages of $142 million. For the huge new A-380, a daily transoceanic flight to and from LAX in 2006 would be worth $723 million in economic output and 3,900 jobs with wages of $188 million. Note again that the space for commercial air cargo is

roughly equivalent in the B-767, B-747, B-787, and A-380 aircraft since the larger aircraft carry more passengers and thus have to carry more luggage.

SH&E forecasts that LAX could add 11 new daily overseas international flights by 2012. Based on our benchmark measure of economic activity per flight in 2006, the 11 new flights could add economic activity in Southern California up to the values reported in Table 10.

Table 10
Economic Potential of Adding 11 Daily Overseas International Flights
(Millions of Dollars and Number of Jobs)

	Per Flight	11 Flights
Economic Output	$623	$6,858
Jobs	3,120	34,300
Wages	$156	$1,719

* May not appear to be 11 times the average flight due to rounding.
Source: HR&A, SH&E, LAEDC.

By adding 11 new daily nonstop overseas flights, Southern California could generate as much as $6.9 billion (in current dollars) in economic output and add up to 34,300 jobs with wages of $1.7 billion annually.[3] This estimate is conservative because the per-flight estimate (from Table 5) is based on the fleet mix serving LAX *in 2006*. To the extent that the average number of passengers per flight is higher in 2012 – which seems likely when the A-380 is added to the mix – the estimates in Table 10 will be understated.

We do not expect the full economic impact to materialize immediately, or even within the first year or two of a new daily nonstop overseas flight being added. Particularly with air cargo, there will be a lag as businesses dependent on air service make plans to add (or reduce) capacity based in part on service availability. Over time, we would expect businesses to make decisions that would lead to each additional flight having approximately the same effect in terms of total economic activity as the current flights. As such, the stakes for the Southern California economy in the competition for additional direct overseas flights are considerable.

[3] If LAX were to miss out on the new flights, Southern California may still enjoy some fraction of the economic gains described in Table 10. The share would depend on the willingness and ability of passengers to use connecting flights and air cargo shippers to use connecting flights or dedicated air freighters to reach the region.

CONCLUDING REMARKS

Substantial economic activity in Southern California is tied to daily nonstop overseas flights at LAX. The region stands to increase its economic output and add jobs and wages if LAX can attract more of these flights.

The cost of failing to attract multiple daily flights would be imperceptible, at least at first. Rather, the loss to the California economy would become visible retrospectively, much like the damage done by the gradual shift in the average price of electricity in the state from "average" to "expensive" relative to other states.[4] Over the past 25 years power-intensive operations have left the state, often taking good jobs with them. For example, during the defense industry downsizing in the early 1990s, defense contractors seeking to consolidate frequently elected to close their California operations because they had the highest costs.

Three sectors of the Southern California economy are particularly sensitive to the availability and frequency of nonstop overseas flights. First, the business services sector in general, and corporate headquarters in particular, depend on a full menu of air services. Southern California has much to offer firms from the western edge of the Pacific Rim seeking a headquarters for their expansion into the United States. The region's strengths include its huge and comparatively wealthy market, strong and diverse economic base, formidable array of professional business services, and international trade networks. However, the lack of a wide selection of convenient flights, particularly to the foreign firm's home country, could rule out Southern California as a corporate headquarters location.[5] The routes for which LAX faces the most competition are those to places such as India, where the difference between nonstop and connecting flights could mean an hours-long layover.

Second, tourism, one of the top three industries in Southern California by employment, depends on convenient connections. For example, tour operators are less likely to sell packages involving a connecting flight. Tourist travel is discretionary by definition, which means that convenience is a critical selling point.

Third, high-wage, high-technology manufacturing in Southern California depends on proximity to the air cargo operations offered by a full service international airport. More than half of all air cargo is transported in the bellies of passenger aircraft, and the air freight industry benefits from the same network effect that draws passengers to hub airports. California already struggles to attract and retain businesses because it is a high-cost state. Lack of a world-class airport in Southern California should not be added to the litany of reasons (such as the cost of workers' compensation insurance, high land prices, traffic congestion, and tax rates) for businesses to relocate or expand elsewhere.

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[4] Electricity was already more expensive in California than in other states before the rate shocks that accompanied the state's ill-structured flirtation with electricity deregulation.

[5] Studies have linked the emergence of Dallas and Atlanta as major centers for corporate headquarters to the development of their respective airports. In Atlanta, for example, the number of firms from various European countries operating in the area spiked during the five to ten years following the introduction of direct flights to the companies' home countries.

A fourth sector could be added to this list: the motion picture industry. Film production has become a global activity, in both making and exhibiting the films, so good air service is important. Southern California already faces a concerted effort by other states and other countries seeking to lure film production away from Southern California with lucrative incentives. Other states would love to steal the headquarters part of the business as well, so Southern California would do well not to add 'more convenient air service' to the potential reasons to relocate.

Finally, it is worth noting that Orange County passed on creating a new international airport at El Toro and San Diego County passed on creating one at Miramar, ensuring that all of Southern California will continue to remain heavily dependent on LAX.

Appendix A – Visitor Spending

The visitor spending estimate presented on page 4 started with the number of international passengers arriving at LAX during 2006 and not continuing on a connecting flight.

Passengers on Overseas International Flights Arriving at LAX in 2006			
Flights Arriving From	Total Passengers	Visitors to U.S.	Visitors to So. Cal.
Europe	3,216,413	852,016	787,918
Asia/Far East	4,952,851	1,101,981	840,259
Australia & Oceania	2,362,744	601,065	410,915
Total	10,532,008	2,555,062	2,039,092

Source: SH&E (US DOT T-100 Databank)

LAX handled a total of 61.0 million passengers in 2006, of which 10.5 million arrived on international overseas flights.* Most of the passengers arriving on overseas flights were U.S. citizens, primarily from Southern California; the rest, 2.6 million passengers, were visitors to the U.S. About one in five of the arriving foreign visitors (515,969) caught a connecting flight at LAX. This leaves 2.0 million visitors to the Southern California region who arrived at LAX from overseas in 2006: 410,915 from Australia and Oceania, 787,918 from Europe, and 840,259 from Asia and the Far East.

Next, the LAEDC used country-specific estimates of tourist spending to estimate total overseas visitor spending. LA INC. supplied survey-based tourist spending data for 2005 that included a per trip average for all overseas visitors and country-specific estimates for visitors from Australia ($829), China/Hong Kong ($1,017), France ($599), Germany ($605), Japan ($1,074), South Korea ($652), Taiwan ($1,271) and the UK ($498). Visitors from these countries accounted for 80 percent of all overseas international visitors arriving at LAX in 2006. The average spending per trip by all overseas visitors ($799) was used for the remaining 20 percent of visitors. Collectively, international overseas visitors arriving at LAX in 2006 spent an estimated $1.7 billion in Southern California.

Estimated Spending by Overseas Visitors Arriving at LAX in 2006 (Millions of Dollars)	
Category	Spending
Transportation	$248
Shopping	$464
Lodging	$447
Food and Beverage	$331
Entertainment	$165
Total	$1,656

Source: SH&E, LA INC., LAEDC.

* The visitors were counted by country of origin. For each flight arriving at LAX in 2006, the number of passengers, as well as the number of U.S. citizens and foreigners is known. The citizenship of the foreigner passengers is unknown, and is assumed to be the same as the country of origin for the flight. People from countries with few or no direct flights to LAX (such as Italy and India) are thus undercounted, with an offsetting over-count of nationalities with routes (such as those from Britain) used to make connections to LAX. This quirk in the data should not materially affect the study's estimate of visitor spending impact.

Appendix A – Visitor Spending

The LAEDC used additional tourist surveys provided by LA INC. to itemize tourist spending by categories including entertainment, miscellaneous retail, transportation, shopping, food, and lodging. All spending estimates were adjusted for inflation and then the aggregate total from each category was matched with the corresponding industry sectors in the IMPLAN economic model.