## 1NC

### 1NC Shell

#### The U.S. aerospace industry is recovering now—

Center for Aviation 12 1/3/12 (“2012 marks beginning of next chapter in US airline industry,” CAPA, Accessed online at http://www.centreforaviation.com/analysis/2012-marks-beginning-of-next-chapter-in-us-airline-industry-65485, Accessed on 6/23/12)

While downturn is rife in the airline industry, the [US](http://www.centreforaviation.com/profiles/airports/athens-airport-ahn) industry will do relatively well, with [IATA](http://www.centreforaviation.com/profiles/industry-associations/iata) expecting the [US](http://www.centreforaviation.com/profiles/countries/united-states) industry to post USD2 billion in earnings in 2011 and USD2.9 billion in 2012 as US carriers limit capacity growth, keeping load factors high.

Within the US there was a higher than expected consumer retailing at the end of the year, and while unemployment is still high it has shown a steady decrease since the last half of 2011.

There are an increasing number of travel surveys concluding leisure travel will rise this year. Despite last summer’s angst, when fears of a double dip recession were high, the economy picked up nicely in 2011 growing faster than expected each quarter, with the fastest growth expected in the fourth quarter.

Unemployment applications have been halved from the 650,000 in March 2009 although admittedly still too high to create a robust turnaround. Small businesses are [hiring](http://www.centreforaviation.com/analysis/2012-marks-beginning-of-next-chapter-in-us-airline-industry-65485) and consumer inventories at retailers are rising, up 8.7% in October year-on-year. Housing starts have also risen, up 9% in November compared to October.

Trans- and intercontinental bookings are already up for Asia, [Australia](http://www.centreforaviation.com/profiles/countries/australia) and Europe, according to a travel agent [survey](http://www.centreforaviation.com/analysis/2012-marks-beginning-of-next-chapter-in-us-airline-industry-65485) which indicated clients plan to spend the same or more for travel in 2012.

The survey also supported suppositions that the advanced booking window will stretch as travellers try to squeeze every dollar out of their trips. Leisure travellers are already at eight weeks or more but business travel [windows](http://www.centreforaviation.com/analysis/2012-marks-beginning-of-next-chapter-in-us-airline-industry-65485) are expected to rise as well. [United](http://www.centreforaviation.com/profiles/airlines/united-airlines-ua) has already reported a 3.7% increase in advanced domestic bookings between mid-December and February.

Fares were up 22.4% domestically in 2Q2011 compared to 2009, according to the Bureau of Transportation Statistics ([BTS](http://www.centreforaviation.com/profiles/airports/bratislava-ivanka-airport-bts)). While this is good news, it comes as inflation-adjusted fares are still 15.8% lower than in 2Q1995. Expect fares to continue their upward trajectory and more fare increase attempts to stick this year.

We have passed the time when airlines will be consistent money losers, as evidenced by the fact that they were profitable in 2011 despite higher[fuel prices](http://www.centreforaviation.com/analysis/2012-marks-beginning-of-next-chapter-in-us-airline-industry-65485) than in 2008, when losses were common. It is difficult to visualise a circumstance when that would change failing another travel-related terrorist attack.

#### HSR decimates the airline industry—steals half their market.

Jaffe 12 (Eric, Eric Jaffe is a contributing writer to The Atlantic Cities and the author of The King's Best Highway: The Lost History of the Boston Post Road, the Route That Made America, "What the Eurostar's Success Means for California HSR", Jan 13 2012, <http://m.theatlanticcities.com/commute/2012/01/what-eurostars-success-means-california-hsr/938/>)

Behrens and Pels found that **frequency, travel time, and distance to the point of departure were major determinants of travel behavior** in the corridor, in addition of course to fares. The total travel time on Eurostar (which includes getting to the station) is relatively long compared to flights: roughly 3 hours 20 minutes in 2003, dropping to 2 hours 50 minutes after the move to St. Pancras, against 1.5 or 2 hours for airlines. But **the train's on-time arrival was 95 percent, much higher than that of its competitors**, and by 2009 its frequency had grown to twice that of major airlines, with 119 weekly trips. First-class fare is also cheaper on the Eurostar, and since 2007 its coach fare has been cheaper than fares on the three main air alternatives, according to the report. The **researchers used their models of the Paris-London corridor to consider the potential success of** [**high-speed rail from San Francisco to Los Angeles**](http://www.theatlanticcities.com/commute/2011/11/history-gives-hope-california-high-speed-rail/399/). Behrens and Pels made several notable assumptions — **similar passenger behavior in the United States as in Europe**, for instance, **and a rail fare that costs only 80 percent of air travel** — still their findings will come as some encouragement to American high-speed rail supporters. At a travel time of roughly 3 hours, which is about what California's high-speed rail authority expects, the train would capture about 30 percent of business travelers and 40 percent of the leisure market, according to Behrens and Pels. In the unlikely chance the fast train can achieve a travel time of 2 hours 25 minutes, it could win about half the market share of leisure travelers:

INSERT IMPACT MODULE

## Uniqueness

### Airlines Okay Now

#### Summer travel profits signal strong quarter for airlines but travel demand is key

Marketwatch, ’12 (5/11/12, <http://www.marketwatch.com/story/us-airlines-set-for-a-busy-summer-season-2012-05-11>, JS)

NEW YORK, NY, May 11, 2012 (MARKETWIRE via COMTEX) -- Things may be turning around for airline stocks as they have posted respectable profits in what is historically their slowest quarter of the year. Collectively the top seven U.S. airlines have posted a first quarter operating profit of $247 million compared with a moderate loss a year ago according to data collected by the Deutsche Bank. The Paragon Report examines investing opportunities in the Airlines Industry and provides equity research on US Airways Group, Inc. LCC -1.28% and JetBlue Airways Corporation JBLU -0.48% . Access to full reports can be found at: www.ParagonReport.com/LCC www.ParagonReport.com/JBLU Airlines for America's (A4A) annual summer forecast predicts that U.S. airlines will carry 206.2 million passengers in the June-August peak flying season, just 5 percent below the record of 217.6 million. A4A expects a record number of passengers to fly internationally this summer. Total passengers on international flights are forecasted to total 26.8 million, beating last summer's record of 26.3 million according to the group.

#### Airline industry growing now­—assumes oil and economic uncertainty

Chicago Tribune 3/9/12 (FAA: Profitable times likely ahead for airlines,” Chicago Tribune, Accessed online at <http://articles.chicagotribune.com/2012-03-09/business/ct-biz-0309-notebook-airlines-20120309_1_american-airlines-parent-united-continental-holdings-iam>, Accessed on 6/27/12)

The airline industry, which traditionally has run in boom-and-bust cycles, has a good chance to be profitable during the next 20 years as demand for [air travel](http://articles.chicagotribune.com/2012-03-09/business/ct-biz-0309-notebook-airlines-20120309_1_american-airlines-parent-united-continental-holdings-iam) grows worldwide. And the good news for passengers is that airfares will rise relatively slowly over that time.

That prediction comes from the Federal Aviation Administration in a report released Thursday.

"Over the long term, we see a competitive and profitable industry characterized by increasing demand for air travel and airfares growing more slowly than inflation," said the report, called the "FAA Aerospace Forecast Fiscal Years 2012-2032." "Going into the next decade, there is cautious optimism that the industry has been transformed from that of a boom-to-bust cycle to one of sustainable profits."

The report predicts more demand for air travel despite rising oil [prices](http://articles.chicagotribune.com/2012-03-09/business/ct-biz-0309-notebook-airlines-20120309_1_american-airlines-parent-united-continental-holdings-iam) and economic uncertainty in the U.S. and Europe. It forecasts that the industry will grow from 731 million passengers in 2011 to 1.2 billion in 2032.

"This year, more people will be flying more miles, and we expect that to [continue](http://articles.chicagotribune.com/2012-03-09/business/ct-biz-0309-notebook-airlines-20120309_1_american-airlines-parent-united-continental-holdings-iam) in future years,"

#### Industry is recovering—increasing traffic

USA Today 11 2/15/2011 (“FAA predicts steady growth for airline industry,” USA Today, Accessed online at <http://travel.usatoday.com/flights/story/2011/02/FAA-predicts-steady-growth-for-airline-industry/43752062/1>, Accessed on 6/2/12)

WASHINGTON – The embattled airline industry will see solid long-term growth over the next 20 years with yearly passenger totals climbing from 713 million to nearly 1.3 billion, the government predicted today.

That growth will add huge new pressures on the aviation system, requiring technological improvements to ensure that it can handle the additional traffic, said Transportation Secretary [Ray LaHood](http://content.usatoday.com/topics/topic/People/Politicians%2C%2BGovernment%2BOfficials%2C%2BStrategists/Executive/Ray%2BLaHood).

"We need to invest in aviation today to make sure America's economy remains competitive," LaHood said.

The annual [Federal Aviation Administration](http://content.usatoday.com/topics/topic/Organizations/Government%2BBodies/Federal%2BAviation%2BAdministration) aviation forecast projects small increases in airline flights and passengers this year compared to 2010. Overall, the amount of flights will decrease slightly this year due to continuing decreases in private aircraft flights, the [FAA](http://content.usatoday.com/topics/topic/Organizations/Government%2BBodies/Federal%2BAviation%2BAdministration%22%20%5Co%20%22More%20news%2C%20photos%20about%20FAA)says.

After a decade in which the airlines lost a collective $60 billion, the FAA says the industry turned a [profit](http://travel.usatoday.com/flights/story/2011/02/FAA-predicts-steady-growth-for-airline-industry/43752062/1) last year of $9.5 billion as the U.S. economy rebounded from recession and airfares rose.

Domestic airline passengers are expected to increase by 3% this year over last and then climb by an average of 2.5% annually for the remainder of the next 20 years. International traffic is forecast to surge this year by 7.8% and [continue](http://travel.usatoday.com/flights/story/2011/02/FAA-predicts-steady-growth-for-airline-industry/43752062/1) growing by 4.3%, the FAA says.

#### Even if profits from ridership are down, airlines are using ancillary products to maintain revenue.

Reuters 6/21/12 (“Teddies to trinkets, airlines eye sales in the sky,” Reuters, Accessed online at <http://www.reuters.com/article/2012/06/21/us-airlines-revenues-idUSBRE85K0ST20120621>, accessed on 6/23/12)

(Reuters) - Major airlines struggling to maintain profits in the face of stiff competition and rising fuel bills are increasingly looking at sales of non-ticket extras as a way to boost [earnings](http://www.reuters.com/finance/earnings) without harming their reputations or alienating customers.

Low-cost pioneers such as U.S. carrier Southwest Airlines and Irish group[Ryanair](http://www.reuters.com/article/2012/06/21/us-airlines-revenues-idUSBRE85K0ST20120621), have been cashing in on such alternative or ancillary revenues since their advent, pushing sales of everything from teddy bears to train tickets, bacon sandwiches to baggage charges.

Now traditional airlines are taking a cue from their no-frills rivals and looking to charge for services that do not need hefty infrastructure investment or that are contracted out.

Telecommunications, for example, is seen as a prime source of additional revenue as technology advances, with aviation consultancy Ascend expecting more traditional carriers to start charging passengers for wireless and internet-related services.

"My prediction would be that three to four years from now practically every commercial airline, with the exception maybe of some very old aircraft, will have (wireless) connectivity installed in their aircraft," said Stephan Egli, chief commercial officer of Geneva-based OnAir.

"The passengers like it, use it and want it."

Carriers such as IAG's British Airways, already charge extra for services such as hotels, [car rental](http://www.reuters.com/article/2012/06/21/us-airlines-revenues-idUSBRE85K0ST20120621)and day trip bookings, currency exchange and travel insurance as well as for font row seats and seats with more leg room by the emergency exit.

As competition and cost pressures increase, these and other legacy airlines are on the lookout for even more ways to boost earnings - aside from adding fuel surcharges to ticket prices - but they do not always find it as easy to start charging for services as their no-frills rivals.

"Because of the brand positioning, there's a definite advantage for newer carriers who can say 'we've always done it like this' whereas older ones have a problem in terms of brand image - there's a Ryanair lottery - you wouldn't find Singapore Airlines having a scratchcard lottery on board," said Ascend's chief economist Peter Morris.

"But as communications and connectivity improve there are elements that will be chargeable."

In Europe, Air [France](http://www.reuters.com/places/france)-KLM and Lufthansa are among airlines that recently reported results battered by higher fuel costs, and the industry is braced for a worsening euro zone debt crisis to wipe out the benefit of now lower oil prices.

Ryanair - Europe's biggest budget airline and one of the pioneers of ancillary revenues - now generates around a fifth of its total revenues from optional extras such as food, drink, duty-free products and in-flight lottery scratchcards, while internet-related revenues also help.

Ancillary revenue outpaced traffic growth, rising 11 percent to 886 million euros ($1.1 billion)in the year to the end of March.

"The low-cost (airline) philosophy is unbundling, where they strip the product down to its raw state and if you want something beyond that you have to pay," said Davy's Furlong.

British budget airlines easyJet saw ancillary revenues rise 13 percent in its last full year, helped by ‘speedy boarding', the extra charge that passengers can pay to get ahead of the rush for unreserved seats.

EasyJet's ancillary revenues have remained steady at around a quarter of the carrier's total revenues over the last three years.

A recent Amadeus and IdeaWorks report estimates traditional airlines generate between 5 and 10 percent of their total sales from ancillary revenues. The report said this would "grow significantly" as legacy carriers become more innovative in their introduction of new revenue sources.

#### Despite industry concerns, the airline industry will experience tenuous growth

Worldwide News 6/17/23 (“Airline industry could rise again,” Worldwide News, Accessed online at <http://article.wn.com/view/2012/06/17/Airline_industry_could_rise_again/>, Accessed on 6/23/12)

Johannesburg – The wind may have turned around, but economic weather conditions for airlines remain unfavourable.

The industry has recently suffered subdued demand from travellers, as well as high fuel and other input costs.

The recent drop in the oil price to under $100 a barrel – after having been above $120 for some time – is welcomed, but players reckon other economic factors could offset the decline.

Tony Tyler, chief executive of the International Air Traffic Association, said at the association’s annual general meeting last week that the lower oil price, stronger than expected passenger traffic and the fact that cargo traffic had reached a turnaround point, were all positive for the industry’s profit outlook.

But he warned that the European debt crisis stands squarely in the [path](http://www.fin24.com/Companies/TravelAndLeisure/Airline-industry-could-rise-again-20120617) of economic growth, keeping the profit outlook for the year at $3bn, amounting to a net profit of only 0.5%.

The picture in southern Africa also looks rather gloomy, although the industry “is optimistic about a recovery”.

Chris Zweigenthal, chief executive of the Airlines Association of Southern Africa, said that while the rand was trading between R7.50 and R8.00 to the dollar the industry, which pays for its fuel in rands, enjoyed a slight advantage because of the lower oil price, but the rand has since weakened.

At around R8.30 the benefit of a lower oil prices becomes diluted and airlines effectively pay more or less the same for fuel as they paid when the oil price was higher.

Zweigenthal said the oil price is expected to rise closer to $110 a barrel again.

Frank van der Post, managing director for brand and customer experience at British Airways, which is operated locally by Comair, said the oil price plays a significant role in the group’s costs and it would definitely help for the oil price to remain under $100 a barrel.

As a result of weaker economic growth, which drives down the oil price, the lowering of turnover could considerably exceed any savings in fuel costs, he believes.

That’s a situation in which it would be rather difficult to rejoice about a lower oil price, he said.

James Rigney, chief financial officer at Etihad Airways, said the group last year spent more than $1bn on fuel – almost 40% of its costs, against a mere 14% 10 years ago.

“Every small change in the oil price is thus meaningful for us and a decline brings welcome relief,” he said.

But he agreed that the European debt crisis and the resultant weaker passenger traffic and smaller demand for freight traffic largely wipes out the benefit the industry enjoys from a lower oil price.

But hope is not lost.

Zweigenthal is optimistic about growth prospects, although the recovery will take longer than the industry would wish.

He reckons airlines will not soon experience the growth they saw in the mid-2000s, and subdued growth in passenger levels is in store for the industry.

Consumers are taking care and keeping their eyes open for the best offers, which puts prices under pressure.

One might hope to see an improvement next year, he said.

Low-cost airline Velvet Sky had to suspend operations a while ago, and Zweigenthal said he hopes there will be no further casualties.

He does not necessarily expect any mergers in the industry, but believes airlines will look for ways to help them recapitalise in future.

Difficult trading conditions will remain the order of the day and shareholders may have to offer assistance.

### NextGen Okay Now

#### Next Gen working now.

AT ’12 (Aviation Today, “ FAA Releases Updated NextGen Implementation Plan”. March 22. http://www.aviationtoday.com/av/air-traffic-control/FAA-Releases-Updated-NextGen-Implementation-Plan\_76004.html)

In its annual NextGen Implementation Plan, FAA said it is "enthusiastic and confident" about the direction of its multibillion dollar Next Generation Air Transportation (NextGen) initiative, adding the agency has demonstrated steady and tangible progress in 2011 and expects more progress in 2012 and beyond. The report also responded to the NextGen Advisory Committee's (NAC) working group recommendations, issued in September. "Even in the face of new challenges, the FAA remains confident about NextGen success. Given our history of overcoming difficulties, we are prepared to respond to any new obstacles," according to the report. Going forward, FAA said it will focus on expanded surface data-sharing capabilities and the development of closely spaced parallel runways. During the 2013-2015 timeframe, FAA said it plans on developing and implementing mechanisms to provide National Airspace users with information about the current and future status of Special Activity Airspace, which is airspace set aside for military training and other specialized use, and leverage Automatic Dependent Surveillance-Broadcast (ADS-B) infrastructure for surface monitoring. Initial tower datacomm capability for revised departure clearance is expected in 2015; FAA is set to award the datacomm contract this summer. Also, in 2012, FAA will initiate Surface Wide Information Management for surface data; publish FAA responses to Aviation Rulemaking Committee recommendations on ADS-B In; issue a final investment decision on ADS-B In; and work toward satellite navigation alternatives to ILS for dependent staggered approaches. "Uncertainties and constraints increase the importance of managing NextGen with the skill and determination that such a complex system engineering project requires. We are making considerable progress on challenges that are malleable to management solutions," according to the report. Among the 2011 highlights: -- More than 300 Automatic Dependent Surveillance-Broadcast (ADS-B) ground stations were operational by the end of 2011. FAA said it expects the total complement of about 700 radio stations to be in place and operating by 2014. -- FAA said it published 354 Wide Area Augmentation (WAAS) LPV procedures in 2011. As of February 2012, there were nearly 2,800 LPVs at more than 1,400 airports nationwide. -- Also, the agency advanced the design phase of its metroplex initiative in two locations.

#### Funded compromise now.

FAA ’11 (Federal Aviation Administration, “NextGen Implementation Plan”. March. http://www.faa.gov/nextgen/media/ng2011\_implementation\_plan.pdf)

NextGen is a comprehensive overhaul of our National Airspace System to make air travel more convenient and dependable, while ensuring your flight is as safe, secure and hasslefree as possible. In a continuous roll-out of improvements and upgrades, the FAA is building the capability to guide and track air traffic more precisely and efficiently to save fuel and reduce noise and pollution. NextGen is better for our environment, and better for our economy. • NextGen will be a better way of doing business. Travel will be more predictable because there will be fewer delays, less time sitting on the ground and holding in the air, with more flexibility to get around weather problems. • NextGen will reduce aviation’s impact on the environment. Flying will be quieter, cleaner and more fuel-efficient. We’ll use alternative fuels, new equipment and operational procedures, lessening our impact on the climate. More precise flight paths help us limit the amount of noise that communities experience. • NextGen will help us be even more proactive about preventing accidents with advanced safety management to enable us, with other government agencies and aviation partners, to better predict risks and then identify and resolve hazards. • NextGen boils down to getting the right information to the right person at the right time. It will help controllers and operators make better decisions. This data will assist operators in keeping employees and passengers better informed. • Our nation’s economy depends on aviation. NextGen lays a foundation that will continually improve and accommodate future needs of air travel while strengthening the economy with one seamless global sky. • NextGen will help communities make better use of their airports. More robust airports can help communities attract new jobs, and help current employers expand their businesses. By doing this the U.S. will strengthen its economy and help communities realize all the benefits that aviation can bring. • NextGen will allow us to meet our increasing national security needs and ensure that travelers benefit from the highest levels of safety.

### A2: Rising Fuel Prices

#### Fuel prices are dropping now

The Economic Times 6/8/12 (Struggling airlines get some relief with cheaper oil,” The Economic Times, Accessed online at <http://articles.economictimes.indiatimes.com/2012-06-08/news/32124147_1_iata-airline-traffic-airline-industry>, Accessed on 6/23/12)

BEIJING: Fresh fears over the global economy could unravel the benefit of cheaper oil prices and keep a lid on financial forecasts for the airline industry when its chiefs gather in China this weekend for their annual summit.

An eight per cent drop in oil prices this year has delivered a quick fix to an industry severely damaged by record [fuel costs](http://economictimes.indiatimes.com/topic/fuel%20costs) - but the main reasons for the drop, Europe's debt crisis and a slowdown in China's economy, cast a shadow over its recovery.

"The reduction in [fuel prices](http://articles.economictimes.indiatimes.com/2012-06-08/news/32124147_1_iata-airline-traffic-airline-industry) is a great thing for the airline industry but they are coming down because of concerns over world economic activity," said Tony Tyler, director general of the [International Air Transport Association](http://economictimes.indiatimes.com/topic/International%20Air%20Transport%20Association) (IATA).

"If the world enters an economic slump, that will be even worse for the industry than the higher fuel price was on its own," said Tyler as heads of most of the world's [airlines](http://economictimes.indiatimes.com/topic/airlines) flew into Beijing for a three-day annual meeting starting on Sunday.

IATA, whose 240 members account for 84 per cent of world air traffic, is expected to leave its overall industry-[profit](http://articles.economictimes.indiatimes.com/2012-06-08/news/32124147_1_iata-airline-traffic-airline-industry) forecast broadly unchanged at the June 10-12 meeting.

But a breakdown of the widely watched forecast is likely to reflect widening regional disparities as Europe's debt crisis shows no signs of abating and trade shifts to the Middle East.

Global airline industry profits halved in 2011 to $7.9 billion and are expected to halve again this year.

In March, IATA predicted global airlines would make a profit of $3 billion in 2012, based on an average Brent crude price of $115. The benchmark North Sea price is now below $100.

Tyler said the latest update would balance eurozone and oil price risks against the positive effect of robust traffic, which rose 7.1 per cent in the first four months of the year. A recent slump in cargo markets has meanwhile bottomed out.

Airline traffic traditionally tracks the wider economy.

POWER SHIFT A surprise interest rate cut by host nation China on Thursday - its first since the global financial crisis of late 2008 - highlighted the meeting's uncertain economic backdrop.

Spain's mounting bank crisis and poor eurozone demand meanwhile hit Europe's shares and single currency on Friday.

"As China slows, that affects everybody. Europe is in a dire state and although traffic there has held up, I think we are coming to an end of that," said Peter Harbison, executive chairman of the Centre for Asia Pacific Aviation.

China is the world's fastest-growing aviation market. Traffic at Beijing Capital airport has trebled in the past decade and now ranks second in the world.

The IATA event, which includes dinner for delegates in the Great Hall of the People, brings together the haves and have-nots of an industry that has seen a marked shift of power towards Gulf carriers from loss-making standard bearers in Asia and Europe.

### A2: American Airlines Bankruptcy

#### American Airline’s bankruptcy doesn’t mean airline travel is down—they’ve increased revenue by 10%.

Lawton 6/15 (Thomas C., journalist for U.S. News, "American Airlines Is Thriving Despite Bankruptcy", June 15 2012, http://www.usnews.com/opinion/blogs/economic-intelligence/2012/06/15/american-airlines-is-thriving-despite-bankruptcy)

**What has been happening recently at American Airlines?** Its management has gone rather quiet since entering Chapter 11 bankruptcy last year. Inevitably, questions will arise: About progress on restructuring, when it will emerge from Chapter 11, and how it will successfully relaunch on a profit trajectory. So far, **the answers look promising**. **The company** bullishly **predicts exiting from Chapter 11 in late 2012. Revenue has improved across all regions of the business. Domestic unit revenue was up almost 10 percent and Latin American revenue has increased by close to 11 percent** in the first quarter of 2012 **compared to the same period the prior year**. **American Airlines is performing better than other airlines that have filed for protection and has done so without slashing capacity**. In short, **American is doing the right things to return to business efficiency and customer effectiveness**. To be more specific, its emphasis is now on operational flexibility, international growth through alliance and selective network expansion, and domestic partnerships to reduce operational and balance sheet risks. American's market differentiation is based on emphasizing and meeting the needs and expectations of high value customers (particularly large global corporates) and better alignment with the oneworld airline network and value proposition. Also, being the lead carrier between not only the United States and Latin America but, increasingly, the world and Latin America—connecting through Dallas, Los Angeles, or Miami. This strategy makes sense; if they can get all labor work groups on board, they should be able to make it happen. That is still the main challenge, as is competitor contestation, particularly from larger traditional rivals like Delta and United.

## Link

### HSR Hurts Airlines

Train spending directly trades off with demand for airline travel – negative risks outweigh positive gains

De Rus, ‘8 (Ginés, University of Las Palmas Spain, “The Economic Effects of High Speed Rail Investment”, JOINT TRANSPORT RESEARCH CENTRE Discussion Paper No. 2008-16, revised October 2008, <http://www.internationaltransportforum.org/jtrc/discussionpapers/dp200816.pdf>, JS)

 The construction of a new HSR line of a length within the range 400-600 km has a significant impact on air transport. Modal split changes dramatically in the affected corridor as the generalized cost of the railway is lower than the generalized cost of air transport. As the recently launched AVE Madrid-Barcelona illustrates, the introduction of HSR in a corridor of 600 km long gives railways a role unforeseen with the average rail speeds of recent past. The airlines carried 5 million passengers per year in the route Madrid-Barcelona and three months after the HSR services were introduced they are losing traffic at a rate that amounts to 1.2 million passenger-trips per year (see Figure 1 and Table 1). This volume of traffic is approximately 50 per cent of the market. What about other HSR lines? The intermodal effect of HSR is stronger in lines with a longer period in operation. The effect of the introduction of HSR in medium distance corridors where conventional rail, car and air were the previous alternatives is quite significant as Table 2 and Figure 2 illustrate. The HSR market share is correlated with rail commercial speed and, with the exception of Madrid-Barcelona (recently launched), in those lines where the average speed of rail is around to 200 km the market share of the HSR is higher than 80 per cent. The high market share of railways in these medium distances has been an argument in favour of investing in the HSR technology. If passengers freely decide to shift overwhelmingly from air to rail it follows that they are better off with the change. The problem is that a passenger decides to move 18 De Rus — Discussion Paper 2008-16 revised— © OECD/ITF, 2008 from air to rail because his generalized cost of travel is lower in the new alternative (certainly, this is not so for everybody as air transport maintains some traffic) and this is not a guarantee that society benefits with the change as it can easily be shown. The direct benefits in the corridor where the HSR line is built come mainly from the deviation of traffic from the existing modes of transport, railway included. These benefits are accounted for in the term 1 0 0 v Q ( ) τ −τ in equation(2), where time savings 1 0 ( ) τ −τ should be interpreted as the average of the highest benefit obtained by the first user after the change and zero, the value corresponding to the last user, who is indifferent between both alternatives. The intermodal effects measured in the primary market consist of the product of the value of time, the average time savings and the number of passengers shifting from the conventional mode to the new transport alternative. The interesting point here is that these average values hide useful information regarding user behaviour and the understanding of intermodal competition. Time savings can be disaggregated in access and egress, waiting and in vehicle time. Each of these categories of time has a different value. Passengers usually give more value to savings coming from access, egress and waiting time than those coming from `in vehicle time´; therefore, when users shift from road transport to HSR they save substantial amount of `in vehicle time´ (3 hours in a HSR with a 600km length) but they invest access, waiting and egress time partially offsetting the `in vehicle time´ savings. Moreover, as the `in vehicle time´ generates less disutility than the other components, the final user benefits can even be negative. The opposite case occurs in the case of air transport, where time savings experienced from users shifting to HSR come from a reduction of access, waiting and egress time which hardly offset the substantial increase in vehicle time. Even with a negative balance in terms of time savings, the user benefit can be slightly positive when the different values of time are considered (we do not include the ticket price in this comparison). Looking at Table 3 it seems apparent that HSR is cheaper than air transport, at least if a non restricted tourist fare is taken as the reference. Though the comparison is not straightforward railway fares seem to be below the air alternative, and as section 2.2 shows the HSR average costs are quite above HSR prices; meanwhile airlines operate in competitive markets and have to cover total producer costs. These facts deserve a closer examination because direct benefits of deviated traffic from air transport are included through the term 1 0 0 v Q ( ) τ −τ in equation (2), and the value in brackets could be very low where air transport provide a good service (let us remember that prices are transfers and do not count as social benefits). The conclusion is that the case for HSR investment can rarely be justified on the benefits provided by the deviation of traffic from air transport. It seems apparent than higher benefits could be harvested deviating traffic from road transport but this is more difficult in the range of distances considered. The benefits of deviating traffic from road and air exceed the direct benefits discussed above, as other indirect benefits could be obtained in the other transport modes when their traffic volumes diminish with the project. Let us examine the conditions required for obtaining additional benefits in the secondary markets.

#### HSR decreases airline dependance by around 30%—multiple empirical cases

IREA 10 (The Research Institute of Applied Economics, a research institute in applied economics, "High-Speed Rail: Lessons for Policy Makers from Experiences Abroad", http://www.ub.edu/irea/working\_papers/2010/201003.pdf)

As an HST service enters a given corridor as a new or upgraded transport mode, its performance can attract new passengers, as well as those that had previously been using air, road or conventional rail services. Thus, **upgrading rail transportation is expected to affect the airline industry** and road usage **over medium distances**. The European Commission (1996) provides data on changes in modal shares following the introduction of HST on the ParisLyon (France) and Madrid-Seville (Spain) lines. **In** the first of these (**Paris**-Lyon), between 1981 and 1984, the modal share of **air traffic fell from 31 to 7%,** and that of car and bus traffic fell from 29 to 21%, **whereas rail traffic rose from 40 to 72%.** **In** the case of the **Madrid**-Seville line, between 1991 and 1994 the modal share of **air traffic fell from 40 to 13%,** and that of car and bus from 44 to 36%, **while train increased from 16 to 51%.** Hence, as modal shares are subject to dramatic changes, this review highlights the ways in which the introduction of an HST line can alter the modal split between two cities.

#### HSR steals a third of air traffic

**IREA 10** (The Research Institute of Applied Economics, a research institute in applied economics, "High-Speed Rail: Lessons for Policy Makers from Experiences Abroad", http://www.ub.edu/irea/working\_papers/2010/201003.pdf)

The modal distribution of **traffic has been affected by the introduction of HSR** in all the cases studied, having **the greatest impact on the airline industry** in France and Spain. As Table 5 highlights, immediately following the inauguration of the HST service, the share held by air transport fell significantly in both countries. Similarly, **road transportation has suffered from competition from HST**, albeit to a lesser extent. Surprisingly, the impact on the modal shares of the Paris-Lyon and Madrid-Seville lines were very similar according to the European Commission (1996). **Recent data** on the traffic between Barcelona and Madrid, the main air corridor in the Spanish airline market (and indeed in the entire world market, with almost five million passengers per year in 2007), **show that after a year of HST service a third of air traffic has switched to rail.**

#### Popular HSR lines decrease airline passengers by 33 percent

Jimenez and Betancor 11 (Juan Luis, Economics of Infrastrucure and Transport Group, Ph.D. in Economics, Ofelia, Economics of Infrastructure and Transport Group, PhD in Economics and Associate Professor, "High Speed Rail vs. Air Competition in Spain", http://www.aerlines.nl/wp-content/uploads/2011/01/49\_Jimrnez\_HRS\_AIR\_Spain.pdf)

We now focus on how **passengers** (by routes and market shares by mode **change) after the introduction of HSR**. In this case, we explain the total passengers (train plus air) carried in route i at year t, the Air Transport Share in terms of passengers of the total transport market (air plus railways) and the Iberia´s Share in terms of passengers. The empirical strategy, descrip­tion of variables and period of time considered was similar to that applied to get estimates for the effect on frequencies, but for the fact that variables were on a yearly basis. Our **results show that** the introduction of **HSR in the Spanish markets** has produced an important impact on demand. In fact, it **has increased between 41 to 86 per cent**, depending on the routes, however, we are not able to identify what part of it has been deviated from the road market and what part is purely new generated demand. **On the other hand, the air transport total market share** has also been significantly affected. After the introduction of HSR, the air transport share **in terms of passengers is** between 14 to 33 percentage points lower. Fi­nally, Iberia’s share in the air markets also reduced with the introduction of HSR, and it is for the Madrid-Barcelona route that such a decrease is more important.

#### HSR trades-off with airline passengers

Jimenez and Betancor 11 (Juan Luis, Economics of Infrastrucure and Transport Group, Ph.D. in Economics, Ofelia, Economics of Infrastructure and Transport Group, PhD in Economics and Associate Professor, "High Speed Rail vs. Air Competition in Spain", http://www.aerlines.nl/wp-content/uploads/2011/01/49\_Jimrnez\_HRS\_AIR\_Spain.pdf)

**Before** the introduction of high-speed railways (**HSR**), **aircraft and railways were considered as independent modes of trans­portation that could not compete** given their different features (Ivaldi and Vibes, 2005). **The empirical literature finds** that the introduction of HSR has a significant effect on consumers and, therefore, on air carriers. This fact is more relevant in routes with a distance shorter than 800 kilometers or with a travel time by train of less than 3 hours (IATA, 2003). In addi­tion to speed, it is the fact that **most cities’ railway stations are located in downtown areas, which gives HSR the travel time advantage over aircraft** (Givoni and Banister, 2007). There are some examples from around the world about the ef­fects of HSR on the air sector. **Paris-Lyon was one of the first routes where a high-speed rail operated and in which airlines** reduced their participation almost 50 percent. In Spain, on the route Madrid-Seville (HSR entry in 1992), railway increased its share from 16% to 51% (Park and Ha, 2006). There is a considerable among of literature analyzing the influence of the market structure on competitive variables, mainly prices and frequencies for the case of the air transport sector.ii Results in all of these studies are similar: **the level of concentration on the route or at the airport positively affects consumer prices**. Another research branch is related to the rise of low-cost air carriers. Those **studies point out how such air companies** disci­pline competition, **lead**ing **to price reductions after their entry** or even making incumbent air carriers change their behavior into a low-cost carrier entry threat, as described in Goolsbee and Syverson (2008).iii

#### China proves—HSR causes Airlines to lose passengers causing canceled flights and lower ticket prices

Chovanec 11 (Patrick, Business Insider reporter, "The Backlash is Brewing Against Chinese High-Speed Rail: Here's Why It's In trouble", Jan 14 2011, <http://articles.businessinsider.com/2011-01-14/markets/30039216_1_high-speed-rail-new-high-speed-lines-passenger-traffic>)

Rather than capturing lower-end traffic from slower trains and buses, it appears **the new high-speed lines are drawing higher-end traffic away from China’s airlines**: Wang Changshun, deputy head of the Civil Aviation Administration of China, told a conference on Tuesday that **the fast trains have forced some airlines to cancel short-distance flights along high-speed rail lines.** For example, the Wuhan-Guangzhou **high-speed railway**, where every few minutes **trains zip between** the **two cities** via Changsha … has carried 20.6 million passengers since its opening in December 2009. During that period **the number of flights** between Changsha and Guangzhou **has been cut** from an average of 11.5 flights a day **to three flights** a day, he said. Hainan and Shenzhen airlines decided to withdraw from the market, leaving only China Southern Airlines carrying the three daily flights … **The ticket price** for those flights also **dropped** by **15 percent … but still the number of passengers … dropped** by **48 percent**. **“The opening of the Beijing-Shanghai high-speed line next year will be another blow to the air transport industry**,” Wang said. It may be that China’s airlines could use a bit of competition, but that certainly wasn’t the intent behind the high-speed rail build-out. The intent was to relieve the congestion of China’s existing rail system, thereby opening up lower-end capacity to handle more freight, and relieving stress on roads. It was supposed to bump passengers up-market (from slow trains to fast trains) not down-market (from slow trains to buses, from planes to fast trains)

#### **Causal relationship between increase of HSR passengers and decrease of airline passengers**

Jimenez and Betancor 11 (Juan Luis, Economics of Infrastrucure and Transport Group, Ph.D. in Economics, Ofelia, Economics of Infrastructure and Transport Group, PhD in Economics and Associate Professor, "High Speed Rail vs. Air Competition in Spain", http://www.aerlines.nl/wp-content/uploads/2011/01/49\_Jimrnez\_HRS\_AIR\_Spain.pdf)

Table 1 shows some information on the main vari­ables per route, distinguishing, in the case of routes with HSR, the pe­riod before and af­ter the introduction of HSR services. The variables re­ported in this table are the focus of our econometric analy­sis as presented below. **Of particu­lar importance are the number of total passengers** (air plus rail**), the number of flights and the market share of air trans­port as compared to the railway mode**. In such routes (Barce­lona, Málaga and Zaragoza), **air transport monthly operations and passengers carried have decreased after the introduction of HSR services**. In turn, **passengers transported by railway** (monthly average) **increased substantially**. In fact, **the trains’ market share more than tripled for the route Madrid-Barcelona, doubled for the route Madrid-Málaga, and almost monopolized the passengers’ volume in the case of Madrid-Zaragoza**. Finally, it is worth noting Iberia’s behavior concerning the starting of HSR services. The change in its air transport mar­ket share is not so clear. In fact, except for Barcelona, it main­tained or even increased its share. For routes without HSR services, as expected, the air transport mode is more relevant, especially for routes connecting Madrid with cities in the North of Spain. As we will see below, the Madrid-Barcelona route in particular is competitive, and one where **HSR has clearly won the race with air carriers for the market.**

#### HSR decreases air transport operations by an average of 17%.

Jimenez and Betancor 11 (Juan Luis, Economics of Infrastrucure and Transport Group, Ph.D. in Economics, Ofelia, Economics of Infrastructure and Transport Group, PhD in Economics and Associate Professor, "High Speed Rail vs. Air Competition in Spain", http://www.aerlines.nl/wp-content/uploads/2011/01/49\_Jimrnez\_HRS\_AIR\_Spain.pdf)

Using a Two-Stage Least Square estimator (2SLS-IV) with in­strumental variables, we reach several conclusionsiv. Firstly, **on the routes in which Iberia has a higher market share in the air transport market, the total number of operations decreases**, as pointed in the works by Schipper et al. (2002), Carlsson (2004) or Bilotkach et al. (2010), too. **Secondly,** **distance neg­atively affects the frequency of monthly flights**. Thirdly, the parameter of the HSR dummy is negative and is statistically significant when explaining the total number of operations. **On average, the number of air transport operations decreases by 17% in response to the introduction of HSR**, though this re­sult differs depending on the route and the airlines considered.

\*\*\*NOTE: Iberia is a large Spainish airline

### A2: Trades Off with Small Airlines

#### Regional airline reductions have an effect on major airlines due to revenue-sharing and fixed-fee agreements.

Forbes 2007 (SJ, Assistant Professor of Economics at the University of California, San Diego, "The Role of Regional Airlines in the U.S. Airline Industry", http://weber.ucsd.edu/~sjanusze/www/book\_chapter\_oct06.pdf)

In the case of an independent regional, the contract between the major and the regional will generally take one of two forms. Historically, **most contracts have been revenue-sharing agreements** (also known in the industry as pro-rate agreements). Under these agreements, **the regional agrees to serve a set of routes** on behalf of the major and to coordinate its schedule on (and allocation of aircraft to) those routes with the major’s own schedule. **In exchange, the major permits the regional to use its service marks and logos** and lists the regional’s flights in computer reservation systems under its two-letter designator code. **The regional receives an allocated portion of the revenue from each passenger that** flies the regional as part of an itinerary that **connects with one of the major’s flights.** Fares are set by the major and marketing and ticketing are carried out by the major. **More recently, the industry has shifted towards fixed-fee** or capacity-purchase **agreements**. Under these types of contracts, **the regional receives a fixed payment** (usually based on block hours flown) **for each departure that it operates on behalf of the major**. This fixed payment is calculated to cover the regional’s operating costs and to guarantee a reasonable rate of profit. In addition, the regional may receive incentive payments based on operational performance, such as on-time performance and baggage handling. Under a capacity purchase-agreement, **the major retains all revenue from flights operated by its regional**. Our conversations with industry participants and examination of the trade presses suggest that the switch to fixed-fee contracts was motivated by two factors. First, these contracts eliminate almost all of the risk faced by the regional. The fixed fee payment with a guaranteed profit margin insulates the regional from both demand risk (since its revenue is independent of the number of passengers onboard) and cost risk (since most costs, including fuel, are passed on to the major).11 Second, fixed fee contracts provide the major with a greater level of control over the regional, in particular over its schedule. The switch to fixed fee contracts began in the late 1990s and, interestingly, largely coincides with regionals’ adoption of RJs.

### Link Magnifier—Every Passenger Key

#### Each lost passenger dramatically affects airlines—only 1 out of 100 passengers represent a profit.

McCartney 6/7 (Scott, blogger for the Wall Street Journal, "How Airlines Spend Your Airfare", June 7 2012, <http://blogs.wsj.com/middleseat/2012/06/07/how-airlines-spend-your-airfare/>)

**On an airline flight with 100 passengers, how many people does it take**, on average, **to cover the costs of the trip? Slightly more than 99 of them**. **That’s a vivid way of showing how small profit margins are for airlines** and why they try so hard to pack planes so full. But where all the money goes may be more a mystery to travelers. Sure, tickets pay for fuel and pilots and airplanes. But **there are so many other costs that most fliers never see**. Somebody on every flight covers **crash insurance and compensation paid for bumped passengers or lost luggage**. The person next to you on your next trip is partly paying **to repair baggage carts and provide passenger defibrillators**. This week’s Middle Seat (click [here for the column](http://online.wsj.com/article/SB10001424052702303296604577450581396602106.html)) takes a hard look at airline costs, spreading them out over a hypothetical 100-passenger flight. I asked US Airways and consulting firm Oliver Wyman to crunch airline expenses down to the percentages that an individual passenger pays. The results show why squeezing one last passenger onto a flight, or getting baggage fees, reservation-change fees or preferred-seat charges from miffed customers, are so important to airlines. The US Airways hypothetical flight had 100 passengers all paying the average $146 fare for a domestic flight ($292 round-trip), based on a year’s worth of data ending March 31. The airline also collected $18 per passenger in other revenue, everything from baggage fees to cargo. Then the airline’s costs were divided up by passenger. It took 29 passengers to pay for fuel. That’s a staggering number. It also shows how important fuel-efficient airplanes are to airlines. A 10% reduction in fuel burn would move about three passengers from covering costs to supplying profit for the airline. And that would be a huge difference, considering **only one passenger out of the 100 represented the airline’s profit** for that period. Well, not exactly one. When I asked Robert Isom, chief operating officer at US Airways Group Inc., about the sole Mr. Profit passenger, he gave me a pained chuckle. “We rounded up,’’ he said.

## Impact

### Airlines Good: Economy

#### Airlines key to the economy – jobs, tech innovation, manufacturing and trade outweigh the AFF’s internals

**ITA, ’10** (International Trade Administration, 4/20/10, <http://trade.gov/press/press-releases/2010/us-commerce-department-official-highlights-the-importance-of-aerospace-industry-in-wa-state-082010.asp>, JS)

Lamb-Hale recognized the significant contribution of aerospace exports to achieving the goals of President Obama’s National Export Initiative, which aims to double exports in five years to support two million American jobs. Boeing hosts the annual symposium to educate diverse small and medium-sized businesses interested in opportunities in the aerospace industry. Discussion topics ranged from growth and development opportunities to access to capital and benefits of globalization. “The U.S. aerospace and defense industry is a strategic contributor to the economy, national security, and technological innovation in the United States,” said Lamb-Hale. “Manufacturing is the furnace that forged our middle class and remains a vital part of the U.S. economy.” The aerospace industry employed 11.7 million American workers as of July 2010. The total value of aerospace shipments for 2009 was nearly $189 billion, an increase of 8.5 percent over 2008 levels. At $46 billion, aerospace has the largest positive trade balance of any manufacturing sector. “Every time a Boeing 777 lands in China or India or anywhere else in the world for that matter, it lands with about 4 million parts reflecting the workmanship of some 11,000 small, medium and large suppliers, the vast majority of which are in the United States,” said Boeing Chairman and CEO Jim McNerney in a speech earlier this year. “Our goal is to increase the number of small and medium-sized businesses exporting to more than one market by 50 percent over the next five years,” said Lamb-Hale. “The markets with the highest potential, such as China, Brazil, and India, are also countries with rapidly developing aerospace and automotive capabilities. We stand ready to work with U.S. businesses to reinvigorate American manufacturing for the 21st century, increase exports, and create jobs.”

#### Federal investment into airport infrastructure key to growth

PRINCIPATO ’12 - president, Airports Council International-North America; M.A. in International Relations from University of Chicago; International Trade and Transportation specialist, Hunton & Williams (Greg, “Airports Have Greater Economic Clout than the Economies of South Korea, Mexico or Switzerland”. February 29. http://acinablog.wordpress.com/2012/02/29/airports-have-greater-economic-clout-than-the-economies-of-south-korea-mexico-or-switzerland/)

As a nation, we (through our Congress and President) decided to increase our investments in airport infrastructure. Our study, the first undertaken since those policy changes went fully into effect, shows the very positive results.

America’s airports support 10.5 million jobs. America’s airports support $1.2 trillion in economic activity, larger than the GDP of South Korea. “Airports, Inc.” directly employs 1.3 million people, making it the second largest employer in the nation, behind Wal-Mart. Total airport payroll equals the total payroll of the State of Michigan. The total economic clout of airports: 8 percent of U.S. GDP and 7 percent of U.S. employment.

Those are big numbers. But if you are still not convinced, consider this: during that time, the jobs number increased by 56 percent. Total payroll has gone up over 90 percent. And the total contribution to the output of the American economy has more than doubled. All this has happened despite the industry being devastated by the largest terrorist attack in history. All this has happened despite the most severe economic downturn since the Great Depression, including spikes in the price of fuel.

This economic growth occurred because we decided to invest in our economic future. In economic times as difficult as most of us will ever experience, those investments paid off.

That is why it is so discouraging that the recent FAA bill leaves in place federal limits on what airports and local communities can do to generate resources. That is why it is so discouraging that the president’s budget reduces investment in airports. That is why it is so discouraging that local communities cannot raise their own resources because of decisions made in Washington. We are putting the future in peril, just as we are set to take off.

Some have called for a new national airline policy, designed to promote the financial strength of airline companies. I am a strong proponent of strong airline companies. But the purpose of the air transportation system is the movement of people and products to destinations and markets. It is not to ensure shareholder value for airlines; that’s what airline executives and boards are supposed to do.

We do need a new national AVIATION policy, looking at all aspects from NextGen to financing airport infrastructure to the regulatory environment in which aviation must operate to the tax structure, all of it. It must be designed to strengthen the air transportation system, not merely any one component of it.

We are now stepping back from investments in aviation at the same time as our competitors around the world are stepping up. We are in peril of becoming what the steel industry became in the 1970’s and 1980’s, out of date and non-competitive.

We have a chance to avoid that. Our study shows the benefits in terms of job creation and economic impact when good decisions and good investments are made. I worry that the next study will show when the opposite happens.

#### Airline industry collapse sends ripple effects through the economy—destroys US competitiveness.

Reuters 8 6/23/8 (“Oil-Fueled Catastrophe in the Airline Industry Would Cripple U.S. Economy and Eliminate American Jobs,”

Accessed online at [http://www.reuters.com/article/2008/06/23/idUS29898+23-Jun-2008+PRN20080623](http://www.reuters.com/article/2008/06/23/idUS29898%2B23-Jun-2008%2BPRN20080623), Accessed on 6/20/12)

According to the paper, “Airlines move people, but also high-value, time-sensitive or perishable cargo. Failure of one large airline would disrupt the travel of 200,000 to 300,000 passengers per day and thousands of tons of goods. The almost-full planes of remaining airlines would not be able to absorb much of these volumes. Failure of multiple airlines would paralyze the country and our American way of life, leaving us less productive, more isolated, less happy and more vulnerable.” The paper points to nine specific impacts of a collapse of the industry: • Direct Employment. Between 30,000 and 75,000 would lose work immediately with just one airline failure, with [payroll](http://www.caribbeanpressreleases.com/articles/3544/1/Oil-Fueled-Catastrophe-in-the-Airline-Industry-Would-Cripple-US-Economy-and-Eliminate-American-Jobs/Page1.html) losses of $2.3 billion to $6.7 billion. • Indirect Community Impact. Losses would ripple throughout communities given that each airline job creates large numbers of indirect [local jobs](http://www.caribbeanpressreleases.com/articles/3544/1/Oil-Fueled-Catastrophe-in-the-Airline-Industry-Would-Cripple-US-Economy-and-Eliminate-American-Jobs/Page1.html), and other economic activity. • Reduced Purchases from Suppliers. Airline purchases would cease at any failed [carrier](http://www.caribbeanpressreleases.com/articles/3544/1/Oil-Fueled-Catastrophe-in-the-Airline-Industry-Would-Cripple-US-Economy-and-Eliminate-American-Jobs/Page1.html) impacting companies that rely on airlines to keep their businesses afloat as well as public entities such as airports. • Impact on Tourism. The world’s largest industry would be devastated in the U.S., with locally severe effects in places like South Florida, Hawaii, Las Vegas or Colorado, depending on which airline(s) fail. • Effects on Logistics and Supply-Chain Management. Restaurants, pharmaceutical companies, manufacturers relying on just-in-time parts, florists, grocers and the fashion industry would be among those injured. • Decline in Business Activity. Business travel – really the flow of human capital, which precedes or facilitates other flows – would be severely disrupted, with acute disruption in airline hubs and major cities. • Declining Tax Revenues. Loss of income taxes paid by employees, coupled with the loss of excise, use and other airline-paid taxes would be bad news for governments already struggling with declining revenues. • Increasing Government Outlays. Impacted individuals would immediately place demands on governments in the form of unemployment compensation, retraining and the demand for other resources. • Weakened US Competitiveness. America competes with other countries for tourists, and with reduced air lift to the U.S., travelers would be less likely to visit the U.S. and more likely to use non-U.S. carriers.

### Airlines Good: Aerospace

#### Air cargo is key to reviving our aerospace industry – solves military readiness

WOODGERD ‘4 Operations Research Analyst at Leonie Industries; Naval Postgraduate School (“The Mobilus Initiative: Creating A New Component of the US Aerospace Industry Centered Upon Transport Airships”,

The United States requires greater mobility to meet burgeoning military and commercial demands. The US aerospace industry shows signs of faltering and losing its preeminent position in the world and our national economy. Improving the efficiency of the existing air transportation system and its components, including the introduction of new types of airplanes, while critical and achievable, cannot by itself provide enough overall gain in capability to meet future commercial and military needs. The Nation needs a new component of the aerospace industry – a key element of our economic power – to create a new transport capability in the civilian sector the military can draw upon when necessary. A different type of airlift platform is necessary. A new initiative is essential to cause the creation of the required capability, and it must use a method copied from success in the private sector rather than traditional government paths that have failed. Only Lighter-Than-Air (LTA) technology--derided, often wildly misunderstood and largely ignored for the last 50 years--actually offers the potential to provide tremendous increases in volume, speed and accessibility for air movement around the world. LTA technology offers new types of aircraft, more complete utilization of airspace, and supports a more fully networked concept to air transportation. The nation needs to move more, faster, point-to-point from various points of origin to relevant locations worldwide. Only the atmosphere provides us a navigable ocean that reaches all points on the planet to which we may maneuver. Thus we must fly, and only exploiting LTA technology will allow us to do so with a payload more akin to a ship than a plane. 1 Only such transport airships 2 will enable us to be Mobilus in Mobile 3 – Mobile Within The Mobile Element. Discussion of the value of transport airships often does not meet disbelief, but rather an acceptance of the value and an awareness of many previous ill-defined or oversold governmental efforts over many years. The Mobilus Initiative exists precisely to rapidly create a broad, diverse commercial sector capability and avoid repeating past errors. The developmental path we must follow emerges from thorough study of the many previous failures, and successes, of past LTA efforts in the public and private sectors. The failures have generated great cynicism and misinformation, but they and the successes also provide many lessons to take forward. The “build it and they will come” mantra has repeatedly failed. Success depends upon a realistic, long-term view that factors in realistic cost and time estimates, realistic technical developmental paths, considers training, utilizes all remaining first hand human experience, and includes key parts of the private sector. Not only is technology alone not enough, nor is a solely military or even governmental effort. This article describes the Vision—a worldwide LTA industry--towards which we must focus efforts and the non-traditional path—a public/private partnership unlike any other-- we must follow to create a broad, sustainable new aerospace capability, and the resultant national advantage, within two decades. This Vision, and the method to realize it, is Mobilus—a new mobility for our Nation, and a challenge for the 21st Century. These airships do not yet exist, but are technically feasible. Historical data and the body of significant conceptual engineering work over the past decades enables realistic prediction of airships within the near term capable of payloads measured in thousands of square feet of deck space and perhaps 200 tons 4 of cargo capacity. These ships would cruise around the clock at speeds between 60-90 MPH origin-to-destination and operate independent of traditional airports and seaports. Think in terms of nearly 3 C-5s or 4-5 C17s of capacity. These rough estimates of a future capability do not require significant technical breakthroughs. The challenge lies far more in closing the business case, in project management, in training crews, in operating airships and in organizing the required value networks to finance, create and operate them. The “right tech” is not necessarily “high tech”. Technological advances are critical to achieve the more demanding sizes that many hope for, but the laws of physics, economics and human nature remain in effect so we must address the entire challenge. This article describes the key military/civilian/aerospace industry needs and opportunities to show how transport airships offer a common solution to multiple problem sets. The bulk of the paper describes the Mobilus Initiative in greater detail. Nexus of Challenges and Opportunities The US Aerospace Industry is essential to the very existence of our national commercial and military mobility. A new LTA centered aerospace sector is attainable and will make an extremely significant quantifiable improvement in our mobility capability and to the US Aerospace Industry. It also supports several of the core strategies for transforming the Next Generation Air Transportation System. 5 While each individual cargo-carrying airship would be capable of significant payload and range, it will take dozens or more ships to achieve truly significant impact. The US Department of Defense cannot develop, operate, crew and maintain a fleet of transport airships no matter how valuable. We are at war, and cannot sacrifice current capabilities (force structure, funding for a full development, etc.) for potential future ones. Development would also be too slow. A cursory inspection of traditional acquisition programs shows delays and cost increases of 40% are common. That means that we will use civilian assets in a manner similar to the current Civil Reserve Air Fleet (CRAF) model. The next step in the logic is that a civilian sector of airships/other LTA vehicles must exist on a large scale. The problems and weaknesses across the military needs, commercial needs, and the aerospace industry itself suggest that solutions must apply across all three areas. This is a challenge in itself, but it is also the key opportunity we will exploit. Mobilus will identify the most sensible paths of development and the value networks across government and the private sector to develop airships to meet varied commercial needs. Consortiums are proven effective in harnessing the power of the free market and legal mechanisms exist to help small companies produce technology that they cannot do alone. Mobilus Vision The Mobilus Vision is of a future worldwide LTA industry, a robust and complementary component of the current aerospace industry made up of varied types of airships of various design types performing varied commercial functions throughout the world. Commensurate with the network of airships will be a similar network of facilities, both maintenance and construction, personnel to crew and maintain the ships, lifting gas production, distribution, storage and purification, more precise weather forecasting, the training base for those who operate and maintain ships, and management of operations. The US military will utilize this commercial asset of transport airships and their support structure in a manner similar to how we now use airplanes through the Civil Reserve Air Fleet (CRAF). Airships will not reside primarily within military force structure. This civilian capability must be broad, deep, and develop as rapidly as reasonably possible. Military considerations will be a key component of development from its inception and the military will be a crucial first customer as well. Why This Path Will Realize The Vision Mobilus is the Vision of the desired endstate and the method to achieve that endstate. The fundamental core of this method is that of a public-private partnership, in this case a type of technology-sharing consortium, though with some unique aspects. This choice of method is recognition of reality and of successful precedent. 6 Major industries have long pooled efforts in innovation in recognition of the overall efficiency of this approach and the fact that such a win/win approach is most efficient and least risky. Innovators have strong incentives to share innovations and technology-sharing consortia are quite stable. 7 Mobilus will identify the best technical developmental path(s), identify the key stakeholders who will share in the development, and identify the most efficient overall path(s) by which various value networks of stakeholders should move toward their desired goals within the endstate. Key stakeholders will join in public-private partnerships (P3s) to develop actual cargo-carrying airships and the required support networks – operators, trainers, maintainers, etc. Arguably, no previous business case closed because developing an airship capability is too big for any company and arguably even for government acting alone. Mobilus, by identifying all relevant participants, working with them to accurately identify the risk and reward for all participants (in a collaborative effort) and showing a comprehensive development path, realistic time line and realistic cost estimate reduces collective risk. One person may not step forward into the unknown, but a team of many will step forward together. “Civil aerospace faces declining federal funding and US worldwide leadership…corporations are risk averse and short-term oriented… the most significant change in our industry is the need for cooperation or …teaming. Pure technology is, of itself, not the answer anymore.” 8 Military Mobility Needs Current military operations are always limited by the availability of “lift”. The desired forces simply cannot be moved through time and space in the volume and tempo operational planners want. Developing Service concepts of operations and logistics demonstrate a tremendous, perhaps even exponential, increase in future movement demands, especially within a theater of operations. To provide an asymmetric advantage for our forces and counter the multiple forms of anti-access, we need the capability to rapidly deliver large volumes/heavy payloads directly to the desired destination, independent of existing infrastructure. 9 Multiple deployment analyses show the value of Ultra-Large Airlifters (ULAs) 10 , the generic term for this capability. They improve overall force closure as well as offering entirely new ways to package and deploy specific capabilities such as hospitals, C2 nodes, bridge building materials, etc. A point-to-point capability and high volume cargo bays translates into significantly faster employment of units such as helicopters (lightweight but large footprints) and also of heavier, denser units that then use the vacated deck space on sealift to move sooner. Remembering that sealift carries 90% of units and sustainment cargo, one can see that an airship provides a useful surge capability early on and also fits a sector between sealift and airlift – combining the better qualities of both. Such a platform blurs the line between inter and intra theater deployment and moves toward the deploy/employ paradigm.

#### R&D jobs alone tip the economy

**Crawford, ’12** (Mike, freelance writer, April 2012, <http://www.areadevelopment.com/Aerospace/April2012/market-report-2012-aerospace-MRO-28715161.shtml>, JS)

Best R&D in the World Rising fuel prices are creating demands for new fuel-efficient aircraft. The United States is the world leader in aerospace manufacturing and technology, including alternative aviation fuel research and development — a huge growth market. U.S. producers have successfully completed test flights using fuels from different feedstocks and are moving toward commercial production. AIA’s 2012 forecast predicts significant growth in almost every aerospace category — from civil aviation to space. This is great news for hundreds of U.S. manufacturers in aerospace supply chains that are eager to expand production and hire more workers. Increased aerospace production not only will help major clusters thrive, but also boost economies in smaller towns across the country. Over 90 percent of U.S. exporters of aerospace products are small and medium-sized firms — many of them located in communities like Spokane, San Antonio, or Meridian, Mississippi, that aren’t part of big clusters. Rob Akers, CEO of the National Tooling and Machining Association (NTMA), a national organization that represents the custom precision manufacturing industry, indicates big companies like Boeing are just as likely to contract with smaller companies if they can meet their production demands. “And if OEM engineers need to be heavily involved in component design, this sometimes drives the decision to work with local suppliers as well,” says Akers. “Aerospace was continually on the leading edge of processing, materials, and quality issues in the manufacturing sector,” adds Doug Woods, president of the Association for Manufacturing Technology (AMT). “This drew tier-one and tier-two companies into those clusters. Today, however, you are just as likely to find the best blade-grinding provider in Michigan as in California or New England. In fact, aerospace component providers have spread across the United States and into Mexico, from where we’re importing a significant amount of aerospace components.” New innovations in manufacturing technology enable faster component production, which means faster delivery times can be achieved. “Coming out of the recession, our challenges are being driven by the original equipment manufacturers,” says Akers. “They require more aggressive delivery times because they don’t want to carry inventory. Our manufacturers are extremely competitive, diverse, adaptive, and can rise to the next level.”

### Airlines Good: Accidents

#### Decreased profits increase the chance of accidents

Noronha and Singal 4 Gregory Noronha, School of Management, Arizona State University and Vijay Singal, Department of Finance, Pamplin College of Business, Virginia Tech (“Financial Health and Airline Safety,” Managerial and Decision Economics, Accessed online at <http://www.finance.pamplin.vt.edu/faculty/vs/2004MDE-FinancialHealthAirlineSafety.pdf>, Accessed on 6/27/12)

That the ﬁnancial health of an airline will impact its ability or willingness to provide safety seems intuitive. In this paper, we provide empirical evidence to support this notion. Relying on lagged bond rating to judge the ﬁnancial health of an airline and using accidents and incidents as a measure of airline safety, we ﬁnd that ﬁnancially strong airlines are signiﬁcantly less at risk than ﬁnancially weak airlines. The diﬀerence in the accident rate from a whole letter rating change is about 10%. These ﬁndings are robust to alternative deﬁnition of mishaps, ratings, and other variations. If the ﬁnancial condition of airlines is important in the pursuit of safety, the FAA should consider allocating relatively more resources to the oversight of ﬁnancially weak airlines than to ﬁnancially strong ones.

### Airlines Good: Trade Leadership

#### Airport infrastructure investment is critical to US trade leadership and the air cargo industry

DRI ‘2 (Global Insight Company, “The National Economic Impact of Civil Aviation”. July. http://www.aia-aerospace.org/stats/resources/DRI-WEFA\_EconomicImpactStudy.pdf)

The disadvantages associated with the baseline future case examined in this study will detrimentally affect economic activity within the United States; they also will constrain the ability of the United States to compete in global markets. This section identifies the degree of global competition among nations, explores the key ways that this competition can be affected, illustrates how the United States currently competes globally, and suggests how the U.S. global competitive stance could be affected by the disadvantages associated with increasing air traffic delays. Air Transportation and Economic Growth: From Economic Nationalism to a Global Economy Since World War II, a key direction of global commerce has been the increasing integration of national economic activity. Industrial nations came together to form the Organization for Economic Corporation and Development (OECD). The General Agreement on Tariffs and Trade (GATT) was formed and then superseded by the World Trade Organization (WTO) to help facilitate a new era of accelerated global trade. These trends reflect the global integration of economies as business increasingly sought not only to sell its products into wider markets, but also to coordinate production and distribution across national borders. Every region of the world has participated in these trends except for the Middle East, whose export statistics are distorted by the region’s huge exports of petroleum and related products. This steady increase in trade activity has been enhanced by the growth of global air transportation. Clearly, air transportation has facilitated business’ ability to move its products around the world. But it has played a far more important role in bringing business managers together, enabling them to build the links, communications, and personal relationships necessary to achieve such a level of international business activity. Despite continuous advances in telecommunications technologies, the growth in global business over the past 50 years could not have been achieved without the personal contact enabled by the world’s air transportation system. Not only is air transportation important to the global economy; it is also an important enabler of economic growth for individual economies. By developing its air transportation system, a country can better link itself to the global economy and provide an environment for its business that facilitates global activity. Conversely, there are distinct disadvantages for regions or communities that are beyond the reaches of efficient air transportation. In these regions, business remains more isolated and less able to reap the benefits offered by being connected to global economic activity. Both adequate airport capacity and the efficiency with which the air transportation system works are critical to generating economic benefits. The main body of this report examines the impacts that a constrained system in the United States would have on the U.S. economy later in the decade. But it is also true that these constraints would inhibit the ability of the United States to compete in global markets, damaging its international competitiveness in general andtheinternational competitiveness of U.S. civil aviation specifically. This chapter examines some of the elements of such potential damage. Competitiveness by Industry Air Cargo During the past three years, several analyses have shown that, in macroeconomic terms, U.S. integrated air express companies have created billions of dollars annually in reduced business inventory carrying costs, over $50 billion per year in logistics cost savings, and tens of billions of dollars of final demand and export sales that would not occur in the absence of their services. The air express industry itself, including its ground transportation and logistics services divisions, generates approximately $60 billion a year in revenue and employs approximately 600,000 workers. In addition, a significant portion of the world’s freight is still carried either in the bellies of passenger aircraft or by all-cargo aircraft specializing in traditional “heavy freight.” These segments of the marketplace allow those shippers not necessarily demanding “express” service to enjoy the relative speed of movements by aircraft and to permit the transportation by air of oversized cargo to remote regions of the nation and world. Global economic integration is characteristic of most of the world. Exports of goods and services in 2000 represented almost a quarter of the world’s GDP, up from just 10% in 1970. In turn, U.S. merchandise trade amounts to 22% of the world total. This steady increase in trade activity has been enhanced by the growth of global air transport. Air Transportation and Tourism In 1999, almost 48.5 million international visitors came to the United States, spending a total of $74.9 billion on travel-related expenses, such as lodging, gifts/souvenirs, food and beverages, and entertainment. They spent another $19.8 billion on U.S. air carriers in traveling to and from the United States. The total of air travel and travel related spending, $94.7 billion in 1999, has grown 62% since 1990, when international visitors spent about $58.3 billion in travel and travelrelated expenses to visit the United States. 22 This amount of spending is significant (the International Trade Administration—the source of these figures—estimates that foreign travel in the United States in 1999 supported over 1.1 million U.S. jobs), and exceeds the amount spent by Americans visiting other countries by $13.9 billion. In other words, the United States runs a surplus in its travel trade balance. Anything adversely affecting this surplus, such as constrained infrastructure or regulatory barriers to adapting to market forces, would imply a decrease in the United States’ global competitiveness. Other Industries The increase in production costs added to American business by air transportation delays affects the U.S. global competitiveness of all industries. In this case, the increased air transportation costs implied by congestion delays raises the costs of production and distribution across the U.S. economy, resulting in a decrease in global competitiveness. An increase in air transportation costs impacts U.S. industries in two ways: higher air passenger transportation costs increase business travel and entertainment expenses, and higher air cargo costs affect those industries that utilize this form of transportation in their logistics. Improved air transport infrastructure not only increases U.S. competitiveness in general, but also allows U.S. aviation itself to compete more effectively with foreign entities. Constraints in the U.S. air transport system first affect the economic well being of the aviation industry itself.

### Airlines Good: Power Projection

#### Airport infrastructure solves power projection

DRI ‘2 (Global Insight Company, “The National Economic Impact of Civil Aviation”. July. http://www.aia-aerospace.org/stats/resources/DRI-WEFA\_EconomicImpactStudy.pdf)

On November 27, 2001, just 11 weeks after the terrorist attacks, John Marburger, Director of the White House Office of Science and Technology Policy, reiterated the continued need for investment in the nation’s airports and airways in remarks to the Commission on the Future of the U.S. Aerospace Industry: “We need to develop a 21st Century global air transportation system that provides safe, secure, efficient and affordable transportation of people, goods, and information in peacetime and wartime—enabling people and goods to move freely anywhere, anytime, on time. We need a system that: - Enhances national security by strengthening homeland defense while enabling the military to project power anywhere in the world at any time; - Increases U.S. economic competitiveness by building a more efficient, higher capacity air transportation system; and - Improves the quality of life of all Americans by enabling them to do what they want to do when and where they want to do it.? 3 This study addresses the economic competitiveness and quality of life benefits that Dr. Marburger describes.

### Airlines Good: Pollution (HSR Specific)

#### HSR causes more pollution then competing airlines

Feigenbaum 12 (Baruch, policy analyst at Reason Foundation, a non-profit think tank advancing free minds and free markets. He specializes in transportation policy. "California High-Speed Rail Will Increase Pollution", Reason Foundation, June 14 2012, http://reason.org/blogs/mass-transit-and-light-rail

The latest development in the California high-speed rail disaster concerns pollution. University of California-Berkeley professor Arpad **Hovath explains that construction of the train will produce 10 million metric tons of Carbon Dioxide per year. Electricity for the California trains will come from coal fired power plants leading to more pollution**. In order to negate this pollution, **the train would need extremely high ridership in the Central Valley something that would be nearly impossible to achieve. California HSR will likely be more polluting than air travel.** Further according to federal biologists and as reported in the Los Angeles Times: **Eleven endangered species**, including the San Joaquin kit fox, **would be affected**, according to federal biologists. **Massive emissions from diesel-powered heavy equipment could foul the already filthy air. Dozens of rivers, canals and wetlands fed from the rugged peaks of the Sierra Nevada would be crossed, creating other** knotty **issues**. Among the most difficult issues will be air quality, which is regulated across eight counties by the San Joaquin Valley Air Pollution Control District. The district worries that the construction project would exacerbate already problematic levels of nitrogen oxides, particulates and volatile compounds.

### Airlines Good: Terrorism

#### Diverting security funds to invest in transportation have the greatest impact on current counter-terrorism operations

Polzin 2 (Steven E., Ph.D., Civil Engineering (Transportation), Northwestern University, M.S.C.E., Urban Systems Engineering, Northwestern UniversityB.S.C.E., Civil and Environmental Engineering, University of Wisconsin, Transit Research Program Director, "Security Considerations In Transportation Planning: A White Paper", http://www.planning.dot.gov/documents/SecurityPapers/SecurityConsiderations\_Polzin.htm

The response of transportation agencies to **security concerns will encompass all aspects of agency operations from day to day operations** and administration to midterm planning **to long-range planning. Security assessments and enhancements** for operating **facilities will impact current operations the greatest**. Beyond the near term the largest influence on planning is likely to be the impact on resource availability. **The available resources influence the program of transportation investment and diversions of funds to support near-term security initiatives may have a significant impact on long-range planning initiatives.**

#### A hijacked plane could crash into spent nuclear fuel pools releasing radioactive substances into the environment

Zhang 3 (Hui, Senior Research Associate, Project on Managing the Atom, "Radiological Terrorism: Sabotage of Spent Fuel Pools", Dec 2003, http://belfercenter.hks.harvard.edu/publication/364/radiological\_terrorism.html

**The September 11** large-scale **terrorist attacks** on the World Trade Center and the Pentagon **show the threat of nuclear and radiological terrorism is real**. **A successful attack or sabotage on a nuclear facility could cause the most potentially devastating radiological release into the atmosphere**. While many people focus their concerns on the vulnerability of reactor containment buildings, an increasing number of nuclear experts are concerned about the **spent fuel pools** (SFP) **which would be more vulnerable** than the reactor containment building, **because most SFPs are housed in far less robust structures** than the reactor containment vessels. Moreover, **a SFP would contain much more radiation than a reactor core**. [[1]](http://www.inesap.org/sites/default/files/inesap_old/bulletin22/bul22art30.htm#a1) In particular, one major concern is the vulnerability of the pools' cooling systems. **In absence of cooling water, the spent fuel would overheat**, and the fuel-cladding could melt or catch fire in some cases. Thus **it could release radioactive substances to the environment**.

#### **A terror attack on SFPs would destroy an entire state, poison our food supply, and cause an outbreak of cancer fatalities**

Alvarez 11 (Robert , an Institute for Policy Studies senior scholar, served as a Senior Policy Advisor to the Secretary of Energy during the Clinton administration, Spent Nuclear Fuel Pools in the U.S.:Reducing the Deadly Risks of Storage, May 2011, http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=4&ved=0CFUQFjAD&url=http%3A%2F%2Fwww.ips-dc.org%2Ffiles%2F3200%2Fspent\_nuclear\_fuel\_pools\_in\_the\_US.pdf&ei=ENrnT\_j1CueB6gGu6vnhDg&usg=AFQjCNG\_iwX\_Mu0JmathDIwz9ZLG1PyXWA

For the past 30 years, nuclear safety research has consistently pointed out that **severe accidents could occur at spent fuel pools resulting in catastrophic consequences. A severe pool fire could render about 188 square miles around the nuclear reactor uninhabitable, cause as many as 28,000 cancer fatalities, and spur $59 billion in damage**, according to a 1997 report for the NRC by Brookhaven National Laboratory done for the NRC. If the fuel were exposed to air and steam, the zirconium cladding would react exothermically, catching fire at about 800 degrees Celsius**. Particularly worrisome is the large amount of cesium-137 in spent fuel pools, which contain anywhere from 20 to 50 million curies** of this dangerous isotope. With a half-life of 30 years, cesium-137 **gives off highly penetrating radiation and is absorbed in the food chain as if it were potassium**. **As much as 100 percent of a pool’s cesium 137 would be released into the environment in a fire**, according to the NRC. While it’s too early to know the full extent of long-term land contamination from the accident at the Dai-Ichi station in Fukushima, fragmentary evidence has been reported of high cesium-137 levels offsite. The Nuclear Regulatory Commission also has reported that spent fuel fragments from the explosion the Unit 4 pool were found a mile away. The damage from a large release of fission products, particularly cesium-137, was demonstrated at Chernobyl. More than 100,000 residents from 187 settlements were permanently evacuated because of contamination by cesium-137. **The total area of this radiation-control zone is huge: more than 6,000 square miles, equal to roughly two-thirds the area of the State of New Jersey** (Figure 13). During the following decade, the population of this area declined by almost half because of migration to areas of lower contamination. In the summer of 2002, the Institute for Policy Studies helped organize a working group including experts from from academia, the nuclear industry, former government officials, and non-profit research groups to perform in in-depth study of the vulnerabilities of spent power reactor fuel pools to terrorist attacks. By January 2003, our study was completed and accepted for publication in the peer-review journal Science and Global Security.19 We **warned that U.S. spent fuel pools were vulnerable to acts of terror**. **The drainage of a pool might cause a catastrophic radiation fire, which could render an area uninhabitable much greater than that created by the Chernobyl accident** (Figure 14).20 In addition to terrorist acts, there are several events could cause a loss of pool water, including leakage, evaporation, siphoning, pumping, aircraft impact, earthquake, the accidental or deliberate drop of a fuel transport cask, reactor failure, or an explosion inside or outside the pool building. Industry officials maintain that personnel would have sufficient time to provide an alternative cooling system before the spent fuel caught fire. But if the water level dropped to just a few feet above the spent fuel, the radiation doses in the pool building would be lethal — as was demonstrated by the loss of water in at least two spent fuel pools at the Fukushima Dai-Ichi nuclear power station.

#### **One reactor explosion is 17 times worse than Chernobyl**

Zhang 3 (Hui, Senior Research Associate, Project on Managing the Atom, "Radiological Terrorism: Sabotage of Spent Fuel Pools", Dec 2003, http://belfercenter.hks.harvard.edu/publication/364/radiological\_terrorism.html

A 400 t PWR pool holds about 10 times more long-lived radioactivity than a reactor core. A radioactive release from such a pool would cause catastrophic consequences. One major concern is the fission product cesium-137 (Cs-137), which made a major contribution (about three quarters) to the long-term radiological impact of the 1986 Chernobyl accident. **A spent fuel pool would contain tens of million curies** of Cs-137. Cs-137 has a 30 year half-life; it **is relatively volatile and a potent land contaminant**. In comparison, the April 1986 **Chernobyl accident released about 2 Mega Curies** (MCi) Cs-137 into the atmosphere from the core of the 1,000 MWe unit 4. It is estimated that over 100,000 residents were permanently evacuated because of contamination by Cs-137.The total area of the radiation-control zone is about 10,000 km², in which the contamination level is greater than 15 Ci/km² of Cs-137. [[6]](http://www.inesap.org/sites/default/files/inesap_old/bulletin22/bul22art30.htm#a6) A typical 1 GWe PWR core contains about 80 t fuels. Each year about one third of the core fuel is discharged into the pool. A pool with 15 year storage capacity will hold about 400 t spent fuel. To estimate the Cs-137 inventory in the pool, for example, we assume the Cs137 inventory at shutdown is about 0.1 MCi/tU with a burn-up of 50,000 MWt-day/tU, thus the pool with 400 t of ten year old SNF would hold about 33 MCi Cs-137. [[7]](http://www.inesap.org/sites/default/files/inesap_old/bulletin22/bul22art30.htm#a7) **Assuming a 50-100%** Cs137 **release during a spent fuel fire**, [[8]](http://www.inesap.org/sites/default/files/inesap_old/bulletin22/bul22art30.htm#a8) **the consequence** of the Cs-137 **exceed those of the Chernobyl accident 8-17 times** (2MCi release from Chernobyl). Based on the wedge model, the contaminated land areas can be estimated. [[9]](http://www.inesap.org/sites/default/files/inesap_old/bulletin22/bul22art30.htm#a9) For example, for **a scenario of a 50%** Cs-137 **release** from a 400 t SNF pool, **about 95,000 km²** (as far as 1,350 km) would be contaminated above 15 Ci/km² (as compared to 10,000 km² contaminated area above 15 Ci/km² at Chernobyl). Thus, it is necessary to take security measures to prevent such an event from happening.

\*\*95,000 km2 = 59,000 miles2

If the crippled building of reactor unit 4—with 1,535 fuel rods in the spent fuel pool 100 feet (30 meters) above the ground—collapses, not only will it cause a shutdown of all six reactors but will also affect the common spent fuel pool containing 6,375 fuel rods, located some 50 meters from reactor 4. In both cases the radioactive rods are not protected by a containment vessel; dangerously, they are open to the air. This would certainly cause a global catastrophe like we have never before experienced.

It is important for the public to understand that reactors that have been operating for decades, such as those at the Fukushima-Dai-Ichi site have generated some of the largest concentrations of radioactivity on the planet.

Many of our readers might find it difficult to appreciate the actual meaning of the figure, yet we can grasp what 85 times more Cesium-137 than the Chernobyl would mean. It would destroy the world environment and our civilization. This is not rocket science, nor does it connect to the pugilistic debate over nuclear power plants. This is an issue of human survival.

#### Investments in airport security are modeled by other airlines

Heal 5 (Geoffrey, Graduate School of Business and the School of International and Public Affairs, Columbia University, "IDS Models of Airline Security", April 2005, http://opim-sun.wharton.upenn.edu/risk/downloads/archive/arch146.pdf)

The analysis in this article assumed that the risks faced by the airlines are independent of their own behavior. In reality, if **some airlines are known to be more security conscious than others, they are presumably less likely to be terrorist targets**. In this sense, the problem of investing in security has similarities to the problem of theft protection: **if a house announces that it has installed an alarm, then burglars are likely to turn to other houses as targets** (Kunreuther and Heal 2003). **In the case of airline security, terrorists are more likely to focus on targets that are less well protected**. This is the phenomenon of displacement or substitution, documented in Sandler (2003). Keohane and Zeckhauser (2003) also consider the case of endogenous terrorist risks. In Heal and Kunreuther (2004), we analyze the case of endogenous probabilities for the airline security problem. We show that **an airline is more likely to invest in security when probabilities are endogenous than when these probabilities are exogenous because of the increased likelihood of being a target when others invest in protection.** In addition, if one makes the reasonable assumption that the total externality imposed on any non investing firm decreases as the number of investing firms increases, then **this should lead more firms to invest in protection.** For both these reasons, it should also now be easier for a coalition to tip the other firms into investing in security than if the probabilities were exogenous. Future research should examine how changes in endogenous probabilities affect IDS solutions and the appropriate strategies for improving individual and social welfare.

#### Terrorism turns the economy

Balvanyos 5 (Tunde, Ph.D. and M.S. degrees in civil and environmental engineering from Carnegie Mellon University, Supervising Planner in the San Diego office of Parsons Brinckerhoff, a global infrastructure strategic consulting, planning, engineering and program/construction management organization, "The Economic Implications Of Terrorist Attack On Comercial Aviation In The USA", Sep 4 2005, http://create.usc.edu/assets/pdf/51831.pdf)

The immediate effect of shooting down an airliner would be hundreds of deaths and a cost to the airline of about $1 billion for the aircraft and payments to the survivors of deceased passengers, as well as reduced demand for all air services. Reduction in demand for air services depends on how the government, the media and the general public react to the attack. **An unsuccessful attack could generate** similar **reaction from the public** **resulting in similar losses in transportation and related business. Closing an airport for more than a few days would throw thousands of people out of work and generate losses to the surrounding businesses** and those who depend on the airport and air transport of freight. Closing US airspace immediately after the attack would cause diversion of flights, stranded passengers, and major costs to the airlines and travelers. There are two major components to the economic cost of a successful terrorist attack. The direct cost for the downed aircraft and lives lost would be about $1 billion per aircraft. The indirect cost would result from operating losses to the airlines and loss of consumer welfare as some people would not fly. **These amounts would depend on the length of any interruption in air travel and the public’s long term reaction** to terrorist threat to flying. The indirect economic cost would be greater then the direct cost and would depend on how the government reacts (investing in countermeasures and/or closing airports) and how the public reacts (measured in reduction in travel demand). While the cost of countermeasures and airport closures can be estimated, the main determinant of long term costs, the reaction of the public, is unpredictable. If a terrorist managed to shoot down a large passenger aircraft and this resulted in grounding all aircraft for 2.5 days (as was the case after 9/11), the loss to the economy would be $1 billion per air craft (including compensation for the dead passengers) (RAND), $1.6 billion in reduced airline and associated spending, and $4.75 billion in losses to business and leisure passengers. The total cost of $6.3 billion per 2.5 days (or $2.5 billion per day) makes a ground attack against commercial aircraft a tempting target. There are few areas in the USA where **a lone terrorist with readily available weapons could inflict such a high cost on the economy, and possibly cause widespread terror.**

## Affirmative

### Non-Unique—Airlines Hurting Now

#### Airline industry is structurally unprofitable—will decline inevitably

Seeking Alpha 6/7/12 (“In-Depth Drilldown Of The Airline Industry - Part 1,” Seeking Alpha—An investment advice cite, Accessed online at <http://seekingalpha.com/article/644991-in-depth-drilldown-of-the-airline-industry-part-1>, Accessed on 6/23/12)

The airline industry has long been an unprofitable industry, plagued by nearly every external force surrounding it. The industry is characterized by intense competition, threat of substitution, threat of new entry, and strong buyer/supplier power which lead to dangerously low [profit](http://seekingalpha.com/article/644991-in-depth-drilldown-of-the-airline-industry-part-1) margins. To make things even worse, the airline industry is also adversely affected by volatile fuel prices and economic conditions. Because of the immense complexity of the airline industry, this report is the first of many to help investors truly understand how the airline industry work, and the factors influencing it, to make the best investment decision.

Since 9/11, we've seen tremendous changes surrounding the airline industry: security, regulations, and operational costs. Overall, these variables have had tremendous, and far-bearing, negative impacts on the industry. On November 19, 2001, President Bush passed the Aviation and Transportation Security Act, which established a new Transportation Security Administration ([TSA](http://seekingalpha.com/symbol/tsa)). The most notable, and visible, effect of TSA to consumers has been the intense scrutiny placed on securing personnel and baggage; however, with the increased security measures, airlines claim that the effects have cost them billions in lost ticket revenue. Why? Because the consumer's benefit of using an airline is outweighed by the hours they wait through lines, security, and delays; resulting in consumers utilizing substitute modes of transportation. A research report conducted by the University of Cornell, published in 2005, suggests that the new baggage-screening process has reduced the originating passenger volume by 5% in the industry.

In the past decade, the airline industry has been attacked by economic and regulatory changes, causing many to declare [bankruptcy](http://seekingalpha.com/article/644991-in-depth-drilldown-of-the-airline-industry-part-1), consolidate, or even leave the market. Currently, the airline industry is suffocating from many factors causing mayhem in the market, including:

· - A weak economy and volatile operational costs

· - Excess capacity

· - Low cost carrier competition

In attempts to cope with these factors, we've seen airlines shift towards a "no-frills" approach, allowing airlines to manage their operational costs, transgressing into a lower price-point airfare to compete against low cost carriers like Southwest ([LUV](http://seekingalpha.com/symbol/luv)), JetBlue ([JBLU](http://seekingalpha.com/symbol/jblu)), and Virgin America. Recently, we've also experienced tremendous consolidation, which has been shifting pricing power back to the airlines.

Note: much of the data utilized in this report comes from Airlines for America (A4A), which pools data from 130 U.S. passenger and cargo airlines.

A Weak Economy and Volatile Operational Costs

There are certain sectors of the economy that get hit the hardest, stay injured the longest, and recover the slowest during a recession; the airline industry is one of them

In the past decade, the airline industry has essentially suffered 2 heart attacks and a stroke (two recessions and 9/11). Just after the tech bubble, we entered an economic recession in 2001 which lasted to 2003, but because it "officially" ended in 2003 didn't mean the woes were gone. In fact, airlines experienced consistent, multi-billion dollar losses all throughout 2001-2005. Finally, in 2006 they experienced some short-lived economic profit which reversed itself in 2008 and just recently rose to profitability again in 2010-2011.

Many issues surround the industry, which make themselves blatantly apparent in airline profitability. From 2001-2009, U.S. airlines experienced painful profit margins ranging from -18% to a peak of 11%; with an average of -4.8% throughout the 9 years, and currently at only 0.4% for 2011, with a bad start in Q1 2012. Much of the negative returns are attributable to sharply rising fuel costs and weak economic conditions.

#### Fuel Prices cause inevitable decline

Seeking Alpha 6/7/12 (“In-Depth Drilldown Of The Airline Industry - Part 1,” Seeking Alpha—An investment advice cite, Accessed online at <http://seekingalpha.com/article/644991-in-depth-drilldown-of-the-airline-industry-part-1>, Accessed on 6/23/12)

Fuel Volatility

Historically, labor expense was consistently the airline's largest operational costs, with fuel expense situated as the second largest expense. Last quarter though, for United Continental Airlines, fuel expense composed 36.4% of total operating expenses, up from composing 32.7% of total operating expenses in the same quarter of 2011. Also, fuel costs, as a proportion of total revenues, increased from 32.6% in 2011 to 37.5% in 2012. We did experience a 4.9% increase in revenues, but also experienced a disproportionate 20.9% increase in fuel expenses, largely attributable to increase in fuel prices over the year. The effects of volatile fuel prices are blatantly apparent in its ability to suck out nearly all profitability in airline transportation. We've seen jet fuel prices rise from just $0.74/gal in September 2001 to $2.79/gal this May, representing a 277% increase in an operational cost which used to be historically stable.

#### Cost structure makes Airlines unprofitable

Seeking Alpha 7/6/12 (“In-Depth Drilldown Of The Airline Industry - Part 1,” Seeking Alpha—An investment advice cite, Accessed online at <http://seekingalpha.com/article/644991-in-depth-drilldown-of-the-airline-industry-part-1>, Accessed on 6/23/12)

Weak Economic Conditions

Earlier, I stated how the airline industry experienced two heart attacks and a stroke in the past decade, alluding to the two recessions we've faced and the terrorist attacks of 9/11. The 9/11 attacks also occurred during the economic recession following the tech bubble bust, which led to five years of negative profitability for the industry. During 2006-2007, though, the U.S. airline industry experienced a tremendous boom in profitability, which was again reversed in 2008 due to our financial market collapse. One thing to note, though, is how distinctly different the airline industry's profitability works, opposed to nearly every other industry.

Every business has the following model which defines profitability:

Profit = Revenue - Expenses

which expands to:

Profit = (P\*Q) - (Fixed costs + variable costs)

where P represents profit and Q represents quantity

For almost every business, their largest operational costs come from their variable costs: the inputs required to create an output. Construction companies need labor, Soda companies need ingredients and aluminum cans, and pen manufacturers need ink and plastic. All these companies have fixed expenses, like rent, machinery, and utilities, but the overwhelmingly large expense is attributable to variable input costs. For them, this is beneficial during economic slowdowns because, just by cutting back on production, they can cut back on most of their expenses, minimizing their losses.

Airlines are not like most businesses though. To their unfortunate dismay, an overwhelmingly large proportion of their costs is fixed. Regardless of whether or not the fill an airplane with passengers, airlines will still pay for the aircraft leases, fuel expense, labor costs, and leasing space from airports. It can be argued that airlines don't have to fly unprofitable flights, but there are multiple dynamics which force them to eat the short-term costs to avoid long-lasting, permanent consequences. These dynamics arise from the immense competition between airlines fighting for retaining market share, in an industry where customer loyalty is dismal, at best.

Michael E. Porter's analysis of the airline industry creates a nearly flawless depiction of the 'war' airline companies are fighting on all fronts: limited customer loyalty, extreme competition, strong supplier power, plentiful substitutions, and weak pricing power. In attempts to create customer loyalty, airlines have created frequent flyer programs which reward their consumers with bonuses for being loyal to them. This works well in growing market share if you're the only airline providing this system; however, the frequent flyer program has become an industry standard, utilized by all competitors. This creates a very interesting situation though. It essentially creates a rigid market share between the airline providers, making it less beneficial for customers to jump from one airline to another. It limits the threat of losing market share, which can quickly destroy bottom-line profitability; however, it comes at a very, very steep hidden cost.

The frequent flyer programs help retain market share while the airline is providing frequent and flexible flight times for their customers; however, if flight times are infrequent and inconvenient, customers will be much more willing to use a competitor's services for their flying needs. The effects of this can, and will, become devastating to an airline not providing convenient flight times for their already loyal customers. The hidden cost comes in that airlines are forced to provide frequent and convenient flight schedules, even at unprofitable times in order to retain their market share. They're forced to provide convenience, which, in the short-run, comes at the cost of billions to themselves to prevent long-term effects. During the past decade we've seen intense competition in the airline industry from new competitors, which has led to price undercutting and excess capacity, transgressing to devastating bottom-line profitability.

Going back to the airline industry's profit model, we see that most of their costs are fixed costs, with very negligible variable costs. Airlines are forced to fly frequently and can't change that fact, making the blunt of their operational expenses, like fuel and labor, fixed regardless of how much they can fill their aircrafts; though we've seen an increase in passenger load factor over the decade, leading to increased operational costs. This poses an issue, especially when operational costs are increasing, because the break-even point for profitability becomes more difficult to achieve. To make things worse, a soft economy drives down revenue from both business-side and leisure-side revenue, but when combined with rapidly rising fuel costs, becomes a devastating storm for airline's profitability; directly affecting the top line, and savaging the bottom-line. In 2008, with jet fuel reaching $3.89/gal in June, amid a very weak domestic and global economy resulting from the economic recession, the airline industry experienced a net loss of 23.75 billion (Airlines for America). Although the revenue from the previous year declined only by 2%, the sharp increase in expenses, led to a difference of $31.44 billion in bottom-line profitability during 2007-2008. It's an unfortunate case for airlines during weak economies because they suffer so tremendously; however, if they can hedge their fuel costs and manage their expenses during an economic expansion, they can become very profitable. That's the dynamic of a high-fixed cost structure: during an economic downturn, your losses pile quickly, but during an economic uplift, you reap the benefits of increasing top-line revenues, which has an adversely large effect on bottom-line profitability.

#### Excess capacity prevents profitability

Seeking Alpha 6/7/12 (“In-Depth Drilldown Of The Airline Industry - Part 1,” Seeking Alpha—An investment advice cite, Accessed online at <http://seekingalpha.com/article/644991-in-depth-drilldown-of-the-airline-industry-part-1>, Accessed on 6/23/12)

As consumers, we've all experienced the positive effects of excess capacity, to the detriment of the airlines. Excess capacity derives from underutilized airplanes, leading to intense price competition. Because the marginal variable cost associated to servicing another customer per flight is so low, airlines undercut each other tremendously, leading to fare rates barely even keeping up with inflation. The business model of "supply to everyone, from everywhere" has led airlines to overcrowding airports far beyond their capacity and eventually leading to a decline of bottom-line profitability. I just booked a flight from Newark Liberty International Airport, which is much smaller than giant hubs like LAX, but when I went on Priceline to reserve a seat, I had a choice between 5 different airlines from 41 departing flights, on that day alone; also, remember that Priceline doesn't manage all the airlines in a given airport, undoubtedly meaning there are more departing flights to just one location.

Although we've experienced consolidation recently, the competition is still intense, especially against low cost carriers like Southwest. Because of the intense competition and multiple flights through the same route daily, most aircrafts are underutilized by about 21%, albeit an impressive increase from 70% passenger load factor in 2001 to 78.9% this February. In a time of rising operational costs, we'd expect airlines to pass the costs onto their consumers; however, because of intense competition and strong market forces, this is not the case. Adjusting for inflation, domestic airfares have fallen by 16.4% from 2000-2011. So, although associated operational costs have skyrocketed far beyond the rate of inflation, airfare has declined below the rate of inflation, resulting in a tremendous disadvantage for airlines. With all these forces working against airlines, we've seen multiple airline bankruptcies over the decade, leading to increased consolidation; interestingly too, we've also seen new strategies to cope with these devastating conditions.

Especially in the past decade, we've seen a strong shift in strategies implemented by airlines to maximize bottom-line profitability. The airline industry has increased its passenger load factor utilization of 70% in 2001 to about 78.9% in February, but still leading to a total loss of $1.73 billion in the first quarter of 2012; much in part to America Airlines and rising fuel costs. In part to aggressive steps to minimize excess capacity, we've witnessed the rapid decline of domestic available seat miles operated per $1,000 of real U.S. GDP to about 53 in 2011 (Airlines for America).

#### FAA wrong—airline industry in trouble now

USA Today 11 2/15/2011 (“FAA predicts steady growth for airline industry,” USA Today, Accessed online at <http://travel.usatoday.com/flights/story/2011/02/FAA-predicts-steady-growth-for-airline-industry/43752062/1>, Accessed on 6/2/12)

Some airline industry experts see the government's forecast as overly rosy, given the past decade of massive upheaval in the industry.

"We've got some turbulence ahead of us, there is no doubt about that," says Darryl Jenkins, an airline consultant. "And it's going to be turbulent for another four or five years."

Stung by the [Sept. 11, 2001](http://content.usatoday.com/topics/topic/Events%2Band%2BAwards/September%2B11%2C%2B2001%2Battacks), terrorist attacks, high fuel prices and a sour economy, the airline industry has responded by slashing capacity. Given the huge [debt](http://travel.usatoday.com/flights/story/2011/02/FAA-predicts-steady-growth-for-airline-industry/43752062/1) that the industry carries from years of losses, Jenkins says he does not see a significant expansion any time soon.

"It's a very optimistic long-term outlook in an industry where optimism usually kills you," he says of the FAA's forecast.

Airline delays have fallen significantly since airlines, facing high fuel costs and heavy losses, began reducing flights in 2008. However, officials warn that strained airports in New York, Atlanta and other cities could once again face gridlock if traffic increases to previous levels.

"Only a modernized air transportation system will be able to keep up with our forecasted demand," says FAA Administrator Randy Babbitt.

#### Alt causes to Airline Industry decline—Europe and China

The Economic Times 6/8/12 (Struggling airlines get some relief with cheaper oil,” The Economic Times, Accessed online at <http://articles.economictimes.indiatimes.com/2012-06-08/news/32124147_1_iata-airline-traffic-airline-industry>, Accessed on 6/23/12)

An eight per cent drop in oil prices this year has delivered a quick fix to an industry severely damaged by record [fuel costs](http://economictimes.indiatimes.com/topic/fuel%20costs) - but the main reasons for the drop, Europe's debt crisis and a slowdown in China's economy, cast a shadow over its recovery.

"The reduction in [fuel prices](http://articles.economictimes.indiatimes.com/2012-06-08/news/32124147_1_iata-airline-traffic-airline-industry) is a great thing for the airline industry but they are coming down because of concerns over world economic activity," said Tony Tyler, director general of the [International Air Transport Association](http://economictimes.indiatimes.com/topic/International%20Air%20Transport%20Association) (IATA).

"If the world enters an economic slump, that will be even worse for the industry than the higher fuel price was on its own," said Tyler as heads of most of the world's [airlines](http://economictimes.indiatimes.com/topic/airlines) flew into Beijing for a three-day annual meeting starting on Sunday.

IATA, whose 240 members account for 84 per cent of world air traffic, is expected to leave its overall industry-[profit](http://articles.economictimes.indiatimes.com/2012-06-08/news/32124147_1_iata-airline-traffic-airline-industry) forecast broadly unchanged at the June 10-12 meeting.

But a breakdown of the widely watched forecast is likely to reflect widening regional disparities as Europe's debt crisis shows no signs of abating and trade shifts to the Middle East.

Global airline industry profits halved in 2011 to $7.9 billion and are expected to halve again this year.

In March, IATA predicted global airlines would make a profit of $3 billion in 2012, based on an average Brent crude price of $115. The benchmark North Sea price is now below $100.

Tyler said the latest update would balance eurozone and oil price risks against the positive effect of robust traffic, which rose 7.1 per cent in the first four months of the year. A recent slump in cargo markets has meanwhile bottomed out.

Airline traffic traditionally tracks the wider economy.

POWER SHIFT A surprise interest rate cut by host nation China on Thursday - its first since the global financial crisis of late 2008 - highlighted the meeting's uncertain economic backdrop.

Spain's mounting bank crisis and poor eurozone demand meanwhile hit Europe's shares and single currency on Friday.

"As China slows, that affects everybody. Europe is in a dire state and although traffic there has held up, I think we are coming to an end of that," said Peter Harbison, executive chairman of the Centre for Asia Pacific Aviation.

#### Fuel prices outweigh all other profitable factors

NASDAQ, ’12 (5/4/12, <http://community.nasdaq.com/News/2012-05/airline-industry-stock-outlook-may-2012-industry-outlook.aspx?storyid=139062>, JS)

Fuel Price Rise: Bane or Boon? Airline profit outlook depends on fuel prices, the major variable component in the industry. Escalating fuel prices are making aircraft operations expensive and are changing the sector's overall dynamics. Airlines need to figure out ways to counter rising fuel expenses. High crude oil prices, largely a function of geostrategic forces, are beyond the control of the airlines. We expect crude oil and jet fuel prices to increase this year because of the political tensions in the Persian Gulf, but forecasting this key variable with any level of accuracy has always been extremely challenging (hedging strategies discussed below). While air carriers are contemplating a more effective and enduring way to counter the rising costs, passing on the increased cost to customers in the form of fare hikes seems an easy way out. Airlines imposed about 10 broad fare increases last year, which have all been successful with the rise in travel demand. If demand remains strong and the fuel price continues to rise, then carriers will be able to earn higher through-fare hikes in 2012.

### No Link—HSR Doesn’t Trade Off

#### No tradeoff – rail and airline travel can be complimentary

De Rus, ‘8 (Ginés, University of Las Palmas Spain, “The Economic Effects of High Speed Rail Investment”, JOINT TRANSPORT RESEARCH CENTRE Discussion Paper No. 2008-16, revised October 2008, <http://www.internationaltransportforum.org/jtrc/discussionpapers/dp200816.pdf>, JS)

HSR competes with air and road transport within some very specific distances and it is also considered as a substitute of feeder air services to main hub airports (Banister and Givoni, 2006). In any case, spending public money in the construction of HSR lines has been defended as a socially desirable public investment which produces several types of benefits such as passenger time savings, 1 `The fact is that, almost two centuries after the first train ran, the railways are still a means of transport with major potential, and it is renewal of the railways which is the key to achieving modal rebalance. This will require ambitious measures which do not depend on European regulations alone but must be driven by the stakeholders in the sector´. European Commission (2001a). 2 `Intermodality with rail must produce significant capacity gains by transforming competition between rail and air into complementary between the two modes, with high-speed train connections between cities. We can no longer think of maintaining air links to destinations for where there is a competitive high-speed rail alternative. In this way, capacity could be transferred to routes where no high-speed rail service exists´. European Commission (2001a).De Rus — Discussion Paper 2008-16 revised — © OECD/ITF, 2008 7 increase in comfort, generation of new trips, reduction in congestion and delays in roads and airports, reduction in accidents, reduction in environmental externalities, release of needed capacity in airports and conventional rail lines, and wider economic benefits including the development of the less developed regions. To enumerate the list of the social benefits generated by the HSR, even if some number are associated to the description is as irrelevant as to show how expensive is the new technology. In economic terms, the net balance is what really matters, and this net results cannot be obtained without due consideration of the case base, compared with different `projects´ available for the solution of the `transport problem´ under evaluation. HSR is one alternative whose net benefit has to be compared with those resulting from other actions as the construction or upgrading of a conventional railway line, the construction of new airports or road capacity, or the introduction of congestion pricing, alone or combined with different investment plans.

#### HSR doesn’t compete with long distance air—no link.

Tierney 12 — Sean Tierney, Assistant Professor of Geography at the University of North Texas, holds a Ph.D. in Geography from the University of Denver, 2012 (“High-speed rail, the knowledge economy and the next growth wave,” Journal of Transport Geography, Volume 22, May, Available Online to Subscribing Institutions via ScienceDirect, p. 285-286, JS)

The principal resistance many people have against HSR is that it is a poor use of financial resources because it only fills a tiny niche. For distances under 200 miles, as with the city-pairs listed above, people will drive, while HSR is not competitive with air travel for distances over 800 miles. But these arguments miss the mark. HSR is not designed to compete with long distance air travel (Givoni, [end page 285] 2005) and the fact that HSR will lure away certain short-haul passengers should be viewed favorably by the airlines who are struggling with capacity constraints at the busiest airports (O’Connor, 2003). Nor is it going to eliminate the automobile. Despite the housing crisis, Americans remain enthralled with suburban living. But the country cannot accommodate more unsustainable housing and mobility options. Designed effectively, HSR can fuse our current system of city nodes operating largely independently of (and often in competition with) one another, to foster an era of regional conurbations with overlapping and accessible labor pools.

#### No competition—Chinese HSR proves that cooperation between industries is possible

China Daily 4/24/12 (“Airlines link up with high-speed rail services,” Chinadaily.com, Accessed online at <http://www.chinadaily.com.cn/bizchina/2012-04/24/content_15124568.htm>, Accessed on 6/20/12)

After two years of competing with highspeed rail lines, Chinese airlines are trying to find a mutually beneficial solution for both sides.

On Monday, Hainan Airlines Co Ltd launched a joint operating program with Yuehai Railway CoLtd, which runs the high-speed rail between Haikou and Sanya in Hainan province.

Passengers can buy highspeed rail tickets from Haikou to Sanya when booking tickets on any Hainan Airlines flight to Haikou.

The rail fares will be the same as those offered directly by railways. The airline will eventually sell tickets to other stops on the high-speed rail route.

Hainan Airlines is not the only carrier with such a program.

China Eastern Airlines Co Ltd will start to sell high speed rail tickets at the end of this month.

Tickets in either direction will be offered between Shanghai and four other cities - Suzhou, Wuxi, Changzhou and Ningbo.

Ticket sales for high-speed rail lines will expand gradually within the main cities of Anhui, Jiangsu and Zhejiang provinces and Shanghai, which are under the jurisdiction of the ShanghaiRailway Bureau, said Shen Xiaosheng, deputy director of the [carrier](http://www.chinadaily.com.cn/bizchina/2012-04/24/content_15124568.htm)'s publicity department.

He said fares will fluctuate, but joint tickets will cost less than the total air and rail fares if sold separately.

China's high-speed rail service has been operating for two years and has had a broad, adverse effect on airlines' domestic business.

Areas that are getting high-speed rail service are also the most profitable for airlines. All threemajor State-owned airlines cited high-speed rail service as a factor affecting revenue in theirfinancial reports.

Joint ticketing for airlines and high-speed rail lines could be a way for air carriers to profit fromChina's high-speed rail system, analysts said.

"High-speed rail services heavily affect the [business](http://www.chinadaily.com.cn/bizchina/2012-04/24/content_15124568.htm) of flights of less than 500 kilometers," saidYuan Huifang, deputy general manager of marketing and sales at Hainan Airlines. "But we wantto find a way to cooperate with rail systems."

Yuan said joint ticketing can [help](http://www.chinadaily.com.cn/bizchina/2012-04/24/content_15124568.htm) both sides get more passengers.

#### Airport security investments will be used to develop high-speed rail

Polzin 2 (Steven E., Ph.D., Civil Engineering (Transportation), Northwestern University, M.S.C.E., Urban Systems Engineering, Northwestern UniversityB.S.C.E., Civil and Environmental Engineering, University of Wisconsin, Transit Research Program Director, "Security Considerations In Transportation Planning: A White Paper", http://www.planning.dot.gov/documents/SecurityPapers/SecurityConsiderations\_Polzin.htm

**Post September 11, actions suggest a variety of possible investment needs as a result of increased sensitivity to security risks**. These needs range from near-term initiatives to conduct strategic planning and assessments to supporting enhanced enforcement levels such as those found at airports, to longer-term needs to alter the physical characteristics of individual transportation investments and the system or network of investments. Changes could range from rerouting roadway alignments from sensitive sites to removing trash containers from rail station platforms. Enhancements to ITS technology as a tool to utilize in incident prevention and incident response have been contemplated, and simple design changes to enable additional vehicle inspection queues at border crossings or luggage and passenger scanning capacity at airports may be necessary. Revisiting the capability of our transportation network to handle special vehicles or military equipment in response to incidents or the exploration of modifications in our roadway network to more easily enable mass exodus from an urban area in response to a crisis are among the more complex and expensive strategies that might be pursued. Other major financial obligations could occur if decisions to change the connectivity or range of modal options in our transportation system were to move forward. **Several interests, for example, have proposed major investments in high-speed rail in order to provide an alternative to dependency on air travel for longer distance trips**. Additionally, certain travel behavior changes could result in different demands for transportation by various modes than are currently anticipated. This could result in changes in modal priorities, shifting geographic priorities, changes in project costs due to design or other security related changes, or other shifts in long-range transportation facility and service plans.

### Impact Turn—Emissions

#### Fixing the airport crisis fixes pollution

DRI ‘2 (Global Insight Company, “The National Economic Impact of Civil Aviation”. July. http://www.aia-aerospace.org/stats/resources/DRI-WEFA\_EconomicImpactStudy.pdf)

There are direct costs to passengers as a result of airline congestion delays. This category of costs includes such things as additional meals away from home or, in the case of severe delays, hotel accommodations not reimbursed by the airlines or by an individual's employer. Indirect costs to the individual are incurred as a result of the opportunity cost of time. Given a choice, most passengers would prefer to spend their time engaged in some other activity than waiting either in an airport or onboard a plane. The value of their time in some other activity is the opportunity cost of time. For example, there is value associated with the time an individual spends with family or in some personal activity. For personal travelers, airline delays may disrupt vacation plans and lower the quality of the vacation experience. If personal travelers are visiting friends or family, a delay in arrival imposes costs on those being visited. If personal travelers curtail their travels, then friends and family will also not be able to enjoy their visits. Airline delays impose costs on society. If travelers avoid delays by departing from a less convenient airport, it may increase congestion on roadways and add to air pollution. If airline delays cause travelers to choose less efficient modes of transportation, it may contribute to congestion and increased pollution on intercity/interstate highways. Congestion delays also cause departing flights to burn more fuel than required, which contributes to air pollution. Further, arriving aircraft that are required to remain in a holding pattern due to congestion burn additional fuel and contribute to local air pollution. The International Civil Aviation Organization (ICAO), an arm of the United Nations, considers air traffic system modernization an important policy to reduce aircraft emissions, and the resulting reduction in fuel burn also would positively affect the U.S. trade balance. 23 Finally, airline delays increase the cost of doing business, and these costs are passed on to customers in the form of higher prices, which leads to a decrease in general economic activity and real GDP.

#### Rails are more efficient and solve emissions.

ITF 9 (The International Transport Forum is an inter‐governmental body within the OECD family. The Forum is a global platform for transport policymakers and stakeholders. Its objective is to serve political leaders and a larger public in developing a better understanding of the role of transport in economic growth and the role of transport policy in addressing the social and environmental dimensions of sustainable development. The Forum organises a Conference for Ministers and leading figures from civil society each May in Leipzig, Germany. The members of the Forum are: Albania, Armenia, Australia, Austria, Azerbaijan, Belarus, Belgium, Bosnia‐Herzegovina, Bulgaria, Canada, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, FYROM, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Mexico, Moldova, Montenegro, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom and the United States. The Forum’s Secretariat is located in Paris., http://www.internationaltransportforum.org/jtrc/discussionpapers/DP200907.pdf)

Some policy‐makers in the US and especially in the EU are concerned about the sustainability of prevailing interurban and interregional transport patterns. Road and air transport are perceived to generate excessive emissions of conventional pollutants and greenhouse gases, and the networks are excessively congested at some times and places. Given imperfections in road and air pricing to handle external costs, the provision of rail services is seen as a second‐best policy to increase the net benefits from interurban and interregional transport. For passenger transport, high‐speed rail is seen as sufficiently attractive to change the modal split in these markets. De Rus (2008) questions the general social desirability of high‐speed rail, pointing out that for a generic high‐speed rail connection the benefits are well below the costs, unless rather favourable assumptions are made on demand and costs. The construction of new lines requires a high volume of demand, with enough economic value to compensate the high cost involved in providing capacity. It is not only that the number of passengers must be large, but a high willingness‐to‐pay for the new facility is required as well, i.e. one needs many users who obtain high benefits when switching mode or travelling more. This suggests that careful evaluations of projects are required on a case‐by‐case basis. The benefits from high‐speed rail mainly take the form of time savings compared to other modes, and possibly of congestion relief in competing modes. Environmental benefits are minor27. In fact, the benefits are outweighed by the costs (in particular the high fixed costs), except in cases where there is a high density of demand and there are pressing capacity problems in air and road alternatives28. The French situation was mentioned as one where capacity in aviation was a crucial factor in the assessment of high‐speed rail projects. Some French TGV connections brought about a substantial shift from air to rail29, freeing up scarce capacity (valuable slots) in aviation30. This effect occurs irrespective of whether low‐cost or other carriers might provide service between the cities linked by the high‐speed rail connection. Furthermore, since high‐speed rail uses separate facilities, it can also free up capacity for rail freight and for regional passenger transport. It was noted, however, that in many cases the main (expected) modal shift in response to a high‐speed rail connection is from road to rail, not from air to rail. Low‐cost carriers might respond to the emergence of a high‐speed rail alternative by increasing the frequency of service. A similar improvement on the rail side would be very expensive given the cost of trains, and this would reduce rail’s market share and profitability. In addition, low‐cost carriers can provide services between regions instead of cities (so avoiding the need to acquire expensive slots at centrally located airports). This is effectively what happened after the high‐speed rail service between Paris and London opened. The potential strategic responses from low‐cost carriers reinforce the view that high‐speed rail may be justified where densely populated origin‐destination pairs exist, but is not a general model for interurban and interregional transport. De Rus’ (2008) analysis considers high‐speed rail projects at the level of individual links. In contrast, Adler et al. (2008) analyse a European network of high‐speed rail connections (a 300km/h TEN network and a 160km/h conventional network), where the shape of the network is determined within the analysis. They find that the TEN network produces net benefits (and higher benefits than an all‐air network), at least when access charges are based on short‐run marginal costs (and the train operator maximises profits in a deregulated environment). If rail is required to break even, the network is not worthwhile. Instead, if deficits resulting from short‐run marginal cost pricing are financed from costly public funds, the network passes the cost‐benefit test. The difference between the outcomes of both studies is attributable to network effects and to assumptions on pricing rules and budgetary constraints, and not so much to different assumptions on costs, demand and discounting.

### **Link Turn—HSR Increases Ridership**

#### HSR increases airline passengers

China Daily 12 ("Airlines link up with high-speed rail services, April 24 2012, http://english.sina.com/business/p/2012/0424/461401.html)

**China's high-speed rail service** has been operating for two years and **has had a broad, adverse effect on airlines' domestic business.** Areas that are getting high-speed rail service are also the most profitable for airlines. All three major State-owned airlines cited high-speed rail service as a factor affecting revenue in their financial reports. **Joint ticketing for airlines and high-speed rail lines could be a way for air carriers to profit from China's high-speed rail system**, analysts said. "High-speed rail services heavily affect the business of flights of less than 500 kilometers," said Yuan Huifang, deputy general manager of marketing and sales at Hainan Airlines. "But we want to find a way to cooperate with rail systems." **Yuan said joint ticketing can help both sides** get more passengers. However, it's not easy for airlines and railways to work together. Hainan Airlines took almost one year to prepare for the program, and it was difficult to combine the two different ticketing systems, said Wang Yue, manager of product development at Hainan Airlines. Also, joint operation requires convenient transfers, but few Chinese airports can meet that need. For that reason, Hainan Airlines will promote the program more heavily on international destinations rather than adding more domestic cities, Yuan said. "**I believe more railway stations and airports will be built together for joint operations**," she added.