

GROUNDING

The Devastating Impact of the Pilot Supply Crisis

A growing shortage of qualified airline pilots is forcing the US airline industry to shrink, with debilitating economic consequences for smaller cities and towns. The negative economic impact may equal that of 9/11.

After more than three decades of cut-throat competition, macroeconomic shocks, and the strains of war and terrorism, the US airline industry finally appears to have reached a period of profitability and sustainability, with calendar year 2014 forecast to yield record revenues and incomes. A healthy airline industry benefits not only employees and investors, but also the wider economy. Commercial aviation is an essential centerpiece of our national infrastructure, catalyzing economic growth and linking our cities and towns to an international web of commerce where connectivity, accessibility, and timely movement of people and goods is the bare minimum for growth and competitiveness. There is an indisputable relationship between air transportation and economic development. According to the Federal Aviation Administration (FAA), the direct and indirect economic activity resulting from commercial aviation in the US exceeds \$1 trillion annually, roughly 5% of US GDP.¹ Unfortunately, the stability of the airline industry, and the large economic benefits that it generates, are currently threatened by a growing shortage of available, qualified, and interested pilots.

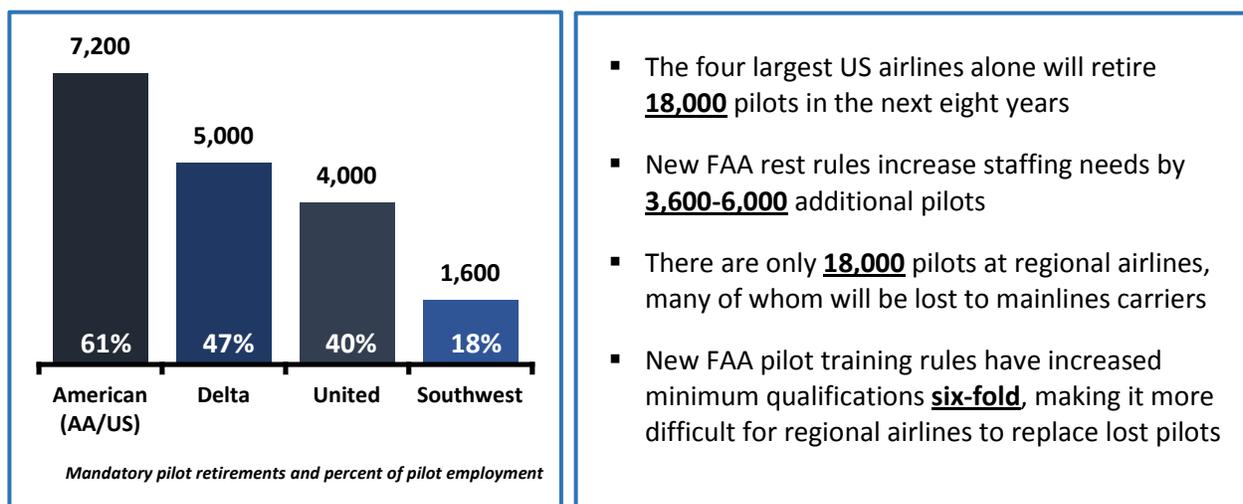
The Pilot Supply Issue

Over the past year, discussions about the US pilot supply have moved from abstract academic theory to blunt and painful reality. Here is the new reality, which is now self-evident: the US airline industry is reducing service to cities and towns across the country, due increasingly to the low availability of suitable pilots willing and able to work in lower-paying regional airline jobs. Recently, Great Lakes Airlines and Silver Airways – two small US regional carriers – were forced to cancel service to eleven towns due to a shortage of pilots. United Airlines also recently announced the closure of the company’s hub in Cleveland, which the company claimed was based in large part on a shortage of pilots at United’s regional partners.

Where did these pilots go? They didn’t simply disappear or walk off the job. Many certainly sought employment at larger, higher-paying network carriers like Delta, American, and United – all of which are hiring new pilots in an attempt to replace their existing pilots, who are retiring at an unprecedented rate. Over the next eight years, the largest network carriers will retire approximately 50% of their pilots, resulting in a hiring frenzy that will extract pilots currently flying in the cockpits of lower-paid regional airline affiliates. With massive employee turnover as the new norm, where will all the regional “express” affiliates of the mainline carriers find sufficient replacement pilots to operate their aircraft and provide essential air transportation to smaller cities and towns? Therein lies the problem.

The pilot supply problem is not purely a case of demographics. It is also a function of long-term structural change in the industry and important regulatory mandates. Beginning in August 2013, all airline pilots – subject to certain exemptions established by the FAA in consultation with the industry – must have a minimum of 1,500 flight hours in the cockpit before serving as a first officer on a commercial airline. The intent of this law is to mitigate perceived safety issues, and the merits of it have been debated and discussed at length elsewhere. Regardless of its merits, the 1,500 hour rule – which is a six-fold increase over the previous 250 hour minimum – has the effect of constricting and elongating the supply “pipeline” of much-needed airline pilots. To understand this dynamic, one has to appreciate that student pilots spend years building experience and flight time. Some earn their initial private pilot license but do not aspire to enter careers as commercial airline pilots. Others build time in the cockpit by teaching other student pilots. However, due to long-term changes in general aviation and commercial aviation, the opportunities to build time are now either expensive, scarce, or both. Recreational flying opportunities have been hit hard by high fuel prices. Compared to the early 1990s, the US is producing 60% fewer private pilots yearly.² Similarly, paid opportunities for low-time professional pilots have diminished as the demand for aerial photography, air surveys, overnight check clearing, and other services has waned. The net result is a longer and more costly training period for new pilots, and a smaller pool of technically qualified pilots for the airline industry.

Figure 1: Mandatory Pilot Retirements at the Largest US Airlines



Unfortunately, the pilot supply problem is likely to get worse before it gets better. Based on our research, we believe it is highly unlikely that the US airline industry can avoid the problem entirely. However, the largest impacts are still several years away and the pilot supply problem can and should be mitigated to the extent possible. It is time to shift our response to this problem into high gear, time to move away from theoretical discussions, and time to develop concrete plans and take action.

Economic Impact

Solutions to the pilot supply problem must be considered immediately to mitigate the massive economic impact a shortage will cause. For context, consider the approximate economic footprint of the US airline industry: according to one study, US airlines are responsible for transporting nearly 800 million passengers and 23 million tons of cargo annually while providing as many 10 million indirect jobs.³ As events in early 2014 have already proven, a pilot shortage among regional airlines is undermining service to smaller communities.⁴ And although recent events are troubling, they are just the tip of the iceberg, the beginning of what is likely to be a lengthy systemic problem.

Figure 2: Lost Airline Revenue (\$ Billions)

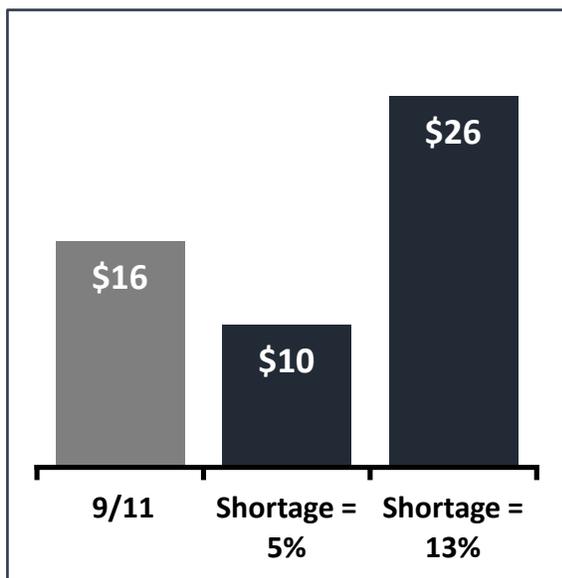
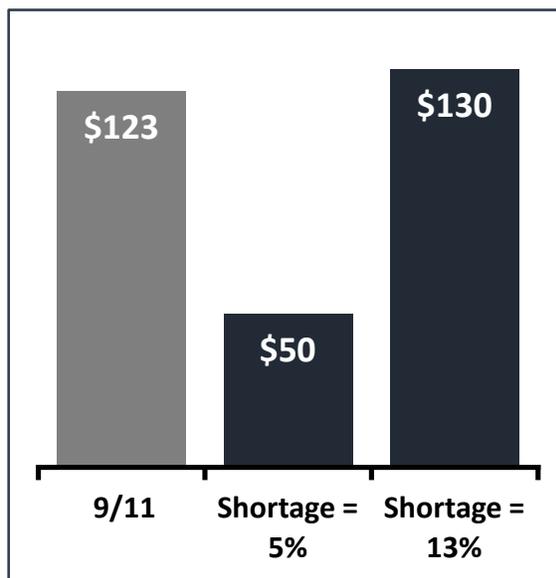


Figure 3: Economic Impact (\$ Billions)

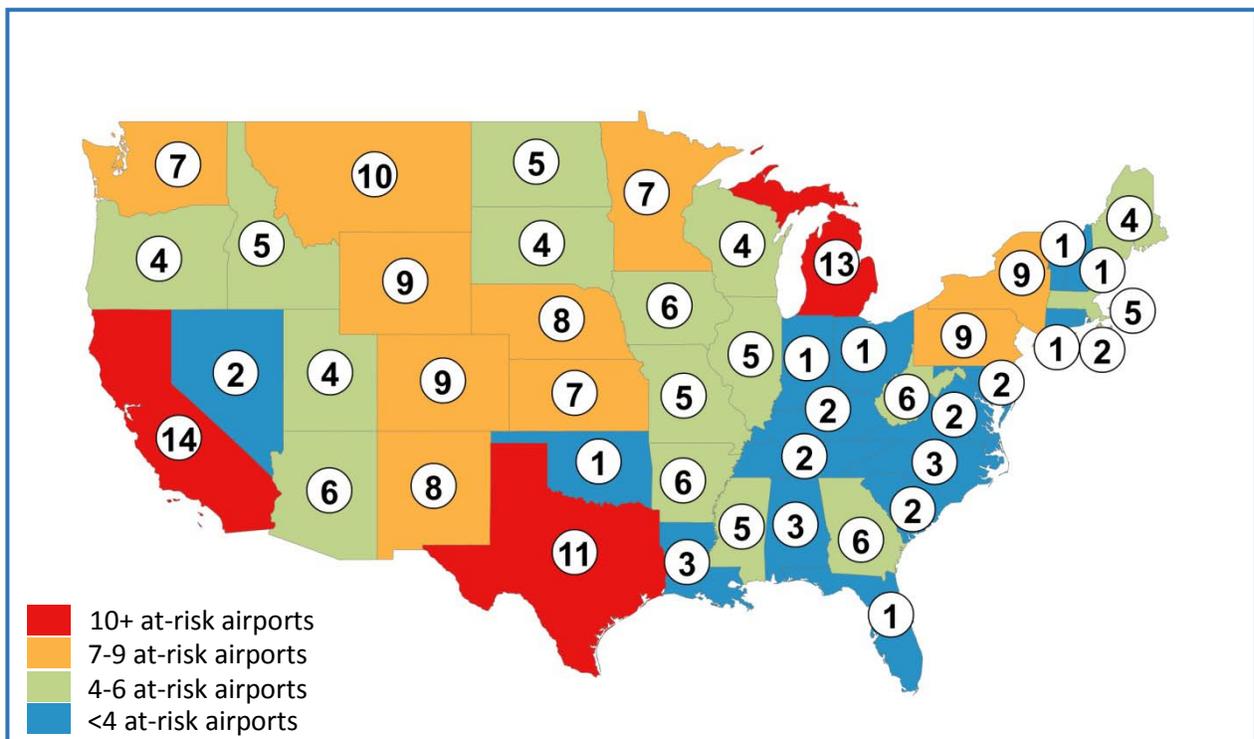


Based on our estimates, in the next ten years US airlines will be likely unable to fill between 5% and 13% of cockpit jobs – equal to a shortfall of 4,000 to 10,000 qualified pilots. At that rate, the annual loss of revenue to the industry may approach \$10 to \$26 billion, and eliminate as much as \$50 to \$130 billion in total annual economic activity.⁵ The resulting contraction of service has the potential to match or exceed the economic impact of 9/11, estimated at \$16 billion annually on the US airline industry and \$123 billion in lost economic activity.^{6,7} Unlike 9/11, however, there will be no single dramatic event to blame or foreign enemy to assail. Indeed, many people may not even recognize the root cause of the problem as they pay higher fares, lose travel opportunities, and face a long steady and slow erosion of economic opportunities.

Disproportionate Impact on Smaller Communities

Importantly, air transportation links communities large and small to the global economy and allows local businesses to compete and grow. When air service is withdrawn or curtailed, companies relocate and local economies frequently lose jobs, tax revenue, and economic vitality.⁸ As the pilot shortage evolves, the impact on air service to smaller cities and communities will be disproportionately high. As pilot retirements accelerate at US network airlines, regional carriers that serve smaller markets will struggle to find and retain qualified replacement pilots. As a result, service in smaller markets will be curtailed or wholly eliminated based on the limited availability of pilots. In the wake of US airline bankruptcies and restructurings, regional airlines now operate roughly 40% of US scheduled domestic passengers flights. There are several hundred US airports that are wholly reliant on air service supplied exclusively by small regional airlines operating either on their own or as subcontractors to the major network airlines. Immediate steps must be taken to mitigate or offset the reduction of service to these communities, as well as the downstream economic impact.

Figure 4: Number and Location of At-Risk Airports in the Continental US



Based on analysis we completed as part of our ***Airport Risk Report***, there are 239 at-risk airports distributed across the country. We have analyzed pilot compensation and availability, traffic trends, fare levels, network connectivity, and other factors to identify and assess specific risks to air service at these airports. Figure 4 provides a summary total of “at risk” airports by state. Collectively, these airports account for \$2.1 billion in domestic airline revenues, and are located in communities which comprise over 10% of the US population and 7% of US GDP. The impacts of the pilot shortage are real and will effect real people in real communities such as: Bakersfield, CA (BFL); Toledo, OH (TOL); Lansing, MI (LAN); Montgomery, AL (MGM); Lincoln, NE (LNK); Waco, TX (ACT); and Champaign-Urbana, IL (CMI), among many others. We invite you to visit www.flightpath-economics.com for further information.

Coordinated Action Will Mitigate the Crisis

The growing US pilot shortage is a function of multiple root causes. Mitigation of the problem will require intelligent solutions that fix multiple components in a complex and integrated system. Addressing single portions of the system will not fix the whole, nor will it be sufficient to rely on market mechanisms alone. However, with the right mix of timely cooperation, investment, and regulatory relief, a solution to the pilot supply problem is clearly within reach.

The massive wave of pilot retirements at major US airlines is creating unprecedented demand for skilled and experienced aviators. Unlike air carriers in many other countries, airlines in the US have historically relied almost exclusively on self-funded student pilots and military training to provide the industry with trained and qualified cockpit personnel. Airline restructuring in the wake of 9/11 returned the industry to health, but also diminished the attractiveness of pilot careers. Carrier bankruptcies resulted in massive pilot furloughs, lower pay and benefits, and diminished job security. Recent changes to FAA regulations have further eroded the attractiveness of the profession; these same regulations are also hamstringing our nation’s ability to produce sufficient numbers of qualified professional pilots. Pilot training and time-building is simply too costly and too time consuming to make financial sense to prospective candidates in the current system. Although higher entry-level pay in the long run will likely be part of a long-term solution, relying exclusively on higher pay to attract enough new aspiring airline pilots is not a viable solution in the near and medium term. It takes years to train and accumulate the minimum flight hours required to become a pilot, and there simply is not enough time to avoid a major problem.

An integrated solution to the pilot supply problem will require broad agreement and cooperation between multiple facets of the aviation industry, including network airlines, regional airline partners, trade associations, labor groups, airports, government, and local communities. Major airlines and their regional airline partners should find common ground and share the costs, risks, and benefits of training new pilots. Recent regulatory changes to pilot minimum hours should be weighed against the cost of lost economic activity and business disruption that will result from reductions in air service to airports across the country. The loss of air service and economic activity are far more expensive than the cost of the solutions that would mitigate the problem and ensure an adequate supply of pilots. It’s time to seek solutions, formulate a plan for dealing with this crisis, and implement that plan before the list of affected communities, lost jobs, and economic damage grows larger.

Visit us at www.flightpath-economics.com to join the effort and be part of the solution.

About the Authors

Dan Akins is an aviation economist with thirty years of experience consulting in the commercial airline industry. He has worked extensively on behalf of a number of passenger and cargo air carriers, and has been heavily involved as an analyst, Unsecured Creditors' Committee advisor, and expert witness in recent airline restructurings including: American, United, Northwest, US Airways, Pinnacle, Mesaba, Hawaiian, Aloha, and Global Aviation. Dan's other engagements include numerous pilot contract negotiations, as well as pilot seniority integrations resulting from the mergers of United/Continental, Delta/Northwest, Southwest/AirTran, US Airways/America West, and Northwest/Republic, among several others. Dan started his aviation career in Washington as a financial analyst with the Air Line Pilots Association. He is a graduate of the London School of Economics where he specialized in Transport Economics.

Matt Barton is a consultant and economist in the aviation industry. He served as a financial advisor to creditors and other stakeholders in the bankruptcies of United Airlines, American Airlines, and Sun Country Airlines. He participated directly in the business and network restructuring of China Southern, Shenzhen Airlines, and Cebu Pacific Air. Matt co-authored an early market development study for Mitsubishi Heavy Industries' regional jet, and was part of the startup team for a new airline that continues to operate small regional jets. Earlier in his career, Matt worked for US Airways, where he was responsible for pricing new international routes between the US and Europe. He holds an MBA from London Business School and a BA from the University of California.

¹ Federal Aviation Administration, "The Impact of Civil Aviation on the US Economy", August 2011.

² Based on an analysis of FAA pilot data specific to US citizens.

³ Oxford Economics, "Economic benefits from Air Transport in the US", 2011.

⁴ Great Lakes Airlines, Republic Airlines, Silver Airways, and United Airlines Press Releases, February 2014.

⁵ Estimates based on 5% - 13% of annual industry revenue of \$200 billion, and total direct and indirect annual economic activity of \$1 trillion.

⁶ New York Times, "9/11: The Reckoning", September 8, 2011.

⁷ IATA, "The Impact of September 11 2011 on Aviation" 2011.

⁸ Companies often make site selection decisions in part on the basis air service availability. To offer one of many examples, in 2008 AT&T moved its headquarters to Dallas from San Antonio, citing air service as one factor in the decision. "AT&T Corporate Headquarters to Move to Dallas" AT&T Press Release, June 27, 2008. <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=25882>