

POINT OF VIEW

The Unfinished Business of Transportation Deregulation

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Although deregulation dismantled the direct controls on prices and market entry in the domestic airline, trucking, and rail industries, it left other economic restrictions in place. In view of the successes of deregulation, additional market-based reforms have been proposed. This article looks at a handful of possible next steps advocated by economists, whose foundational research was essential to the enactment of deregulation 40 years ago.

Aviation Infrastructure

Aviation infrastructure—runways and airways—has long been at the top of the deregulatory to-do list for economists. In March 1978, six months before Congress passed the Airline Deregulation Act, Civil Aeronautics Board (CAB) chair Alfred Kahn spoke to senior staff at the Federal Aviation Administration (FAA), which operated the air traffic control system and set policy governing airport rates and operation. He cautioned that deregulation would unleash enormous demand for air travel and urged FAA to free up additional infrastructure supply to limit flight delays.



PHOTO: EDDIE MALONEY, FLICKR

Airplanes queue for takeoff at Las Vegas's McCarran International Airport. Concerns about deregulation included insufficient infrastructure to prevent flight delays.

A charismatic Cornell University professor who literally wrote the book on the economics of regulation, Kahn urged FAA to abandon landing fees based on aircraft weight in favor of congestion pricing of runways. He rejected FAA's counterproposal that the CAB intervene to forestall delays, for example,



PHOTO: PEXABAY

Deregulation across industries has freed control on prices and markets, but some economists are exploring further reform.

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Expanding infrastructure, replacing weight fees with congestion pricing, and including efficient-airways fares are among proposed ways to reduce flight delays.

by controlling airline scheduling or allowing the carriers to get together to regulate their own schedules.

“At a time when we at the CAB are trying to restore economic rationality to this industry [by placing] increasing reliance on the competitive market to allocate scarce resources, we are not about to [embrace nonmarket] controls in order to solve the problem of limited airport space inefficiently,” Kahn explained.

FAA did not act on Kahn’s recommendation—which he later expanded to include efficient airways pricing—and flight delays remained a

major problem. A rigorous study conducted for FAA found that in 2007, U.S. flight delays imposed \$33 billion in direct costs, including added costs to airlines for fuel, crew time, and aircraft utilization; lost passenger time; and lost demand, or welfare loss incurred by passengers who avoided air travel because of delays (1).

Structural Air Traffic Control Reform

In recent decades, proposals to address flight delays have focused on structural reform of the air traffic control (ATC) system, a network of radar, navigation aids, and approximately 35,000 controllers and engineers whose job it is to keep planes at a safe distance from one another. FAA operates the system and regulates the safety of all aspects of civil aviation, including the ATC system itself. Reform proposals typically call for 1) moving the operational function out of FAA, and even out of the government, and 2) replacing the existing funding system—largely an *ad valorem* tax on passenger tickets—with cost-based user fees on commercial aircraft operators.

The argument for structural reform is twofold: first, ATC is not an inherently governmental function. Although keeping planes safely separated is a complex and critical task, it is a purely operational process that, like running an airline or building a Boeing 787, can be performed effectively by a non-governmental entity as long as it is subject to oversight by safety regulators.

Second, precisely because ATC is operational in



PHOTO: NATS UK AIR TRAFFIC CONTROL, PHOTOSTREAM, FLICKR

nature, the government faces serious challenges running it. Many blue-ribbon commissions and expert panels have concluded that ATC is a 24/7, technology-intensive service business housed in a regulatory agency that is constrained by federal budget rules, burdened by a poorly designed funding mechanism, and micromanaged by Congress and the Office of Management and Budget.

To reform advocates, the clearest evidence of a problem is FAA's long-running struggle to deploy new technology. Controllers still rely on 1950s-era radar technology to space planes, and they communicate with pilots by voice radio rather than by digital signals like texting. Antiquated technology contributes to flight delays and is part of the reason that the cost for FAA to handle a flight has increased by two-thirds since 1996.

Defenders of the current system point to FAA's Next Generation modernization program (NextGen), which is gradually introducing improved technology. However, a 2015 report by a National Academy of Sciences, Engineering, and Medicine panel criticized the program as being too incremental, concluding that the term "NextGen" has become a misnomer" (2).

Although over the past 30 years many industrial countries have spun off ATC to some type of nonprofit corporate entity, efforts to corporatize have failed repeatedly in the United States. The Clinton administration's 1995 plan to create a self-supporting government corporation to provide air traffic services failed to attract congressional support. Last year, the U.S. House Transportation and Infrastructure Committee approved legislation to move ATC to a private, nonprofit corporation modeled after Canada's ATC provider, Nav Canada; however, the bill was ultimately withdrawn from floor consideration.

As in 1995, the main opposition to recent ATC reform came from private pilots (general aviation, or GA) and business jet owners, who pay a *de minimis* fuel tax to use the system. Private pilots worried they would be subjected to user fees, and the business aviation industry, which accounts for 10–12 percent of air traffic operations, feared that its payments would increase significantly. Many small airports also shared GA's concern about continued access to national airspace under a more businesslike ATC operator. Although the House bill, like the 1995 Clinton plan, claimed to hold GA and business aviation harmless, the two groups remained staunchly opposed.

Efficient Pricing of Airport Runways

Chronic flight delays also reflect misallocation of scarce airport capacity. To address this problem, economists have long argued that congested airports should adopt



PHOTO: DAVID, FLICKR

marginal cost pricing of runway capacity.¹

Local airports set landing fees based on an aircraft's weight, subject to guidelines issued by FAA. At most airports, individual airlines decide how many flights to schedule and when and are limited only by airport gate capacity. At a handful of highly congested airports, FAA has capped the number of flights and assigned landing slots to individual carriers. When demand exceeds runway capacity, FAA air traffic controllers generally accommodate flights on a first-come, first-served basis.

Because weight-based fees do not account for delay costs, they offer little incentive for airport users to shift flight activity to off-peak hours or to less-congested airports. In contrast, marginal cost pricing of runways—which can take the form of congestion, or time-variant, pricing or allocation of takeoff and landing slots via auction—ensures that scarce capacity goes to the users who value it most. Steven Morrison and Clifford Winston have estimated that marginal cost pricing of runways alone—even without the construction of any additional runways—would produce \$(2005)6 billion in annual net benefits, largely from reduced passenger delays (3). In addition, airports may use the revenue from such a pricing scheme to address underlying capacity shortage.

In 2008, the U.S. Department of Transportation issued new policy guidance that makes it permissible for airports to institute a limited form of congestion pricing, but no airport has taken advantage of the new authority yet. One reason may be that congested airports often are dominated by a single carrier. In theory, the dominant carrier already is

Reagan National Airport in Washington, D.C., is one of a handful of highly congested airports FAA has slot controlled, capping scheduled take-offs and landings.

¹ See, for example, *Special Report 255: Entry and Competition in the U.S. Airline Industry—Issues and Opportunities*, 1999.

Many European airports, including Nice Côte d'Azur Airport in France, are privately owned. Most U.S. airports remain publicly or government-owned.



PHOTO: LA FRANCE, WIKIMEDIA

internalizing some if not much of the delay cost, thus reducing the beneficial effect of marginal cost pricing on delays.

More importantly, congested airports have not imposed marginal cost pricing because many of their airline customers oppose it. Air carriers currently capture “rents” from scarce runway capacity by charging passengers higher fares to travel at peak periods. Congestion pricing would shift some of those scarcity rents to the airport.

In 2008, with flight delays reaching record levels and new entrant carriers unable to secure slots, the George W. Bush administration worked with the nation’s leading auction experts on a plan to auction slots at the three major airports that serve New York City—John F. Kennedy, LaGuardia, and Newark Liberty. The effort drew fierce opposition from the slot-holding airlines, however, and at the eleventh hour, a federal court blocked the auction on procedural grounds.

FAA Airport Privatization Pilot Program

Although many airports in United States initially were privately owned, because of federal policy almost all U.S. airports now are owned by state and local governments or by public airport authorities (4). In recent years, many airports in Europe, Asia, Latin America, and elsewhere have been privatized, with the government leasing the facility long term or selling a majority or minority interest to a private entity. In contrast, the United States has seen little interest in airport privatization.

The key reason for this lack of interest in airport privatization is the U.S. municipal bond market: state and local governments can issue tax-exempt bonds for investments in public airports, whereas private airports would have to rely on taxable bonds. In addition, FAA historically made privatization financially unattractive. For example, any FAA grants to the formerly public airport had to be repaid and revenue from the lease reinvested in

the airport rather than used to capitalize nonairport infrastructure.

In 1996, Congress created the FAA Airport Privatization Pilot Program (APPP), which removed the major financial disincentives to privatization. The program has had few takers, however, in part because to participate an airport must get the approval of a supermajority of the carriers it serves. The prospect of losing access to tax-exempt bonds also remains a deterrent.

Economists and others are divided as to whether the federal government should do more to promote airport privatization. Supporters argue that U.S. airports often behave more like risk-averse or politicized bureaucracies than customer-oriented businesses. In this view, a commercial operator would have an incentive to price runway capacity more efficiently; make efficient investments in terminals and runways to reduce delays; and allow access to any carrier that is willing to pay the cost of using its facilities, increasing competition in air services (3).

On the other side of the debate, privatization skeptics worry a private operator could abuse the monopoly power that many local airports possess—a concern that airlines share. Skeptics believe that greater transparency can address the key problems facing publicly run airports by reducing the role of politics in decisions that should be made on business grounds.

One modest step could be for Congress to remove restrictions that undercut APPP. The White House’s infrastructure plan, presented in February, proposes to reduce the approval requirement to a simple majority of airlines and would remove any limitation on the number of airports that can participate in the program (the program is currently limited to 10 airports, only one of which can be a large hub airport).

The changes to tax financing of airports proposed in the White House’s infrastructure plan represent a more controversial step. These changes would 1) allow private airport developers to issue tax-exempt private activity bonds, as now is permissible for highway toll projects, and 2) preserve the tax-exempt status of existing bonds when a private entity buys or leases an airport from a government owner (5).

Restrictions on Foreign Ownership and Control

By forcing U.S. airlines to become more efficient domestically, deregulation also positioned them to be more competitive internationally. Capitalizing on that advantage, in the late 1970s the U.S. government began negotiating away bilateral restrictions

on where and how often international carriers can fly, resulting in lower fares and vastly expanded air service. In 2007, the U.S. government and the European Commission agreed to extend “open skies” to all European Union (EU) members—a deal that was worth several billion dollars per year to consumers and that put pressure on other regions to follow suit.

Despite these changes, restrictions remain; most significantly, the combination of U.S. law and the nationality clause in bilateral air services agreements limit the ability of a foreign entity to own or control a U.S. airline. For example, the British entrepreneur Richard Branson had to give up control of Virgin America to operate it in the United States. As evidence of that lack of control, Virgin America now is owned by Alaska Airlines, the result of a merger that Branson did not support.

In the United States, the major objection to proposals relaxing the restrictions on foreign ownership and control has been that it would hurt American workers. Pilots in particular fear that a foreign carrier could seek control to shift lucrative, long-haul international flying to its own operations, thereby eliminating the jobs of the highest-paid U.S. pilots. A 2002 study of an EU–US Open Aviation Area concluded, however, that the potential for direct labor substitution was limited. This was partially because of the extraordinary bargaining leverage that U.S. pilots—who have a monopoly on domestic flying under U.S. immigration law—can exercise regarding international flying (6).

In the past, some officials in the U.S. Department of Defense (DOD) also defended ownership and control restrictions. DOD has legal and economic leverage over U.S.-owned carriers, which is key to its ability to mobilize commercial aircraft in a military emergency. For business and legal reasons, however, a foreign purchaser of a U.S. airline would have no choice but to incorporate in the United States, just like any other foreign entity that engages in U.S. domestic commerce. Therefore, DOD would retain the same legal and economic leverage over a foreign-owned, U.S.-based carrier that it has over a U.S.-owned carrier.

Nor are restrictions on foreign ownership and control necessary to prevent the purchase of a U.S. airline by, say, Russia’s Aeroflot. Under the 1988 Exon–Florio amendment to the U.S. Defense Production Act, the President can block or restrict any foreign acquisition of a U.S. company if the transaction threatens to impair national security (7).

Surface Transportation

As with airlines, trucking deregulation unleashed enormous demand for services, and that growth in



PHOTO: BILL LARKINS, WIKIMEDIA

truck traffic has contributed to—and been adversely affected by—the significant increase in congestion on this country’s road network over the past 40 years. Traffic congestion imposes large and growing costs on the trucking industry. Winston estimates the cost at nearly \$15 billion per year, based on a 2006 study (8).

More broadly, rush-hour congestion is one of the most serious urban problems this country faces. According to a 2008 estimate by Robert W. Crandall, a reduction in the commuting times of one-third of the U.S. population by just 10 percent would be worth \$8.7 billion nationwide (9).

Like runways and airways, roads are a scarce resource that economists believe should be rationed by price; that is, a user should pay an amount equal to the marginal cost they impose through damage to the road, environmental damage, increased accident risk, and increased congestion. The government offers most roads at a price of zero, even during peak periods, and this absence of efficient charges represents a form of economic, or price, regulation.

Because foreign entities cannot legally own or control U.S. airlines, Richard Branson of Virgin Airlines was required to give up control of Virgin America.

The growth in truck freight brought about by deregulation has contributed to traffic congestion.



PHOTO: WASHINGTON DOT, FLICKR



PHOTO: MARIO ROBERTO DURAN ORTIZ, WIKIMEDIA

Some U.S. cities are contemplating the use of congestion zone pricing, as was instituted in London in 2003.

The country's highway network is funded largely by a per-gallon fuel tax. Although such a tax, set appropriately, can internalize environmental externalities, it is a less-useful proxy for congestion externalities and the other costs of road use. As cars and trucks become more fuel-efficient and electric vehicles more prevalent, a per-gallon fuel tax is less effective at raising adequate revenue.

Some states have begun to ration capacity on urban highways using toll lanes, some of which incorporate dynamic pricing. New York City is debating the imposition of steep charges on vehicles that enter a designated congestion zone during peak travel periods—an approach that London; Stockholm, Sweden; and Singapore have embraced successfully (10). Although toll roads and congestion pricing no longer are the political third rail they once were—perhaps the use of surge pricing by Uber and Lyft helped to educate consumers—they remain very unpopular.

Many economists favor replacement of the per-gallon fuel tax with a per-mile charge—also known as a vehicle miles traveled (VMT) charge—that reflects the actual cost of driving on all roads. Oregon was the first state to pilot a VMT system.

Although technology was a constraint in the past, modern cars are equivalent to smartphones. Robert Atkinson, who cochaired the National Surface Transportation Infrastructure Financing Commission a decade ago, envisions a VMT system in which every road segment is electronically coded to indicate its usage price by time of day and the designated payee. Externalities could be priced on a granular

level—for example, gas-guzzling vehicles could pay a higher per-mile rate—and value-added services and apps could be layered onto the VMT platform.

The Reason Foundation's Robert Poole, who originated the concept of high-occupancy toll lanes and is a longtime advocate of a VMT system, now calls for the additional step of highway privatization. According to Poole, highways are another category of network utility, like electricity, water, telecommunications, and natural gas. He argues that, like those utilities, highways could be organized as companies that sell services to customers, including investor-owned companies, government toll agencies, and nonprofit user cooperatives (11).

Although some of these approaches are more controversial than others, all of them face major implementation challenges. The lively debate over road pricing is certain to continue.

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