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After Airline Deregulation and Alfred E. Kahn

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Among Alfred E "Fred" Kahn's many accomplishments, none is better remembered than his pivotal role in deregulation of the U.S. airline industry. Kahn's commitment to core microeconomic principles married to institutional analysis, willingness as chairman of the Civil Aeronautics Board to step outside the "regulation as usual box," and appealing wit made him the face of the Airline Deregulation Act of 1978, one of the great modern triumphs of microeconomic policy. Lessons drawn from Kahn's work and the airline experience remain instructive for current academic research and policy design across broad sectors of the economy.

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> *I begin by baldly stating my essential conviction: airline deregulation has been a nearly unqualified success, despite the industry's unusual vulnerability to recessions, acts of terrorism, and war.* (Kahn, 2004, p. 3)

Alfred E. "Fred" Kahn, is widely remembered as "The Father of Airline Deregulation." Though he consistently redistributed credit for the reform (e.g., Kahn, 2008), Kahn's directness, wit, and willingness as chairman of the Civil Aeronautics Board to step outside the "regulation as usual box" established him as the face at its forefront. This legacy is enormous: The 1978 Airline Deregulation Act may well be one of the greatest microeconomic policy accomplishments of the past fifty years (Bailey, 2010). The policy is notable in itself. It was the first dismantling of an economic regulatory apparatus, and one of the only instances that included abolition of the relevant regulatory agency. Deregulation dramatically transformed the airline industry. The post-deregulation U.S. airline industry saw lower average fares; greater numbers of flights, nonstop destinations, and passengers; dramatically different network structures; and increased productivity (e.g., Borenstein and Rose, 2008). But its compelling demonstration of the benefits of replacing regulation with competition also advanced a broader reform agenda, both in the U.S. and abroad. "Without airline deregulation,…we probably would not have been able … to deregulate trucking, railroads, and buses, or continue along the same path with other major industries" (Kahn, 1988a, p. 22).

The history and politics of airline deregulation and the economic assessments of its impact have been exhaustively analyzed and summarized elsewhere.[1] This paper instead highlights a handful of lessons that Fred Kahn and the experience of the deregulated airline industry impart for students and practitioners of economic regulation—lessons that apply well beyond the reach of the airline sector. Given the perceived failures of "deregulation" in the post-2008 financial crisis world, some may prove especially timely.

I. Regulating Well is Hard

The Economics of Regulation: Principles and Institutions (Kahn, 1970, 1971) remains a relevant, masterful assessment of the theory

[1] With apologies to authors thus referenced only indirectly, the papers cited in Borenstein and Rose (2008) may provide interested readers with an entry point to this literature.

and practice of economic regulation. Airline regulation garnered a relatively brief discussion in this work, perhaps contributing to Kahn's initial rejection of the CAB chair, arguing he should switch places with "whoever might be named to the chairmanship of the Federal Communications Commission…[as he] can't possibly know less than I about the airline industry" (Kahn, 2008 at 619). Notwithstanding that disavowal, Kahn's mastery of regulatory principles and challenges gave him the confidence, after a brief immersion in the role as CAB chairman, to push the agency toward deregulation. Insights particularly relevant for effective regulation today include:

i) Regulation is information-intensive

Economic regulation frequently substitutes regulators' judgment for firm decision-making and impedes the ability of markets to provide feedback on that judgment. But even well-informed regulators typically know much less than firms do about efficient choices. Theoretical models highlight the implications of asymmetric information for regulatory price determination (e.g., Laffont and Tirole, 1993), but even prices may not be the most complex decisions regulators face. For example, CAB entry awards at the route level de facto determined airline network structure. As Kahn recalled:

> *I said, "If I knew what was the most efficient configuration of routes in the airline system, then I could continue to regulate. But since I can't tell you whether it's going to be a Delta kind of operation or ...more like the Eastern shuttle or Southwest Airlines it doesn't make sense to leave it to an ignorant person like me to tell airlines how they can best configure their routes."* (Public Broadcasting System (PBS), 2000).

ii) Incentives matter

Firms respond to regulatory incentives, even when regulators may not clearly understand what those are. The CAB in the 1960s and 1970s was caught in a spiral of ratcheting up prices to chase lower load factors, failing at each point to realize the intended higher rates of return for the industry. With regulated prices fixed substantially above marginal costs, carriers could increase profits by competing for passengers on nonprice dimensions, from larger, faster aircraft and more frequent flights, to designer flight attendant uniforms and piano bars. And so they competed. As Kahn trenchantly noted:

> *If price is prevented from falling to marginal cost in the short run or to average*

total cost in the long run, then, to the extent that competition prevails, it will tend to raise cost to the level of price. Only when, in this way, marginal cost is once again equated with price will the tendency to service inflation be halted. (Kahn, 1971 at 209).

When deregulation permitted airlines to compete on price, average fares declined and load factors increased, as illustrated in figure 1, and many in-flight amenities began to disappear. Despite complaints about crowded flights and poor service quality, particularly from business travelers, the competitive market has "proved to the satisfaction of the carriers that most travelers are willing to sacrifice comfort for lower fares" (Kahn, 2004 at pp. 3-4), and airlines have responded accordingly.

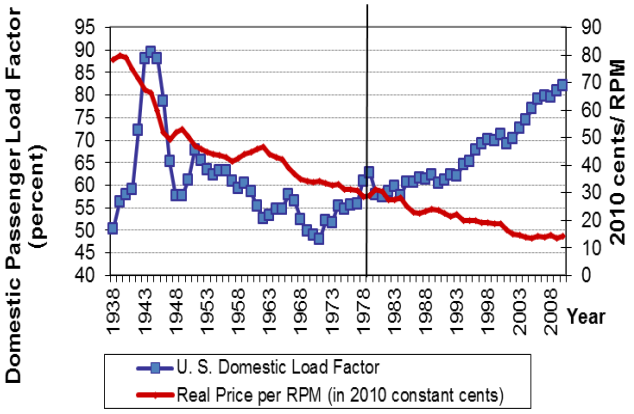

FIGURE 1: AIRLINE INDUSTRY AVERAGE DOMESTIC LOAD FACTORS AND REAL YIELD, 1938-2010. Source: Airlines for America, www.airlines.org

iii) Ignore institutions at your peril

Kahn's division of *The Economics of Regulation* into a first volume based on the "Principles," or theory, of regulation, and a second focused on its "Institutions" attest to the central role he assigned to institutional factors. These may, for example, explain why two apparently similarly-regulated "structurally competitive" industries experience dramatically divergent outcomes—as with federal price and entry regulation of the trucking and airline industries. The higher profit rates earned by regulated trucking firms may be attributed, at least in part, to their ability to use rate bureaus to facilitate collusion, something the CAB effectively blocked in the airline industry.

iv) Innovation increases the challenges

As firms respond to incentives and regulatory ignorance, regulators may find themselves in something like the arcade game of "Whack a Mole." Firms try to circumvent costly regulations through behaviors that regulators fail to anticipate, increasing profits through actions not covered by existing rules. Vigilant regulators, responding to these actions, revise constraints, and firms start the search for evasive maneuvers anew.

The regulatory rule is: each time the dike springs a leak, plug it with one of your fingers; just as dynamic industry will perpetu-

ally find ways of opening new holes in the dike, so an ingenious regulator will never run out of fingers. (Kahn, 1979 at 11)

In an industry with potentially rapid innovations to processes or products, these challenges are magnified, as are the costs of regulatory errors (e.g., telecommunications in Hausman and Taylor, 2012).

Less vigilant regulators end up with outmoded regulation at best, and potentially disastrous consequences at worst. Failing to keep up with ever larger in-flight sandwich sizes may merit a Colbert Report-style send-up; capital regulation that fails to detect subprime mortgage exposure or off- balance sheet derivative risk is no laughing matter. The failure to adapt regulation to industry changes, rather than "deregulation" per se, seems a more plausible explanation for many of the regulatory failures leading to the 1980s Savings and Loan debacle (PBS, 2000) or the 2008 financial crisis.

v. *Regulation may be more imperfect than are markets*

Neoclassical economics describes myriad market failure rationales for government intervention to restore competitive ideals. Given the many challenges confronting regulators, it should come as no surprise that the empirical and theoretical regulatory economics literatures of the past half-century overwhelmingly conclude that those interventions are neither costless nor perfect. As Kahn emphasized in 1971 (at xii):

When we turn from the normative question of what we want to the institutional question of how we get it, we find ourselves launched into the baffling arena of social and political as well as economic behavior and organizations, into the real world of ignorance, error and corruption, where all institutions are in varying degrees imperfect.

The policy tradeoff is not between imperfect markets and perfect regulation, but which imperfection—market or regulatory-- is less costly. This conclusion, while familiar to students of economic regulation, is stunningly overlooked in discussions that presume one simply needs "better regulation" or "better-intentioned" regulators to costlessly correct market failures.

II. Markets are Messy

The industry's considerable and persistent turmoil over the nearly 35 years since deregulation has been surprising and troubling. Much has been made of low and volatile aggregate profits and high rates of firm turnover and bankruptcies, particularly by those calling for a return to regulation.

As Figure 2 illustrates, while earnings volatility is not confined to the deregulated era, aggregate losses are more prevalent during this period.

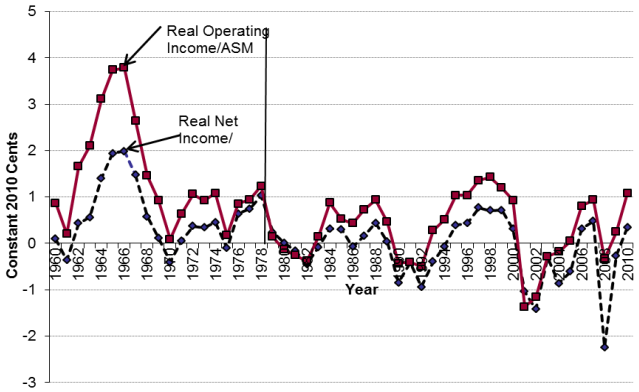

FIGURE 2: AIRLINE SCALED PROFIT RATES 1960-2010 (2010 CENTS PER AVAILABLE SEAT-MILE (ASM)

SOURCE: AIRLINES FOR AMERICA, WWW.AIRLINES.ORG

Adverse demand and fuel price shocks are undoubtedly part of the story. But Borenstein (2011a) suggests that the continuing higher costs of legacy airlines relative to low cost carriers (LCC) that have entered national markets since deregulation, and the declining ability of legacy carriers to realize price premia over LCC fares may play important roles. Competition from LCCs has expanded dramatically over the past 20 years. By 2010, more than 60% of passengers traveled on airport-pair routes with LCC presence, and the aggregate LCC share of passenger-miles had nearly tripled since 1990, to roughly 30% (Borenstein, 2011b). While painful for legacy airlines and their employees, this is "an illustration of competition doing exactly what we hoped and expected it to do" (Kahn, 2008b at pp. 316-317).

The nature of airline labor negotiations, with contracts that typically fix wages for the future based on past profitability, also may exacerbate profitability swings (Borenstein and Rose, 2008). If carriers respond strategically to union bargaining by increasing their financial leverage (as David Matsa, 2010, finds for a non-airline sample of firms), this, may further increase earnings volatility and perhaps bankruptcy rates.

This volatility has not, however, appeared to impair the industry's ability to finance investment, suggesting that claims of "destructive competition" are likely misplaced. Competition dynamics may not always be pretty, but as Kahn (2004 at 5) argues, even "... the unusual vulnerability of an industry to external shocks does not constitute a legitimate case for a return to regulated cartelization."

III. There is a Role for Government in Deregulated Markets

Two of the unfortunate "surprises" Kahn noted in his 1988b retrospective were likely avoidable: increased concentration of market power, particularly in hub markets, and

escalating costs of airline delays and airport congestion. Both owe their origin more to failure of ancillary government policies than to airline deregulation per se: "Deregulation" is not synonymous with "laissez-faire."

The early days of deregulation witnessed enormous entry into airline markets, by both existing carriers expanding into new markets and new carriers entering the industry. But the 47 new carriers that had entered the industry by 1984 were quickly eclipsed by the exit of 48 carriers by liquidation or acquisition over the next 3 years. Over the subsequent decade, industry concentration rose, particularly on hub routes, prompting concerns about the exercise of market power and stability of the early deregulation price declines.

This in large part reflected a "lamentable failure of the administration to enforce the policies of the antitrust laws--to disallow a single merger or to press for divestiture of the computerized reservation systems or attack a single case of predation" Kahn (1988b at 318). Encouragingly, Borenstein (2011) finds some evidence that market power may have abated somewhat in recent years, particularly at the most dominated hub airports and for the highest end fares.

Airport congestion, airline delay, and crowded flights have become sources of increasing public ire over time. These were particularly frustrating to Kahn, who had long advocated congestion pricing in regulated monopoly settings, and addressed the issue explicitly in his days at the CAB

> *We advised Newark [Airport] to put pressure on the New York Port Authority… to introduce marginal cost pricing...and …initiated consultations with the Federal Aviation Administration to explore…schemes--preferably rational pricing--to ensure a more efficient allocation of scarce take off and landing space.* (Kahn, 1979, at 9).

Kahn laid the blame for congestion and delay squarely on the "major derelictions" of the relevant government and airport authorities, who

> *on the one hand failed efficiently to expand airport and air traffic control capacity and, on the other, to price those scarce facilities at their marginal opportunity costs. No wonder there are shortages.* (Kahn, 1988b, at 321)

The political failure to make progress on more sensible policies toward airport investment and congestion pricing has been accompanied by an inability of the Federal Aviation Administration to effectively modernize the technology infrastructure used by the Air Traffic Control system. These

impede the efficient operation of the air transportation network and reduce the social surplus associated with air trave (see Winston, 2012, for a provocative alternative proposal).

John Shenefield (2003 at p.1) argued that Fred Kahn taught us

> *that facts make a difference, if only we have the humane procedures to uncover them and the brains to understand them; and that intellectual rigor, decked out in wit and flair, even in Washington, can be a winning combination."*

We shall sorely miss that combination.

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