SURPRISES FROM DEREGULATION[†]

Surprises of Airline Deregulation

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Surprises are a product of mistaken expectations and unforeseen outcomes. As for the former, I have no taste for the task of putting together a fair composite depiction of the expectations of the airline deregulation advocates; the fact that they ranged from Ralph Nader to the National Association of Manufacturers suggests how difficult that would be. I will therefore confine this account to my own expectations—and inevitably succumb to the temptation to deploy the evidence selectively, so as to demonstrate my prescience about both the good results and the unpleasant ones.

The subject is irresistible, however, partly because the aboriginal opponents of deregulation have been assembling collages of predictions by the proponents and depictions of the results that, even if authentic in their several parts, turn out to be caricatures in their composite.

The main more or less unpleasant surprises—be assured I will conclude with a brief but heartfelt summary of the pleasant ones—fall under four headings: 1) the turbulence and painfulness of the process; 2) the reconcentration of the industry; 3) the intensification of price discrimination and monopolistic exploitation; and 4) the deterioration in quality of airline service.

I. Turmoil

While the advocates of deregulation recognized that competitive markets are inherently more messy and unstable than tightly regulated ones (see my 1971 study, pp. 12–13, 325–26), and recognized also that radical changes were likely to follow removal of the pervasive restrictions that had been imposed on the industry over the preceding forty years, I doubt that most of us were fully prepared for the explosion of entry, massive restructurings of routes, price wars, labor-management conflict, bankruptcies and consolidations and the generally dismal profit record of the last ten years.[1]

During the period of rapid deregulation, I scoffed at what

> seemed to be a general belief among defenders of the present regulatory regime that there is something about airlines that drives businessmen crazy —that once the CAB removes its body from the threshold, they will rush into markets pell-mell, en masse, without regard to the size of each, how many sellers it can sustain, and how many others may be entering at the same time.[2]

I was wrong—at least temporarily—but almost certainly will prove decreasingly so as time goes on.

What inferences are we to draw, however, from these particular surprises?

The turbulent entry of new, much lower-cost carriers, and their ability to quote

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[1]The industry's profit margin averaged only 1.30 percent in 1970–77, which was bad enough compared with industry generally, but fell to a puny 0.10 in the 1979–86 period. (Calculations from the Air Transport Association, 1975–87.)

[2]"I cannot believe, in any event, that it requires governmentally-imposed cartelization to make this or any other industry creditworthy" (myself, 1978a, pp. 15–16, 28.)

much lower fares than the incumbents—typically across-the-board—were a clear reflection of the extent to which the latters' costs had become inflated behind the protective wall of regulation, and an illustration of competition doing exactly what we hoped and expected it to do.

Considering the maniacally detailed restrictions on the operating authorities of airline companies under regulation, it would have been shocking if their removal had *not* resulted in a massive reordering of routes: what better proof could there be of the gross inefficiencies engendered by regulation?[3]

Of much greater significance than the changes in the operations of individual companies has been the continuity and expansion of service in the aggregate. Thanks partly to the Essential Air Services Program incorporated in the 1978 Act, not a single community that enjoyed a minimum level of certificated service at the time of deregulation has lost it. Many communities have lost uncertificated service since that date, just as many had under regulation, but that had little or nothing to do with regulation or deregulation (U.S. GAO, 1985, p. 29). The smallest towns, the so-called nonhubs, have as a group experienced practically no change in their average weekly departures between 1978 and 1987, while the small hubs have enjoyed a 42 percent increase (Melvin Brenner, 1988, Figure 15; also myself, 1988b).

The industry's severe financial losses in 1981–83 were the result primarily—perhaps entirely[4]—of the severe recession, the fuel price explosion of 1979–81, and the air traffic controllers strike. (On the other hand, the very poor financial showing in 1986, a year of general economic prosperity, must be attributed preponderantly to the intense price competition that deregulation unleashed.)

While the industry's return on equity has plummeted almost to zero, its average returns on total invested capital have been no lower since 1978 than before (means shown with standard deviations following in parentheses): 1965–77, 6.3(3.5); 1970–77, 5.3(3.1); 1978–86, 7.2(3.1); 1979–86, 6.4(2.4). (Calculated from Air Transport Association; see also myself, 1988b.) Perhaps equally striking, the volatility of these returns has not increased.

The opponents of deregulation claim that what both they and investment analysts generally see as the perverse tendency of the industry to continue to add to capacity in the face of these poor financial results proves they were right in predicting that unregulated competition would tend chronically to be destructive. The ultimate public concern about the possibility of destructive competition, however, is that it may result in an impairment in the ability of an industry to finance needed expansions of capacity, and a consequent deterioration in service (myself, 1971, pp. 175–76). The triumphant assertions of the critics, therefore, are in effect a concession that this particular threat *to the consumer* has not in fact materialized—partly, no doubt, because several of the airline companies have been doing very well indeed.

Labor unrest and the insecurity and downward pressure on the wages of the preexisting labor force have been an undeniable cost of deregulation. From the standpoint of the public, however, grossly monopolistic wage levels are no more acceptable than monopoly profits. The fact that these costs have been unusually severe may just as logically be blamed on the regulation that created vested interests in its perpetuation as on deregulation.

Total employment in the industry actually increased 39 percent between 1976 and 1986. The increase in revenue passenger enplanements by 87 percent during the same decade, and the increase in productivity reflected in these comparative changes are

[3] It was precisely in recognition of the size of the resulting distortions and the unfitness for competitive survival of companies that had been nurtured in a regulatory hothouse for the preceding forty years that I attempted—unsuccessfully—to give the industry time to adjust, by deregulating only gradually. See my 1978b statement, pp. 5–13.

[4] Steven Morrison and Clifford Winston (1986, p. 40) and John Meyer, Clinton Oster, and John Strong (1987, pp. 21–32) both conclude that during the 1980–82 period the financial showing of the industry might have been even worse had it not been deregulated.

among the most important benefits of deregulation.

II. Reconcentration and the Attenuation of Competition

Just as one of the most pleasant surprises of the early deregulation experience was the large-scale entry of new, highly competitive carriers, so probably the most unpleasant one has been the reversal of that trend—the departures of almost all of them, the reconcentration of the industry both nationally (Brenner, Figure 3) and at the major hubs (Julius Maldutis, 1987, pp. 6–9), the diminishing disciplinary effectiveness of potential entry by totally new firms, and the increased likelihood, in consequence, of monopolistic exploitation. The reasons for these developments are generally familiar and in any event have been thoroughly expounded by Michael Levine (1987)—the advantages of controlled traffic feed, particularly by developing and dominating hubs; the difficulty of rivals mounting an effective challenge at those hubs; the advantages conveyed by ownership of computerized reservations systems (CRS) and frequent flyer programs; the discovery by the incumbents of the superior competitive attractiveness of deeply discounted fares—far lower than their smaller, lower-cost competitors were able to match on an across-the-board basis—targeted (with the help of increasingly sophisticated computerized scheduling) for seats that would otherwise be likely to go out empty; and the flood of mergers and operating agreements between competitors and potential competitors.

Were these developments surprises? Yes, to a large extent. We advocates of deregulation were misled by the apparent lack of evidence of economies of scale—the principal explanation of the differences in cost among the carriers appeared to be differences in their route structures, which we hoped to eliminate by permitting totally free entry and exit—and by the physical mobility of aircraft, which caused us to underestimate the other obstacles to entry. While recognizing the competitive advantages of controlled traffic feed, we were, as it turned out, overly impressed by the apparently equally great competitive opportunities for specialized turnaround service, and therefore did not anticipate the thoroughgoing movement to hub-and-spoke operations and the dominant role it would play in determining the balance of competitive advantage and disadvantage.

At the same time:

> As I specifically observed (1978a, pp. 18–22, and 1979, pp. 5–6), if it was impossible for government officials to predict what kind of route structures would prove ultimately to be the most effective, that was an argument not for perpetuating ignorant regulation but for leaving the decision to the competitive market.

Whatever misgivings one may have about this kind of competition-by-preemption of traffic (and I have more than most economists) one must recognize that the critical advantages of hub-and-spoke operations reflect genuine efficiencies: the superior quality of on-line service (in which passengers change planes from one flight to another of the same carrier) over interline, fuller utilization of larger planes and the possibility of offering a wider range of destinations from all originating points—the principal source, according to Morrison and Winston (pp. 31–33), of the multibillion dollar annual benefit to the flying public attributable to deregulation.

The radical transformation of the operations of the incumbent carriers that enabled them so quickly to overcome the competitive threat of the new entrants was, in very large measure, the beneficent consequence of competition: the successful ones cut their costs, rationalized their route structures, developed extraordinarily efficient CRSs and learned to offer deep discounts to fill their planes.

The concentration process reflected also what many of the advocates of deregulation would characterize as 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. None of these cases would have been easy. All of the mergers, it could be argued, gave birth to more effective competitors; the harmful effects on competition of major carriers owning CRSs, on the one hand, and the feasibility and desirability of their divestiture, on the other, remain intensely contested; and the feasibility of identifying and moving against instances of predation are extremely uncertain. At the same time, I take perverse satisfaction in having predicted the demise of price-cutting competitors like World and Capitol Airways if we did nothing to limit the predictable geographically discriminatory response of the incumbent carriers to their entry, and in having rejected the conventional wisdom that predation would not pay because any attempt to raise fares after the departure of the price-cutting newcomers would elicit instantaneous competitive reentry.[5]

Despite the now markedly higher concentration of the industry at the national level, it is not at all clear that concentration has gone up in the economically pertinent markets—namely, individual routes. On the contrary, it *appears* that the average number of carriers per route is still higher today than it was under regulation (for a survey of the incomplete evidence, see my 1988b paper).

The relatively small number of airlines were under regulation prevented for the most part from competing with one another; since deregulation they have been free to invade one another's markets, offering whatever combinations of price and service they choose, and they have done so, vigorously.

While, therefore, travelers on flights originating and terminating at the concentrated hubs probably face fewer alternatives now than before deregulation, competition on longer, connecting flights over various hubs has clearly intensified: a Boston/Phoenix passenger, for example, has the choice of nine hubs at which to make connections (Maldutis, p. 9).

The industry remains to this very day far more intensely competitive than it was before 1978. The opponents of deregulation cannot have it both ways—asserting on the one hand that competition has proved to be a lost cause and, on the other, that it has been and remains catastrophically destructive. They will undoubtedly retort that the process of competition killing itself off is still incomplete. The response—now, as ten years ago—is that the possibility, which no one can deny with total certainty, that competition *may* one day prove not to be viable is hardly a reason to have suppressed it thoroughly in the first place.

III. Price Discrimination and Monopoly Exploitation

The benefits of price competition under deregulation have been very widespread. Between 1976 (the last year before the CAB began to permit widespread discounting) and 1986, average yields per mile dropped 28.5 percent in real terms. According to the Air Transport Association (1987, p. 5), 90 percent of all passengers in 1986 traveled on discount tickets, at an average 61 percent below coach fare. And while this means that the coach fares themselves have become increasingly fictional, the studies by the Meyer-Oster group show that they have not risen egregiously compared with the levels at which they would have been set under regulation (Meyer et al., pp. 112–13 and 121–22).

The very low fare levels of 1986 and early 1987, reflecting severe price wars, were not sustainable—the industry as a whole lost money—and yields have in the last months of 1987 almost regained 1985 levels.[6] But the decline from 1976 to those 1985 levels would still have represented savings of $11 billion to airline passengers in 1986 alone.

At the same time, the pressures and benefits of price competition have been unevenly distributed geographically. The troublesome disparities that have emerged are not, however, wholly discriminatory: it costs more to provide service on small airplanes, on thin routes, with the frequency required to meet

[5] Large portions of the memorandum to my fellow CAB members in which I expressed these opinions are reproduced in my 1988a paper.

[6] Information from the Air Transport Association.

the needs of business travelers, than it costs on the dense routes and to serve vacationers.

It is by no means obvious to what extent travelers in the less competitive markets have actually been exploited. What is extremely dubious is that, as is widely assumed, their fares have gone up *because* fares have declined, dramatically, in the more competitive markets—that is to say, that passengers in the thin markets are "subsidizing" the bargains in the dense ones. Such contentions assume that businesses would, irrationally, sell some services for substantial periods of time at prices below incremental costs and others at prices below profit-maximizing levels, raising the latter only after and because competition had forced them to reduce the former. On the contrary, if the introduction of intense price competition on the dense routes has had any effect on prices on the thin ones, it is more likely to have been to reduce than to increase them, because of the ability of many travelers to rearrange their routing to take advantage of the discounts.

The persistence—indeed, intensification—of price discrimination has been a surprise. While I pointed out (1978a, pp. 24–27; 1978c, pp. 39–40, 50–57) that the structure of airline costs—the inevitability and desirability (on quality grounds) of average load factors far below the 100 percent level, with the consequent availability of zero marginal cost seats—clearly suggested that widespread price discrimination would continue under competition, I was at other times so carried away by witnessing the introduction of across-the-board, nondiscriminatory low fares as to predict that, with competition increasingly pervasive, "much of the price discrimination will tend to disappear" (1979, pp. 11–12). I should have recognized that the naturally monopolistic or oligopolistic character of most airline markets (which I had myself observed, 1978a, p. 24) and the inevitable continuation of short-run marginal costs approximating zero promised that these discriminations would continue—indeed, expand—under deregulation.[7]

[7]My colleague Robert Frank recalled this elementary principle to me and its pertinence in the airline context.

Competition in the real world is, inevitably, imperfect. The question before us in 1977–78 was whether the imperfections would be so severe as to justify continuation of the kind of regulation we had practiced in the airline industry in the preceding forty years, at costs to the economy of billions of dollars a year. At the worst, we might now decide that competition is so insufficiently protective of consumer interests on particular routes as to require us to reimpose price *ceilings* in those instances, although the practical difficulties would be enormous. In view of the CAB's advocacy of a continuation of such ceilings in markets dominated by a single carrier (myself, 1978b; 1978c, p. 46), I hope I do not shock anybody by observing that I probably would have been very reluctant to abandon price ceilings entirely had I had the choice. All the studies of airline pricing since deregulation confirm that reluctance: market concentration does matter; and their general trend over time has been toward the conclusion that it matters a great deal (compare Elizabeth Bailey et al., 1985, p. 199, with Gloria Hurdle et al., 1987, p. 16).

IV. Congestion and Delay

Most of us probably did not foresee the deterioration in the average quality of the flying experience, and in particular the congestion and delays that have plagued air travelers in recent years. Fortunately, an audience of economists will readily understand how little this failure constitutes a legitimate criticism of deregulation:

> To some considerable extent, these discomforts are a sign of the success of deregulation, not its failure, resulting as they have from the enormous response of travelers to the offer of very low fares for necessarily correspondingly lower-quality service—narrower seating, longer lines, fewer amenities.
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> The consequent similar deterioration in the quality of service enjoyed by full-coach-fare-paying-passengers as well has indeed reflected in part an imperfection of competition: they have lost an option they previously enjoyed. At the same time, their choices have been enriched in other ways—by the

proliferation of business class and other such services and frequent flyer benefits.

In part, however, this spillover effect on them reflects the more general characteristic of a market economy that many of the allocative decisions it makes are in effect collective (see my article with William Shew, pp. 229–32): because of economies of scale, what gets produced is dictated by the preferences of the majority—in this case for a lower-cost and quality service than a minority would have preferred.

This deprivation has, however, resulted also from major derelictions by governments. Congestion at major airports at peak travel times (and the consequent inability of passengers to whom time is very valuable to get the delay-free travel they would willingly pay for) obviously means to an economist that the pertinent government authorities have 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.

V. Completing the Balance

This assessment of the "surprises of deregulation" would be grossly distorted if it were not balanced with at least a mention of the respects in which the outcome has either not been surprising at all to its advocates, or the surprises have been happy ones. The last ten years have fully vindicated our expectations that deregulation would bring lower fares, a structure of fares on average in closer conformity with the structure of costs, an increased range of price-quality options, and great improvements in efficiency—made possible by the abandonment of regulatory restrictions and compelled by the greatly increased intensity of competition—all this along with a 35 percent or so decline in accident rates.

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