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POLICY INNOVATIONS IN THE DOMESTIC PASSENGER-FARE INVESTIGATION

Lucile Sheppard Keyes

In March, 1974, the Civil Aeronautics Board completed its work in the Domestic Passenger-Fare Investigation, a proceeding which had been instituted in January, 1970, with the objectives of setting "rate-making standards with respect to the various elements underlying both fare level and fare structure" and revising existing fares where such action seemed called for. Of the ten phases into which the case was subsequently divided, phases 5, 6, and 9 appear to have resulted in major innovations in the Board’s basic rate-making policy. The following study addresses itself in turn to the decisions in phases 6B (Load Factor), 5 (Discount Fares), and 9 (Fare Structure). Though the decision in phase 6A (Seating Configuration) also embodies an innovation in regulatory principle, the relevant policy issues appear to be quite similar to those related to phase 6B; therefore, phase 6A will not be considered here.

1 CAB Order No. 70-1-147 (Jan. 29, 1970).
2 Id. at 2.
3 The case was divided into the following phases: 1 (Flight Equipment Depreciation), 2 (Treatment of Leased Aircraft), 3 (Treatment of Deferred Federal Income Taxes), 4 (Joint Fares), 5 (Discount Fares), 6A (Seating Configuration), 6B (Load Factor), 7 (Fare Level), 8 (Rate of Return), and 9 (Fare Structure). The original division into nine phases was made by CAB Order No. 7-2-121 (Feb. 26, 1970); phase 6 was subdivided by CAB Order No. 70-11-91 (Nov. 19, 1970). In phase 4, the following decisions were issued: CAB Order Nos. 72-4-42 (April 10, 1972), 72-6-29 (June 6, 1972), and 74-3-80 (March 18, 1974); in phase 5, CAB Order Nos. 72-12-18 (Dec. 5, 1972), 73-5-2 (—, 1973), and 73-8-55 (Aug. 10, 1973); in phase 6A, CAB Order Nos. 71-4-48 (April 19, 1971), 72-5-10 (—, 1972), and 73-6-102 (June 26, 1973); in phase 6B, CAB Order Nos. 71-4-54 (April 9, 1971), and 74-3-81 (March 18, 1974); in phase 7, CAB Order Nos. 71-4-59/60 (April 9, 1971), 72-8-50 (Aug. 10, 1972), and 72-9-78 (—, 1972); in phase 8, CAB Order Nos. 71-4-58 (April 9, 1971), and 71-7-43 (—, 1971); and in phase 9, CAB Order No. 74-3-82 (March 18, 1974).
Regulation of the fare level involves three basic determinations: (a) the value of the investment which will be allowed for rate-making purposes, (b) the rate of return on investment which should be earned by the carriers, and (c) the actual level of prices which should be set in order to produce this desired return. To calculate (c), given (a) and (b), it is obviously necessary to postulate some level of costs per unit sold, and this cost level will in turn depend on, among other things, assumptions as to the utilization of available capacity—notably, an assumption as to the revenue passenger load factors experienced by the carriers. For any given level of costs (e.g., average costs per available seat-mile), costs per unit sold vary inversely with the amount of capacity utilized. If only half the seats in a plane are filled with paying customers, capacity costs per revenue passenger-mile (estimated at 65 percent of total costs) will be twice as high as they would be if all the seats had been sold. As a general rule, regulatory agencies employ cost projections based on past experience and the predictions of the regulated companies, together with the underlying assumptions as to capacity utilization, without seeking to adjust these figures to allow for improved utilization deemed advisable by the regulators. In other words, it is normally assumed (at least in this connection) that the regulated companies may be relied upon not to engage in unwarranted extravagance.

In its decision on load factor, however, the Board executed a decisive departure from this normal assumption. Instead of accepting the "actual or projected load factors that will result from the forecasts of traffic and operational plans of the carriers not shown to constitute uneconomical or inefficient management," the agency decided to specify "standard or optimum load factors, which would be capable of achievement over the long-range," and fix fares "at a level which would produce a reasonable return on investment assuming that the industry operated at the standard load factor." For the trunkline carriers, the standard was fixed at 55 percent.

4 CAB Order No. 71-4-54 at 4 (April 9, 1971): "Approximately 65 percent of airline costs are related to the operation of aircraft and are not affected by the number of passengers carried on board. . . ."

5 Id.

6 Id. at 5.
The Board originally also specified a standard for the local service airlines (44.4 percent), but this standard was later abandoned as inappropriate owing to the "developing state of these carriers."

Though the adoption of the load factor standard represented a new departure, the idea was not a new one to the Board. The agency had considered using such a standard in the General Passenger Fare Investigation\textsuperscript{8} concluded in 1960. Such standards, as well as specific average capacity cost standards, had then been suggested by the Board's Bureau of Air Operations, on the ground that "failure on the part of a carrier to attain, over a reasonably extended period, the load factors and capacity costs projected for it . . . would reflect inefficient and uneconomical management, absent a basic change in underlying economic and operating conditions."\textsuperscript{9} (This version of the Bureau's ground for its recommendation was not accepted by the Board in its more recent decision.) Even in 1960, the Board registered approval of such standards in principle; its decision not to adopt them was based on the unsettled economic conditions then prevailing—notably the recent business recession and the transition to jet aircraft—which had produced significant disparities between forecast and actual airline operating results during the pendency of the proceeding. In the Board's words,

> Our decision . . . stems from the evidentiary content of the record, and not from any decision that use of standards as such is unsuitable. . . . If fair standards could be ascertained for representative periods which can be reasonably defined, it is clear that the Board would be able to deal with the problems of determining appropriate fare levels much more effectively. But it appears that development of such standards must await a time when the industry has reached a more stable period.\textsuperscript{10}

The 55 percent standard figure was calculated on the basis of traffic data for the year 1969, when the actual trunkline load factor was 50 percent. Data were obtained from the carriers concerning the top 351 unduplicated city pairs for the middle month of each quarter. Corrections for excess capacity were confined to "the 170

\textsuperscript{7} CAB Order No. 74-3-81 at 16 (March 18, 1974).
\textsuperscript{8} 32 C.A.B. 291, 292 (1960).
\textsuperscript{9} Id. at 316.
\textsuperscript{10} Id. at 320.
markets with an average of more than three round trips per day per carrier carrying more than 10 percent of the traffic in the market in 1969." In the remaining markets, the existing level of capacity was recognized, for rate-making purposes, as representing an irreducible minimum necessary for adequate service.

For the 170 markets, "attainable" load factors were computed by calculating the amount of capacity warranted under a formula devised by the Board's Bureau of Economics, and dividing the actual traffic by this calculated capacity figure. Warranted capacity was determined "by calculating the number of flights necessary with the average aircraft size used in the market to attain a 62-percent reserved-seat load factor in the market and adding one flight per day of the average aircraft size for the number of carriers competing in the market who carried at least a 10 percent share of the market traffic in the 1969 sample period." Defending this formula, the Board observed that it was "the Bureau's judgment that a 62 percent reserved-seat load factor would represent adequate service for markets served by only one carrier" and that "62 percent was the overall average load factor achieved in monopoly markets in 1967." As to the additional capacity allowed, the Board stated:

The addition of seats equivalent to an average of one flight per day per carrier in calculating market load factors gives recognition to such factors as the number of competitors; the size and indivisibility of aircraft used; and load-factor fluctuations resulting from seasonal and other traffic peaks and from aircraft positioning, maintenance, and crew-rotation requirements. The decision to add an average of one flight of average aircraft size every day for each carrier is based on the judgment that this amount of additional capacity would be sufficient to permit flexibility to account for such variables and result in a reasonable relation of overall market capacity and traffic demand.

The resulting figures were used to calculate attainable load factors for the trunkline industry as a whole and for each trunkline carrier.

It is perhaps not surprising that there were objections to these calculations on the part of the carriers. It seems evident, however,

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11 CAB Order No. 71-4-54 at 35 (April 9, 1971).
12 Id. at 36.
13 Id. at 37.
14 Id. at 38-39.
that the capacity corrections applied were very largely matters of "judgment" (as, e.g., the Bureau's "judgment" on the load factor representing "adequate" service in a monopoly market). However, the 55 percent figure finally arrived at in fact fit quite comfortably within the range of actual experience in the preceding fifteen years, and thus appeared "reasonable" in the eyes of the Board.18

But more important than the credentials of the standards itself is the question of why the agency felt it necessary to adopt such a standard at all. Failure to do so, according to the Board, would almost certainly lead to dire long-term consequences—declining load factors, an increasing fare level, and general impecuniousness among the carriers, all brought on by the misguided overcompetitiveness of airline managements.

In the Board's view, a policy of basing fares on actual load factors can only lead to increasing overcapacity, with the traveling public being asked to pay higher fares to compensate the carriers for the cost of operating an increasing number of empty seats. This result is virtually inevitable because schedules constitute the major competitive device of carriers in their efforts to preserve and enhance their participation in the traffic markets which they serve. In any given market, the carrier with the greatest number of schedules will normally carry the largest number of passengers. Thus, the desire to maximize market participation creates powerful incentives to add capacity. The countervailing incentive is supplied only by the imperative of economics: Schedules cannot be added indefinitely if the load factors achieved are insufficient, at the prevailing fare levels, to permit the carriers to cover costs and return a profit. But this economic incentive loses its force if the carriers are able to raise their fares to cover declining load factors. In that event, the pressure of competition to add schedules will become virtually irresistible and will inevitably lead to a long-term decline in load factor, rising fares to support higher levels of unused capacity, and, because of regulatory lag, a chronically depressed profit level for the industry as a whole.18

Taken at face value, this unlikely scenario would seem to imply progressive adoption of more and more standards governing the

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18 In holding that the Bureau's suggestions constituted reasonably attainable load factors, the Board pointed out that "trunkline load factors from 1955 to 1969 . . . ranged from 50 to 64 percent," and that "[i]n eleven of those fifteen years, trunkline load factors exceeded 55 percent, and the load factor reached the low of 50 percent only in the most recent year (1969)." Id. at 33-34.

19 Id. at 5.
many dimensions of airline competition; managements motivated in the described manner, deterred from overscheduling by the Board's wise guidance, would presumably turn to other forms of extravagance until at last the agency had closed every competitive door. But the low load factors experienced by the industry in the late 'sixties and early 'seventies, which were cited by the Board in support of its theory of airline behavior, can more plausibly be explained as resulting from failure accurately to predict demand conditions far enough in advance, a failing which, as was pointed out by Vice Chairman Gillilland in his dissent, has been amply shared by the Board itself. Moreover, the absence of load-factor standards in the past has not brought about the results called for by the Board's theory. As the agency's own figures show, fifteen years of experience show load factors on the whole comparing quite favorably with the 55 percent level now adopted as a "reasonably attainable" standard for regulatory purposes. Rates of return in the airline industry, though on the average much lower than the 12 percent decided to be adequate by the Board, have fluctuated over the years, with periods of relatively marked prosperity in the

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17 Id. at 15: "There is no dispute that capacity being provided considerably exceeds traffic needs. In 1967, the trunkline load factor was 57.2 percent, and the local-service load factor was 46.4 percent. There is no showing that service was not generally adequate in 1967. Nevertheless, by 1969 the trunkline load factor had dropped to 50 percent, and the local-service load factor to 42.9 percent. For the year ending September 30, 1970, the trunkline load factor declined further to 48 percent. The decline in load factors reflects an increase in unused capacity resulting from substantial increases in schedule frequencies and aircraft size."

18 Id. at 7-9 (dissenting opinion): "Orders for new aircraft require a considerable lead time. Likewise planning, design, production and testing of new aircraft require a considerable time. Accordingly, judgment as to requirements must be made years in advance. . . . What the imposition of load-factor standards means is that the hazard of miscalculation will be greatly enhanced. . . . The industry has recovered from former downturns [and] requires no compulsion other than the ordinary economic law to deter it from excessive acquisitions of aircraft. . . . It may be observed that in 1969, as a result of actions commenced earlier, the Board added 25 percent to the mileage of the air route system, the third largest percentage increase in its history. Carriers added in the neighborhood of 10 percent to number of aircraft and 12 to average seats per aircraft. . . ." The Vice Chairman also noted that "in the recent Transpacific case the Board estimated that 1970 O and D Mainland-Hawaii traffic would be 3,340,000, and Mainland-beyond traffic 800,000, or a total flown of 4,140,000. In reliance thereon it added five carriers to the three already serving Hawaii, all of which made equipment preparations. Actual 1970 on-board loads between the Mainland and Hawaii turned out to be 2,818,265, reflected a forecasting error of 31.9 percent."

19 CAB Order No. 71-4-54 at 33-34 (April 9, 1971).
early and middle 'fifties and the middle 'sixties. And, of course, these historical data do not show a rising trend in the fare level—and certainly not in the real fare level (i.e., the fare level corrected to take into account movements in general prices).

Moreover, like all similar contentions that regulated firms tend to extravagance because of a supposed "fixed" or "guaranteed" rate of return on investment, the Board's argument (even taken at face value) produces simply a case for regulatory lag. If in fact the regulated companies are not promptly and effectively rescued by regulatory fare increases from the consequences of their misguided actions, any incentive to engage in such actions will of course disappear. In view of the recent financial record of the airline industry, it does not seem at all necessary to belabor here the case for regulatory lag. In fact, the regulatory rescue has not occurred, and it is at least very doubtful that the required very large increase in profits could have been brought about by Board-approved general fare increases. An extremely strong incentive already exists for avoiding future overinvestment, and a very substantial part of the "burden" of existing overcapacity is being borne by airline investors, not the traveling public. Unlike the effect of regulatory lag, the potential profit squeeze which could result from application of the Board's load-factor standards is focussed on one particular aspect of airline operations, and thus implies an arbitrary limitation on management decisions as to capacity and service levels.

The Board's argument that carrier competition without load-factor standards necessarily leads to chronic losses and higher fare levels must be carefully distinguished from a superficially similar view advanced by the Department of Transportation. In the latter view, actual load factors tend to decrease to levels equal to breakeven load factors because of competitive additions to capacity; however, the end result is not chronic financial loss but simply an equilibrium, at normal rates of return, at a lower load-factor level and consequently higher quality of service than would have prevailed had fares been reduced rather than capacity expanded. Two types of evidence tending to support this view were cited by the Board in its Supplemental Opinion in phase 6-B: (i) time series showing trends in actual and breakeven load factors for the domestic trunk-

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21 Id. at 81.
line carriers from 1963 through 1970, which indicate "that the actual load factor has tended to follow the increases and decreases in the break-even load factor with the general shape of both curves being remarkably similar;" and (ii) a comparison of actual and break-even load factors (in 1969) for various lengths of haul, which shows that both decline as distance increases (except for the relatively insignificant very short hauls), an indication interpreted by the Board as demonstrating that "carriers . . . operate at low load factors if the fares are high enough to permit such operations; in contrast, where fares are relatively low in relation to seat-mile costs, carriers are forced to, and do, operate at higher load factors." While this evidence clearly does not support the Board's own case for the use of load-factor standards, it is possible to argue that it does support such a policy on other grounds; namely, that equilibrium is attained at too high a level of service quality—that the public interest requires a lower quality of service at a lower unit cost. Such a view may indeed be read into some of the Board's own statements, especially the following:

The high fare level which is the concomitant of a high-capacity, low-load-factor service perforce restricts air travel to a smaller segment of the public than would be the case with a lower-capacity, high-load-factor service, and thus would be inconsistent with the Congressional mandate that the Board consider "the need in the public interest of adequate and efficient transportation of persons and property by air carriers at the lowest cost consistent with the furnishing of such service." There is no reason whatsoever to believe that the carriers cannot earn as high a return on investment from the latter type of service as from the former, high-fare, high-cost service. Moreover, a lower-fare, higher-load-factor service will be of greater benefit to the public by allowing the traffic base to be broadened.

For all this writer knows it may be possible to find in the legislative history of the Civil Aeronautics Act some reference to air fares, and the functions of the regulators in relation thereto, which could be interpreted as showing some congressional advocacy of the position here apparently being taken by the Board. However, it is safe to say that the entire question of fare regulation played

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22 CAB Order No. 74-3-81 at 5 (March 18, 1974).
23 Id.
24 CAB Order No. 71-4-54 at 21-22 (April 9, 1971).
a totally subordinate role in the development of the legislation and also that there was no significant support for the wholly extraordinary view that the agency created by the Act should promote cheapness at the expense of quality.

The proposition that airline competition leads to an excessively high quality of service has been more carefully defended in a study containing an explicit cost-benefit calculation purporting to compare the value of additional service frequency to the average traveler with the cost to him which it entails. As described by one of its authors, this study shows

the relationship between the level of slack capacity of a scheduled transport system with a generalized measure of the convenience of the service, the expected schedule delay per passenger. This variable measures the average difference of a typical traveller's most preferred departure time and the time he can obtain a flight with an available seat. One can demonstrate that for a given market, the expected schedule delay per passenger decreases as the number of flights increases, and as the average load factor decreases. . . .

For a given market . . . there exists a range of "fair prices" which are consonant with a "fair return" on investment. Related to each price, however, is an implicit level of service quality in the system. This range of feasible combinations of price and quality may be regarded then as the opportunity locus of the regulators. The "optimal" price, and by extension, the optimal level of slack capacity, obviously depends on the value travellers attach to this dimension of quality, avoiding schedule delays. Under reasonable assumptions concerning the value which travellers might place on avoiding schedule delays, a pattern of optimal ALF's [market average load factors] and prices may be calculated. While the average load factors arising from the regulated markets have ranged recently from 45-55%, the range of optimal ALF's would appear to be significantly higher, ranging from 50-55% in small markets of short length to 70-75% in larger and/or longer distance markets.

The authors of the study avoid dogmatic commitment to the particular trade-offs assumed between cost and delay, which they regard as "based on information a good deal less complete than ideal;" point out that their approach implies that "ceteris paribus,


the greater the number of price/quality options the better;” and furthermore recognize “that presently the market does provide air transportation in various configurations, characterized by wide differences in cost and schedule delay.”

Whatever one may think about the possibility of an optimum constellation of air services, in all markets, being determined (and appropriately revised in the light of changing demand and supply conditions) by the regulators using cost-benefit ratios based on direct measurements of public preferences, past experience would seem to indicate that any needed innovations in price-service combinations are more likely to be promoted by permitting competition by new entrants than by relying on regulatory initiatives. Moreover, such a pro-competitive policy, with the implied relaxation of fare regulation, would presumably lay to rest any lingering illusions which might exist on the part of the carriers to the effect that the Board will “bail them out” of the consequences of their competitive indiscretions, and thus do away with whatever factual basis might exist for the Board’s conception of wasteful airline competition.

Finally, it should be noted that a rigid adherence to load-factor standards could have very undesirable consequences in certain economic circumstances. Where relief from a depressed profit level could be obtained by higher fares, but existing capacity is such that high load factors can be attained only with low plane utilization, the application of load-factor standards as outlined by the Board could result in the prolongation of the period of low earnings and a consequent even greater reliance on debt financing than has been the case in recent years. This possibility exists if in the

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27 Douglas and Miller, supra note 25, at 668. The authors here continue: “At one end of the scale, charter flights provide the lowest price, but the greatest schedule delay. At the other extreme, corporate executives are whisked about the country in private jet aircraft at enormous cost, but with a very minimum of schedule delay. Scheduled air transportation lies between these poles . . . at the margin of excessive quality and price. Some quality differentiation, moreover, does exist within the scheduled transport industry in this dimension. Stand-by fares and ‘leisure class’ travel represent ways in which differentiation with regard to stochastic delays is currently practiced, although in a very limited way. Of course, additional techniques could be developed for price/quality differentiation within the regulatory environment, and in general such initiatives are to be encouraged.”

28 For some of the relevant experience, see the account in L.S. Keyes, Federal Control of Entry into Air Transportation, Ch. V (1951).
application of such standards allowable costs are figured as if capacity were immediately adjusted to the accommodation of the traffic at the prescribed load factors. In fact, however, recent evidence indicates that the Board may not adopt a rigid position in this regard: in November, 1973, the agency permitted fare increases based on a calculation apparently giving some consideration to the existing "short-term" constraints upon capacity adjustment.  

Decision on Discount Fares

The issue of reasonableness

Though the discount fares specifically at issue in this proceeding were limited to four—youth standby, youth reservation, family, and Discover America—the major result of the decision in phase 5 was the establishment of the following set of general principles to govern the disposition of all "discount and promotional fares not based on cost savings:"

(1) Carriers should be free to utilize discount fares within their managerial discretion, subject to the conditions that such fares are not unjustly discriminatory and meet the profit-impact test;
(2) Promotional fare tariffs should contain expiration dates not to exceed 18 months from the effective date; and
(3) Fare levels will be computed on a hypothetical full normal-fare basis, i.e., as if the discount fares are not a part of the fare structure.  

The question of discrimination will be dealt with in the latter part of this section. To meet the profit-impact test, a fare must be able to generate "sufficient additional traffic to more than offset (i) the diversion of full-fare traffic and (ii) the added non-capacity costs associated with the generated traffic, less any savings in cost attributable to the nature of the services provided to the discount traffic." The Board's method of estimating added costs for the discount traffic specifically at issue in this proceeding can fairly be described as "rough." For example, it is simply assumed that there is an added cost level, equal to a fixed percentage of revenues, which holds good in every U.S. airline travel market, at whatever

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29 CAB Order No. 73-11-93 at 5-6 (Nov. 20, 1973).
30 CAB Order No. 72-12-18 at 78 (Dec. 5, 1972).
31 Id. at 19.
time or place, for each of the discount fares (25.6 percent for family-fare traffic, 30 percent for the others).  

It was considered desirable to permit establishment of discount fares on a temporary basis in order to provide airline managements with the "tools needed to cope effectively with short-run conditions," and in particular (i) to improve load factors during the recurrent periods of excess capacity, (ii) to enhance traffic in new or thinly developed markets, and (iii) to institute competitive innovations in fare policy. On the other hand, the obligatory expiration date and the provision regarding fare level computation were designed as means of "preventing promotional fares from becoming permanently embedded into the fare structure and thereby burdening the general fare level and the normal-fare passenger."

In further explanation of the policy regarding fare-level computation, the Board had this to say:

[W]e intend to fix the basic normal-fare level on the basis of the revenues which would be realized and the expenses which would be incurred in the absence of the promotional fares. This will involve an adjustment of passenger yields to eliminate the dilution caused by the discount fares, together with related adjustments to traffic, expenses and investments.

The agency evidently expects that the effect of this computation will be to penalize the offerer of discount fares; and, on the Board's

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22 In defense of this figure, the Board pointed out that 30 per cent is "approximately the relationship which traffic-related expenses bear to total revenues." The decision then continues: "It is recognized that this percentage exceeds what might be termed the 'bare-bones' cost of handling small increments of additional traffic in very short-run periods. However, the aggregate amount of discount traffic we are here dealing with is substantial, and traffic-related costs (as opposed to capacity costs) will tend to fluctuate in proportion to traffic changes even during the short-term period as defined herein. . . . It is true that some traffic-related costs are non-variable in the short run (e.g., depreciation and rentals of ground passenger facilities). However, since the 30 percent factor is based upon the relation of total traffic-related costs to total revenues but is applied to the discounted revenues realized from the discounted fares, the resultant costs assigned represent substantially less than a full pro-rata share of traffic-related expenses. Moreover, no provision is made for added capacity costs, although it is apparent that some additional capacity will be operated, even in the short run, to accommodate discount traffic. . . . For family-fare traffic, . . . a rate of 25.6 percent is used to reflect . . . group handling savings. . . ." Id. at 36-37.

23 Id. at 52.

24 Id. at 53.

25 Id. at 53-54.

26 Id. at 55.
assumptions, it is not hard to see why. The basic reason for this expectation is the Board's view that the cost of carrying discount traffic is generally identical to that of carrying the normal-fare passenger, and that traffic expansion by using discount fares does not reduce unit costs, a view summed up as follows in the decision:

[S]ince the promotional fare services are essentially the same as those provided to full-fare passengers, there are no inherent cost savings which would justify the current differences in fares. Moreover, because airline costs are largely variable in the long term, the carriage of additional traffic generated by promotional fares does not produce reductions in unit costs in the long run.\(^7\)

On these premises, no great effort will be required to calculate the hypothetical average cost level which would exist if the discount traffic were not carried: it will necessarily be the same as the actual cost level. With a hypothetical yield equal to that from the normal-fare traffic, the offerer of discount fares will be credited with a hypothetical profit margin higher than he actually enjoys. Although hypothetical traffic will presumably be smaller than actual traffic by an amount equal to the traffic which the Board regards as "generated" by the discount fares (as opposed to "diverted" from regular-fare traffic), the actual investment figure will undoubtedly be trimmed proportionally by the Board to produce a hypothetical figure representing perfect adjustment of capacity to the lower traffic level. Hence the hypothetical rate of return on investment will be higher than the actual return, and the discount-offerer will find his Board-estimated revenue needs, for fare-making purposes, to be lower than he would have thought his needs to be on the basis of actual operations.

The postulation of constant costs is also the basic underpinning of the Board's main conclusion on discount fares, namely, that "the pricing of promotional fares at below-average costs reduces the average yields to non-compensatory levels in the long run unless normal fares are raised to above-cost levels\(^8\) and, hence, that "all of the discount fares burden the fare level when viewed over the long run."\(^9\) The same opinion on costs could have been used (but was not) in support of the Board's conclusion that, contrary to the

\(^7\) *Id.* at 50.
\(^8\) *Id.*
\(^9\) *Id.* at 51.
agency's previous belief, the expanded market made available by a differentiated fare structure does not enable the carriers to provide a more desirable level of service for all of their customers, including those who fly at higher fares. Here the Board relied merely on calculations purporting to show that "the total amount of traffic generated under the differentiated fare structure is only minimally larger than the traffic which would be generated under a non-differentiated fare structure with lower normal fares designed to produce the same yields."

A more persuasive argument, based on constant costs, could have run as follows: Although it is perfectly possible, in theory, that a superior product, not profitable under a one-price system, could become so with differential pricing, this situation can never occur if the costs of producing this product do not decline as output rises. For if the product cannot be financed (at any output level) by selling all of it at one price, (a), the demand curve (AR) lies below the average cost curve (AC) throughout. On the other hand, if the product can be financed at some output by discriminatory pricing, (b) the area under the marginal cost curve (MC), which is equal to total cost, must at this output be equal to or smaller than the area under AR, which is equal to total discriminatory revenue with perfect discrimination. Where costs are constant, AC = MC throughout, and, in this situation, (a) implies that MC lies above AR throughout. Therefore (b) cannot be fulfilled.

The flaw in the Board's reasoning does not seem to lie in its apparently realistic conclusions that "the airline industry is one of constant returns to scale" and that generated discount-fare traffic has not been of such magnitude as to make possible widespread utilization of larger aircraft than would otherwise have been employed. What does not seem realistic is the agency's apparent failure to recognize that these general observations merely scratch the surface of the problem of costing any given category of traffic. Of crucial importance here, of course, is the time and space pattern of the particular traffic in question. Though the airline industry may be unlike the railroad industry in not being "characterized by

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40 Id. at 12.
41 Id. at 48.
42 Id. at 49.
substantial fixed costs" (i.e., costs which are fixed with respect to large variations in the level of traffic as a whole), the two are alike in experiencing such phenomena as traffic peaking and geographical imbalance at various times and places, conditions which may provide ample justification for discount pricing resulting in reductions in unit overhead.

In the present case, it appears that much more could have been made of the argument that the specific discount fares at issue were being utilized in markets having demand patterns complementary to that of the ordinary business travel market. Indeed, it seems probable that the carriers' defense of these fares was not excessively vigorous in view of the existing inflationary pressures on airline costs and the resulting apparent desirability of general fare increases. In this connection, it may be noted that discount-fare traffic represented a very large chunk of the total: 44.8 percent of all revenue passenger-miles in 1970. It is also notable that although the Board in its original decision declared its intention to offset the planned elimination of the discount fares found to be unjustly discriminatory (i.e., the youth and family fares) by a downward revision of the general fare level, this announced project was soon abandoned.

In general, it would be deplorable if justifiable discount fares were to be discouraged—either directly or by way of fare level regulation—on the basis of inadequate cost analysis. The Board's realistic attitude toward possible non-discriminatory standby and off-peak fares leads one to hope that the agency will not after all adopt such a course. Indeed, it is plausible to interpret the decision in phase 5 as representing not so much a general endorsement of

42 Id. at 48.
44 Id. at 10.
45 Id. at 14.
46 CAB Order No. 73-5-2 at 7 (May 1, 1973). Here the Board explained that its action was "predicated upon a consideration of the latest financial results of the industry, which indicate that by the time the remanded proceeding could be completed, there is a real possibility that any reduction in normal fares resulting from the remand would have to be offset by an increase in fare level if the carriers are to have an opportunity to realize a fair return on investment under the Board's rate-making standards."
47 CAB Order No. 72-13-18 at 73 (--, 1972). "[W]e do not believe that the use of standby and offpeak fares need be limited to particular classes of persons in order to produce the desired traffic leveling effects, and we particularly emphasize that nothing in this opinion could be construed as suggesting that standby fares available to all are in any way discriminatory or otherwise unlawful."
fully-allocated cost pricing as an attempt to discourage a presumed perverse tendency on the part of the carriers to serve particular classes of traffic at a loss. That a profit-oriented enterprise would stand in need of such discouragement is, of course, hard to believe; however, the Board purports to find grounds for such a belief in the past character of the price regulation to which the industry had been subject. "Under previous policies," said the Board,

the carriers have not had adequate incentives to consider the long-term impact of promotional fares since rate-making practice has permitted them to seek fare-level increases to offset declines in yield stemming from the discount fares. With the normal-fare payer thus available as a source of subsidization of discount-fare traffic, it is entirely natural that airline marketing and pricing policy would tend to be more affected by considerations of short-term revenue advantage and traffic promotion, and less affected by the long-term impact on operating results.48

With respect to the "short-term revenue advantage" said to result from discount fares which do not cover full long-term costs, the Board further asserted that: "At any given point in time, the retention of such a fare will be in the carrier's short-term interest, since cancellation is apt to result in an immediate profit loss."49 This, of course, is not so. Such a fare is profitable only if excess capacity exists; when capacity is perfectly adjusted to demand, the desired level of utilization of equipment can (by definition) be attained by accommodating only the fully remunerative traffic. Thus the "below-cost" fare is profitable only when it serves to utilize idle capacity.

As for traffic promotion for its own sake—even though it may be unprofitable—this is a plausible managerial aim only on the assumption that any profit deficiencies can and will be promptly remedied by a timely regulatory helping hand. The counter-argument here is the same as that which is pertinent in the case of the load-factor scenario. Past profit deficiencies have in fact not been (nor, it seems likely, could they have been) remedied by Board-granted general fare increases. Any surviving expectation that such rescues will be forthcoming in the future should be effectively damped by the very real presence of regulatory lag. In short, there

48 Id. at 56-57.
49 Id. at 51.
seems to be little justification for the Board's fears regarding the carriers' alleged tendency to overindulge in discount fares; moreover, its apparent policy of discouraging discounts may result in a rigidity of pricing which will effectively reduce the feasible level of utilization of airline capacity over the long run.

The issue of discrimination

Before proceeding to consider the decision on fare structure, a few words should be said about the Board's treatment of the issue of unjust discrimination in connection with phase 5. Though the Board here reversed its prior stand with respect to youth and family fares, the decision embodies no major clarification of principle or change of basic approach. The issue of unjust discrimination is distinct from the issue of unreasonableness treated above. Thus, it is possible for a fare to be reasonable though unjustly discriminatory (e.g., the youth standby fares if made applicable for only eighteen months from the date of their approval); unreasonable though not unjustly discriminatory (e.g., the Discover America fares if not subjected to such a time limitation); unreasonable and unjustly discriminatory (e.g., the youth reservation and family fares); or, of course, reasonable and not unjustly discriminatory (e.g., the Discover America fares with the eighteen-month time limitation).

According to the Board's interpretation of the statute, discount fares are prima facie discriminatory if they are available to "limited classes of persons." By this criterion, the youth and family fares are prima facie discriminatory, whereas the Discover America fares are not. But prima facie discrimination does not amount per se to a violation of the statute; fares meeting this criterion can still be lawful if justified by "substantial over-riding considerations involving the sound development of the air transportation system." The Board's unfavorable finding on the youth and family fares is based on new evidence purportedly showing "that the developmental benefits flowing from the promotional-fare structure in general and the youth and family fares in particular are in fact minimal compared to those which we envisioned in our earlier decisions and are insufficient to justify the discriminations," and

50 Id. at 61-62.
51 Id. at 60.
52 Id. at 64.
that "the fares have had an unfavorable long-run impact on the fare level and ultimately have burdened the normal-fare passenger."\textsuperscript{53}

Though it is not made clear what scale of "developmental benefits" would be adequate to counteract \textit{prima facie} discrimination, the Board's calculations with respect to the youth and family fares do provide us with examples of induced traffic expansion which do \textit{not} so qualify, at least when accompanied by evidence that the fares in question result in a burden on other traffic.\textsuperscript{54} In general, we can conclude only that fares producing no more than these amounts of traffic expansion, burdening other traffic, and also qualifying as \textit{prima facie} discriminatory will be disapproved, and that satisfying the profit-impact test (as the youth standby fares in fact did)\textsuperscript{55} will not save them even for a temporary period.

**DECISION ON FARE STRUCTURE**

*Distance and class relationships*

In this proceeding the Board addressed itself to the question of the proper relationships among fares for different distances of travel and for different normal classes of service. The resulting decision\textsuperscript{56} sets forth the underlying principles which, in the Board's view, should govern such relationships, and furthermore provides precise formulae for the calculation of the fares. Thus, in the text of the order accompanying the decision, the following formula for coach fares was prescribed, to be put into effect by the carriers in tariffs to be effective 120 days from the date of decision:

<table>
<thead>
<tr>
<th>Terminal Charge</th>
<th>Line-Haul Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>$12.56</td>
<td></td>
</tr>
<tr>
<td>Mileage</td>
<td>Cents per Mile</td>
</tr>
<tr>
<td>0-500</td>
<td>7.06</td>
</tr>
<tr>
<td>501-1500</td>
<td>5.39</td>
</tr>
<tr>
<td>1501 and over</td>
<td>5.18</td>
</tr>
</tbody>
</table>

\textsuperscript{53} \textit{Id.}

\textsuperscript{54} \textit{Id.} at Appendices I, J, and K. For the youth standby fare, the estimated percentages of induced traffic expansion (as compared with the traffic which would have moved had those fares been cancelled and the level of normal fares reduced to produce an average yield equal to that actually experienced) for 1969, 1970, and 1971, are 1.66 percent, 1.90 percent, and 1.71 percent, respectively. Corresponding figures for the youth reservation fare are .37 percent, .32 percent, and .47 percent. For the family fare, the corresponding figures are 1.42 percent, 1.14 percent, and 1.28 percent.

\textsuperscript{55} \textit{Id.} at 72.

\textsuperscript{56} \textit{Id.} at 72.

\textsuperscript{56} CAB Order No. 74-3-82 (March 18, 1974).
The tariffs were also to conform to the following prescribed minimum percentage relationships between first-class and coach (or, in some cases, "standard or jet custom") fares:

<table>
<thead>
<tr>
<th>Distance (miles)</th>
<th>Percentage Relationship to Coach Fares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 349</td>
<td>137</td>
</tr>
<tr>
<td>350-849</td>
<td>138</td>
</tr>
<tr>
<td>850-1749</td>
<td>140</td>
</tr>
<tr>
<td>1750 and above</td>
<td>141</td>
</tr>
</tbody>
</table>

For economy-class service, the fare charged was to be no more than $4 lower than the normal coach fare.57

In both cases, the prescribed formula was designed as a first step toward placing the fare relationships squarely on a fully-allocated cost basis. For first-class fares, a time-table was set for further steps in this direction, the finally desired relationship being required to take effect on July 1, 1976.58 For distance relationships, it was simply provided that the carriers would be permitted to "file tariffs which change the level and/or taper of coach fares, provided that any changes in taper must move the coach-fare curve closer to the cost curve at all distances."59

It was decided not to prescribe immediately a fully "cost-based" distance fare pattern, which, on the Board's calculations, would have resulted in a substantial increase in the level of short-haul fares (while reducing fares for very long hauls), because of the possibility that such immediate action would have a disruptive effect on carrier operations. On this point, the Board explained:

The record does not enable us to predict with any confidence the impact [of the new formula] on short-haul traffic. ... In addition, the current operations of the carriers are undoubtedly geared in many respects to the present fare structure. Several carriers have cited the use, under the present structure, of short-haul traffic to feed and support long-haul services. The kinds and amounts of aircraft now in the carriers' fleets necessarily reflect the present fare structure and attendant traffic patterns. In short, we have a serious concern that a drastic change in fare structure might, in

57 This sum was believed to be "a reasonable approximation of the average cost of a coach meal." Id. at 134.
58 The final percentages are to be 150, 155, 160, and 163 percent for the mileage blocks indicated in the above table. See the order accompanying the decision.
59 CAB Order No. 74-3-82 at 175 (March 18, 1974).
the near term, have an adverse impact on the transportation system as a whole.\textsuperscript{59}

Similarly, the delay in imposing the final class formula was explained by reference to the possible impact on carrier finances of an abrupt rise in first-class fares, then generally only 130 percent of the coach level:

We are mindful of the adverse short-run consequences that could flow from immediately increasing first-class fares to the full extent of the cost ratio. Such action ought to have an impact on the configuration of the carriers' aircraft to the extent that the increase in the spread between first-class and coach fares diverts first-class traffic to coach service. Thus, the carriers should be given some reasonable period of time in which to adjust their operations and facilities.\textsuperscript{61}

A relatively short period of grace was believed to be sufficient for the adjustment of the class relationship because the first-class traffic deterred by higher fares would probably not be wholly lost to the airlines, but rather diverted to coach service.

Because of their subsidized status, local-service airlines were permitted to file tariffs ranging from 100 to 130 percent of the prescribed levels. The Board thought it desirable to allow them "sufficient flexibility to test in the marketplace fares designed to maximize revenues without unduly impairing the movement of traffic."\textsuperscript{62}

Two main lines of argument were advanced by the Board in support of its "cost-based" distance fare structure. First, it was argued that short-haul fares below fully-allocated cost "arbitrarily limit" the service provided in these markets, and that, conversely, long-haul fares above fully-allocated cost provide an incentive for "excessive service" on the routes to which they apply. Both of these arguments must rest on a theory that airline managements are motivated by something other than the search for profit: if the short-haul traffic could support the same or a higher level of service at a higher fare than the existing one, there is no apparent reason to suppose that a fare lower than this would have been instituted in the first place, and, if it had been, it would presumably be promptly corrected. As for the supposition that long-haul profits

\textsuperscript{59} Id. at 73.
\textsuperscript{60} Id. at 126-127.
\textsuperscript{61} Id. at 141.
tend to be dissipated by over-scheduling, it is based on the same analysis as that advanced in support of the load-factor standards, and is equally incompatible with rational management (especially when that management has no cushion of excess returns to soften the impact of its mistakes). Examples of recent over-scheduling in certain long-haul markets can be readily explained by the existence of temporary over-all excess capacity which is put to use where available traffic offers hope for revenues more than covering added costs.

The second line of argument consists of a rejection of the case for "cross-subsidization," which is said to be "the primary justification for a fare structure that is less tapered than the cost structure."

Support of short-haul services by excess profits derived from long-haul traffic is here declared to be not only inequitable but actually unworkable in the airline industry as it is actually structured:

[C]ross-subsidization could be completely effective only if the domestic air transportation system consisted of a singly monopoly carrier. Since not all carriers have an equal mix of long-haul and short-haul routes, those carriers having predominantly short-haul routes, and relatively few medium and long-haul routes, do not have an opportunity to gain the excess profits from long-haul routes necessary to cross-subsidize short-haul routes. . . . By the same token, under the cross-subsidization theory, predominantly long-haul carriers are allowed to charge above-cost fares in longer markets in order to cross-subsidize short-haul markets which, to a great extent, they do not possess. . . . In sum, while many parties rely, either implicitly or explicitly, on cross-subsidization, the record does not establish its workability as a feature of the fare structure in the long run.

Here one can only welcome the Board's refusal to hold that subsidization of short-haul by long-haul traffic in the airline industry is workable or desirable. The contrary view has, of course, for many years been a favorite weapon of those who advocate protective certification, and the Board has therefore given weighty support to those who argue for its abolition.

With respect to class relationships, the Board's reasoning is the

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63 Id. at 71.
64 Id. at 69. "[A] structure of fares based on costs will be equitable to passengers—both present and potential—by assuring that none will have to subsidize the others.
65 Id. at 71-72.
same as that employed in connection with discount fares. There is the same alleged "tension between short-term and long-run considerations," and the same belief that fares below fully-allocated cost must become unprofitable in the long run when "embedded in the fare structure." Here again, one may note that such fares are not profitable in the short run except where excess capacity exists, and that it is highly unlikely that all excess capacity will disappear in the long run, except in the theoretical sense which defines the "long run" in terms of its disappearance. This sort of "long run" is generally not what happens in the real world "after a long while" or "for a long time"; what actually exists is a series of short runs (and fragmented markets) requiring fare flexibility to secure optimum utilization of capacity. Where excess capacity does disappear, a profit-maximizing management will not pursue a policy of charging below-average cost prices; and the mere existence of price regulation in its traditional form cannot be adduced to rationalize a contrary policy.

Fare flexibility

An illuminating sidelight on the Board's fare policy is cast by its treatment, in the decision in phase 9, of proposals for fare flexibility, i.e., various suggestions that a "zone of reasonableness," within a certain percentage range (set at 5 or 15 percent) of the prescribed level, be established, fares within which zone would be regarded as either prima facie or per se reasonable.

As the Board noted, proponents of price flexibility held that it would bring about two major advantages: (i) the encouragement of price competition, and (ii) the facilitation of carrier initiatives "to adjust fares to the level of costs on a market basis." Principal advocate of promoting price competition through fare flexibility was the Department of Justice, which argued that freedom to compete in the price dimension would "encourage efficient operations" and "reduce the industry's present tendency to channel competitive

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66 Id. at 125.
67 Of course, this does not mean that profit-maximization cannot bring about discriminatory pricing. But no maximizer of profit ever charges a price below marginal cost; and when capacity is fully utilized, average cost is equal to marginal cost. Therefore when capacity is fully utilized, no maximizer of profit will charge any price below average cost.
68 Id. at 108.
69 Id. at 118.
forces into expensive service rivalry." According to the Department:

[F]ares in the past have been set by a process which results in a uniform Board-established and enforced fare structure. The Department believes that this system of uniform pricing has forced competition into non-price areas, e.g., flight frequencies, equipment types, seating configurations, and other service amenities, resulting in a constantly improving quality of service, but at significantly increasing cost. The Department believes that the public, if free to choose, would prefer a lesser quality of service at prices reflecting its lower cost. Competitive pricing, it argues, would permit carriers to experiment with fares and service to determine what combination of price and service is most preferred in particular markets.71

In answer to this argument, the Board had only to point out that in fact no such Board-prescribed passenger-fare level or structure had been in existence, and that carriers had been free to set their own fares, subject to the Board's power to suspend and investigate. Less cogent, however, is the agency's further contention that, under this regime, "Price competition in normal fares has been virtually nonexistent."72 This sweeping statement involves an exceedingly lame dismissal of the fact of widespread fare discounts in the relatively recent past,73 and a refusal even to consider the relevance of the origins of air coach.74

This alleged virtual non-existence of price competition is attributed by the Board to the "economic structure of the industry" with characteristically oligopolistic, closed-entry markets brought about by protective regulation. After invoking the well-known argument to the effect that oligopolistic interdependence deters price reductions, the Board had this to say:

Congress has subjected to regulation and control both entry into

70 Id. at 109.
71 Id. at 109-10.
72 Id. at 116.
73 Id. at 116. "In recent years, the carriers have, however, engaged in extensive discount fare competition which was the subject of our exhaustive opinion in Phase 5 of this investigation, and is not further considered herein."
74 Id. at 116. "[I]t should be emphasized that the above discussion is concerned with standard class fares, and does not consider carrier proposals for introduction of new lower-cost forms of service at fare levels below existing fares, e.g. the introduction of coach service by Capitol Airlines in 1948 at a level approximately two cents below first-class passenger-mile rates."
the industry and entry into individual markets, with the result that
the number of competitors over individual routes is necessarily
limited. . . . As a consequence, effective competition on all but
a few individual city-pair markets is confined to a relatively limited
number of carriers—and many markets are served by only one
carrier. Under these circumstances, to expect pricing behavior rep-
resentative of a truly competitive market structure is ingenuous at
best, and it is therefore not surprising that competition in basic
fares has been virtually non-existent.55

One does not have to subscribe to a dogmatic numbers-based theory
of markets to agree that deterrence to potential competition by pro-
tective entry control probably exerts a dampening effect on price
competition; after all, the original air coach initiative did come
from outside the certificated industry, and emphasis on price com-
petition has apparently been greater in intrastate than in interstate
air transportation (where the former has not been subject to pro-
tective certification).56

As to the second advantage claimed for fare flexibility, the Board
held flatly that airline management has no incentive to develop a
fare structure reflecting cost conditions in individual markets.

Nor is there any likelihood that under fare flexibility carriers will
adjust fares to the level of actual costs on a market-by-market
basis, that fare reductions would be made in those markets in which
actual costs are below industry average cost for the stage length
involved, or that fares would be raised only in markets where cost
or other justification exists. Managements' basic incentive is the
maximization of revenues [sic], and not adjusting fares to costs.
Accordingly, in markets where the value of service exceeds the
formula fare, carriers would seek to raise fares to the maximum
amount permitted resulting in fares based upon whatever the traffic
will bear, irrespective of the cost of service.57

This point of view ignores the very large extent to which the aims
of a profit-maximizing management are entirely consonant with
the interests of the consuming public. Thus the aim of profit-
maximization insures that there will be no carriage of traffic at a
loss, so that the remainder of the traffic must be burdened;58 like

55 Id. at 117-18.
56 See W. JORDAN, AIRLINE REGULATION IN AMERICA: EFFECTS AND IMPER-
57 CAB Order No. 74-3-82 at 120-21.
58 An exception may be found in the case of such industries as railroad trans-
the minimization of expenses for any given output, which is also a basic managerial aim, cost coverage in each individual market is an important aspect of the public's interest in getting the most for its money. Since this is true, excessive returns in any market will show up as excessive returns for the enterprise as a whole; as long as excessive returns do not exist, we can be reasonably sure that the structure of prices does not depart significantly from that dictated by costs (though not, of course, that the price structure reflects fully-allocated costs).

On the other hand, the Board seems to be on perfectly solid ground in concluding that the adoption of fare flexibility would "eliminate meaningful regulation of passenger fares," in that it "would nullify our laborious efforts to achieve a rational, equitable and cost-oriented fare structure." Whether these laborious efforts were worthwhile in the first place is, of course another question, which has been dealt with at some length in the present study.

**Conclusion**

All three major regulatory innovations instituted as a result of the Domestic Passenger Fare Investigation—the adoption of load-factor standards, the establishment of more rigid rules governing discount fares, and the prescription of fully-allocated cost standards for distance and class relationships among normal fares—are defended by the Board on the basis of a theory that management motivation in the Federally regulated airline industry is radically different from that of the ordinary, unregulated, profit-maximizing firm. In essence, the contention is that the regulated carriers are impelled toward and encouraged to continue wasteful policies because of the expectation that any resulting profit deficiencies can and will be expeditiously remedied by compensatory general price increases put into effect by the regulators. In view of the history of actual rates of return on airline investment, and of the very real existence of regulatory lag, it is hard to believe that the described expectation could persist.

If the Board's theory were correct, however, two consequences

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portation, where the importance of the services of the carrier to competing customers may give rise to opportunities for anti-competitive discrimination. See Keyes, *Price Discrimination in Law and Economics*, S. Econ. J., April, 1961.

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79 CAB Order No. 74-3-82 at 121 (March 18, 1974).
would follow. First, it seems evident that the innovations of the *Domestic Passenger Fare Investigation* would be insufficient to deal with the implied general tendency toward wastefulness. More and more of the Board's custodial care would be gradually required, with no end in sight until perhaps the last avenue of competitive endeavor is closed. Second, if existing regulation in this field leads to perverse motivation and indefinite extension of bureaucratic control, it would seem more than ever advisable to consider the obvious alternative of drastically reducing the scope of regulation and opening the field to new competition. For some, at least, this alternative should be made more attractive by the Board's rejection of "cross-subsidization" as a desirable and workable goal for regulatory policy.
Notes