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SEA AND AIR SUBSIDIES: A COMPARATIVE STUDY

JOSEPH L. SARISKY*

I. INTRODUCTION

THE national interest requires that the United States maintain thorough and integrated ocean and air transportation systems. Recognizing this, the Congress has authorized the payment of various subsidies to water and air carriers. Expenditures by the Maritime Subsidy Board of the Maritime Administration, Department of Commerce, for assistance to ocean shipping will amount to $297 million in 1967, and similar expenditures in the form of direct subsidy payments by the Civil Aeronautics Board to certain air carriers are estimated at $73 million for 1967. Assistance to these carriers, although generous, is continually provided in what is generally an inimical climate. Corporate decisions in all phases of operations, rather than reflecting sound market judgment, are cautiously based upon the need to maintain political and public support of Government financial assistance. This decision-making is concurrently attended by an increasingly detailed concern by the Government with such purely corporate matters as executive salaries, investments, diversification, and internal organization and reorganization.

From the viewpoint of pure economics, efficient allocation of resources is not accomplished by an administrative agency through its determination of the amount of subsidy payment due, but by the application of the historical concept of efficient allocation by way of the price system. The world, however, does not always reflect this idealized condition of economic theory. Changing conditions require new responses, since the modern market is not readily receptive to pure historical economic theory. Market imperfections do exist, and with such imperfections acknowledged, a continuing attempt at a sustained rationalization of the pricing system of the economy to these modes of transportation might well lead to an over-all deterioration, rather than improvement, of resource allocation. As stated by Mr. Pegrum:

Under existing conditions, there is evidently overinvestment in transportation. The railroads as a whole are unable to secure adequate revenues for their operations, while motor, air, and water transport do not cover the full economic cost attributable to their activities. If public policy were to require each of the modes to cover its full

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1. The Budget of the United States, Fiscal Year 1967, 105 [hereinafter cited as Budget].
2. Id.
costs, there would undoubtedly be a considerable reduction in air and water transport, and probably in motor trucking.

A factor contributing to the inability of the air and water carriers to recover their full economic costs is the unfeasibility of establishing an inventory of outputs which must be many-sided yet able to insure a capacity sufficient to meet peak demand or load factors which cannot be charged to these peak demand users, as required by sound economic theory. A surcharge on weekend and holiday flights would undoubtedly result in many complaints and possible revenue losses. Tariff increases during the Korean conflict, Suez crisis, or the present Viet-Nam situation would lead to the same results.

Since these services, in their entirety, cannot be provided at a price that is justified in that it attracts sufficient volume over extended periods of time so as to pay their own way, two alternatives are available: subsidized service or no service at all. In ocean shipping and air carrier service, the public policy requires subsidized service in lieu of their elimination. To insure that this service is provided at "maximum efficiency and frugality," President Johnson submitted his Transportation Message to the Congress, wherein he sought the creation of a Department of Transportation. A primary function of the new Department was to respond to rising transportation requirements with "new institutions and new programs." The purpose of this study is to determine whether present subsidy payment procedures reflect "efficiency and frugality" in the light of the interacting causes giving rise to subsidy, the legislative requirements, and the principles and procedures adopted by the respective administrative agencies responsible for making subsidy determinations.

3. D.F. Pegrum, Transportation: Economics and Public Policy 463 (1963). However, the ripple effect of this reduction on small or isolated communities would unfortunately result in their economic and physical impairment, which the Congress has indicated is not in the national interest.

4. Subsidized transportation is now becoming an accepted way of life. See J.R. Meyer, J.F. Kain & M. Wohl, The Urban Transportation Problem (1965). The question was asked by Adam Smith in 1776: what is more valuable, water or diamonds? The reply was: water, since the world would be more harmed without water than without diamonds. Sea and air transportation, like water, must be valued by their social and economic usefulness and the effect of their absence on the national and international economy.

5. Message from the President of the United States, H.R. Doc. No. 399, 89th Cong., 2d Sess. (1966). The message recommended that the Civil Aeronautics Board and its subsidy functions remain outside the new Department but that the Board consider criteria and principles developed by the Secretary so that "the subsidy program will be coordinated with overall transportation policy." Id. at 6. The inclusion of the Maritime Administration in the Department was recommended by the President. However, when the compromise bill was passed, the Congress had excluded the Maritime Administration Act of Oct. 15, 1966, Pub. L. No. 89-670, 80 Stat. 931 (1966).

6. Message from the President of the United States, supra note 5, at 14.
Examination of present proposals and their compatibility with existing conditions will also be considered. Inasmuch as this study is limited to direct payments to air carriers, it will not consider contributions made by the Federal Aviation Agency through the Federal aid to airports program by way of matching funds for airport facilities, providing navigational aids, air traffic control service, safety inspection, and certification of airmen and aircraft. Indirect aids to ocean shipping, including cargo preference, deferred tax on deposits to capital and special reserve funds, credit aid, and war risk insurance, are also beyond the scope of this study.

12. Federal Aviation Act of 1958, 72 Stat. 776 (1958), 49 U.S.C. § 1423 (1964). Subsidies to air carriers generally take on three forms: (1) free use of airways controlled and financed by the FAA; (2) nominal payment for use of airport facilities which are financed by federal, state and municipal funds; (3) direct subsidy through mail payments. A portion of this amount is allocated to services rendered, but the bulk is for direct subsidy. Services and programs provided by the FAA are substantial, requiring a budget of over $750 million for 1967. Budget at 317. The CAB and FAA are considering a service charge to airlines in an attempt to recoup a portion of these expenditures. The CAB has estimated an annual yield of $300,000 to $400,000 under existing statutory provisions. The FAA seeks to recover less than half its $30 million expenditure for operating the safety, inspection and certification function of the Flight Standard Service. Aviation Week and Space Technology, March 13, 1967, at 32.
II. INCEPTION OF SEA AND AIR SUBSIDIES

In 1840, technological progress gave shipowners the opportunity to change their fleets' propulsion systems from sail to steam power. Faced with the immense costs involved in this modification, the shipowners for the first time looked to the federal government for aid. Fortunately, this technological innovation proved timely, because the volume of mail between the United States and Europe increased substantially, and the capacity of the sailboat to deliver this mail efficiently and within a reasonable time was uncertain. Following the precedent established by England and other maritime nations, the federal government began its aid to ocean shipping with the overseas mail service.18

On March 3, 1845, Congress authorized the Postmaster General to invite bids on contracts to carry mail between the United States and abroad.19 Regular subsidized service between New York and Bremen, Havre, Liverpool and Panama was established under the Act of 1845. Subsidy payments averaged between $19,250 and $35,000 per round trip, and aggregated government expenditures to 1858 amounted to $14,-400,000.20

A second round of ocean-mail contracts was authorized by Congress on May 28, 1864.21 Pursuant to the provisions of this Act, the United States and Brazil entered into a ten year contract for monthly voyages between the United States and South America. Of the $250,000 annual subsidy requirement, the United States contributed $150,000 and Brazil $100,000. Subsequent subsidies to various individual American flag lines amounted to approximately $6,500,000 between 1864 and 1877.22

The Ocean Mail Act of 189123 provided for mail-subsidy payments to various classes of steamships and inaugurated a trade-route system which has remained basically unchanged up to the present day. Under the Act's directive to "subserve and promote the postal and commercial interest of the United States,"24 the Postmaster General invited bids under which contracts were subsequently awarded on routes which varied in number

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18. For a history of maritime nations subsidizing their commercial fleets, see Saugstad, Shipping and Shipbuilding Subsidies, United States Dep't of Commerce Trade Promotion Series, No. 129 (1932). Official reports on the mail subsidy issues existing in 1845 are found in S. Rep. No. 267, 32d Cong., 1st Sess. (1845) ; H.R. Exec. Doc. No. 91, 32d Cong., 1st Sess. (1845).
19. 5 Stat. 748 (1845).
22. C.E.McDowell, supra note 20.
24. Id.
SEA AND AIR SUBSIDIES

from four to nine. The Act remained in effect until 1923, and total subsidy in the form of mail payments totaled $29,630,000.25

The Merchant Marine Act of 192026 substantially retained the provisions of the Ocean Mail Act of 1891. Legislative modification relating to ocean mail carriage was limited to a proviso requiring the United States Shipping Board and the Postmaster General jointly to determine ocean mail payments to shipowners. Subsidy paid between 1923 and 1929 under the provisions of this Act totalled $4,800,000.27

The Merchant Marine Act of 192828 represented a slightly different approach to ocean mail subsidy. Section 41429 amendments provided for certification by the Postmaster General to the United States Shipping Board as to the ocean mail routes the Postmaster General initially determined should be established, including dates of sailing and volume of mail carried. Authority previously vested in the Postmaster General to advertise for bids and enter into ocean mail contracts with American citizens was retained. Under the Merchant Marine Act of 1928, Post Office appropriations were used to pay approximately $200 million in mail subsidies, of which $25 million represented actual incurred cost for mail in fact carried.30

The inception of Government assistance to the air industry paralleled in methodology that previously given to ocean shipping. Some seventy years after technology provided man with a faster and more efficient ship through steam propulsion, it presented man with an entirely new method of transportation—the airplane.31 The attitude prevailing when assistance was given to ocean shipping was still in existence when efforts to establish private airlines were unsuccessful because capital requirements and risk were beyond the capacity of private enterprise. This attitude reflected the public's reluctance to accept any form of direct Government aid to private segments of the economy. The Government, which had already recognized the economic and military potential of the airplane and decided upon a program to promote and encourage the air industry, found itself between Scylla and Charybdis. However, the precedent established by the ocean mail contracts provided the solution, and folklore evolved into immemorial usage, establishing a working partnership between Gov-

25. C.E.McDowell, supra note 20, at 250.
27. C.E.McDowell, supra note 20, at 255.
ernment assistance and Post Office appropriations. This method proved expedient, since the aid was not direct and identifiable but indirect and obscured. It also provided a colorable appearance of the Government paying for services rendered, notwithstanding the fact that the amounts paid did not reflect the true value of the actual services rendered.

Initial congressional action relating to air mail contracts came with the passage of the Air Mail Act of 1925,32 usually called the Kelley Act. The Act established rates for air mail, and authorized the Postmaster General to contract with the air industry to transport mail at a rate not exceeding four-fifths of the revenues derived from such air mail service.33 Contracts let by the Postmaster General under the Kelley Act were for feeder routes, and the Government continued to operate all transcontinental routes until 1927.34

The Kelley Act was amended in 192635 to provide for rates not exceeding $3.00 a pound for the first 1,000 miles and increases not exceeding 30 cents a pound for each additional 100 miles.36 This provision permitted air carriers the same amount of pay for voyages of 300 and 1,000 miles.37 The defect was corrected by a 1928 amendment38 to the Kelley Act which provided for periodic negotiations between the carrier and the Postmaster General. This amendment sought to encourage use of the air mail system and eliminated the restriction of payments to four-fifths of revenues. Between 1925 and 1928, prior to the second amendment of the Kelley Act, subsidy (air mail expenditures less revenues) averaged about $400,-

33. Id. The Act formed the foundation for the modern air carrier system. The carriers initially awarded mail contracts under the Act became United, American, and Trans World Airlines. H.L.Smith, Airways: The History of Commercial Aviation in the United States 104 (1942).
34. The Post Office Department had its own air services for the carrying of mail beginning in 1918. See F.C.Thayer, Air Transport Policy and National Security 6 (1965).
36. F. Spencer, Air Mail Payment and the Government 33 (1941). Post Office Appropriations for the carriage of foreign mail by aircraft and ship were jointly included in Post Office Appropriations for 1925. Of the $8,500,000 appropriated, a sum “not to exceed $150,000 . . . may be expended for carrying of foreign mail by aircraft.” 43 Stat. 786 (1925). The 1927 Appropriation was increased to $8,700,000 and prohibited expenditures “on any contracts heretofore made under the authority of section 24 of the Merchant Marine Act, 1920.” 44 Stat. 1050 (1927).
37. F. Spencer, supra at 35.
38. 45 Stat. 594 (1928).
000 for domestic and foreign carriage. Under the provisions of the second amendment, subsidy payments rose to almost $7 million in 1929.30

The Watres Act of 193040 vested extensive powers of supervision and control over air carriers in the Postmaster General by giving him the power to prescribe rates of compensation. On May 1, 1930, the Postmaster General promulgated his first formula under the Watres Act.41 This formula eliminated cost experience considerations and provided an incentive for cost reduction in that it did not provide for any adjustment for greater passenger loads. Payments under this formula by the Post Office Department to the air mail carriers totaled approximately $84 million for the period between January 1930 and February 1934.42

As hereinafter discussed, the Civil Aeronautics Act of 193843 created the Civil Aeronautics Authority and brought the determination of all air mail rates and the regulations of foreign air carriers under the exclusive jurisdiction of the Authority.44

### Table: Detailed Formula

<table>
<thead>
<tr>
<th>Mail load variable:</th>
<th>Cents per Mile</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 pounds, 12.5 cubic feet of space</td>
<td>55.0</td>
</tr>
<tr>
<td>400 pounds, 25.0 cubic feet of space</td>
<td>65.0</td>
</tr>
<tr>
<td>750 pounds, 47.0 cubic feet of space</td>
<td>75.0</td>
</tr>
<tr>
<td>1,000 pounds, 62.5 cubic feet of space</td>
<td>85.0</td>
</tr>
<tr>
<td>1,250 pounds, 78.0 cubic feet of space</td>
<td>90.0</td>
</tr>
<tr>
<td>1,600 pounds, 80.0-100.0 cubic feet of space</td>
<td>92.5</td>
</tr>
<tr>
<td>2,000 pounds, 125 cubic feet of space</td>
<td>95.0</td>
</tr>
</tbody>
</table>

Other variables (additional compensation):

| Night flying | 15.0 |
| Bad terrain | 2.0 |
| Fog | 2.5 |
| One-way radio equipment | 3.0 |
| Two-way radio equipment | 6.0 |
| Capacity for 2 to 5 passengers | 1.5 |
| Capacity for 6 to 9 passengers | 3.0 |
| Capacity for 10 to 19 passengers | 4.5 |
| Capacity for 20 to 29 passengers | 6.0 |
| Capacity for 30 or more passengers | 7.5 |
| Multimotored equipment | 13.0 |

Quoted by F. Spencer, supra note 36, at 45-46.

42. Id. at 48-51.
43. 52 Stat. 973 (1938).
44. Air mail legislation passed after the Watres Act included the Air Mail Act of 1934 (Black-McKellar Act), 48 Stat. 933 (1934), which revised previous air mail legislation to include a study group (The Federal Aviation Commission) and granted authority to the Interstate Commerce Commission to determine air mail rates, to the Post Office Department to designate mail schedules and routes in terms of air mail needs, and to the Department
III. STATUTORY PROVISIONS

In 1935 President Franklin D. Roosevelt sent his message on the American Merchant Marine to the Congress, wherein he stated, in part, that:

In many instances in our history the Congress has provided for various kinds of disguised subsidies to American shipping. . . . The Government today is paying annually about $30,000,000 for the carrying of mails which would cost, under normal ocean rates, only $3,000,000. The difference, $27,000,000, is a subsidy and nothing but a subsidy. . . . I propose that we end this subterfuge. If the Congress decides that it will maintain a reasonably adequate American merchant marine I believe that it can well afford honestly to call a subsidy by its right name. Approached in this way a subsidy amounts to a comparatively simple thing. It must be based upon providing for American shipping Government aid to make up the differential between American and foreign shipping costs.45

The following year Congress passed the Merchant Marine Act of 1936.46 Although the Act itself was based on the mail route system, its acceptance of direct Government aid to any private sector of the economy was indeed sweeping and revolutionary. Previously, the Congress had repeatedly refused outright aid, giving assistance indirectly and through inchmeal mail carriage legislation. The traditional channeling of government aid through Post Office appropriations was now ended,47 and in its place the United States Maritime Commission was created.48 The Act was

of Commerce to certify aircraft as to airworthiness and other safety features. A mail-pay formula was established whereby the amount of payment was conditioned upon the type and capacity of aircraft utilized rather than upon the volume of mail carried. The 1934 amendment to the Black-McKellar Act, 48 Stat. 1243 (1934), permitted a holder of a mail contract on one primary route to hold two routes other than that primary route. The 1935 amendment of the Black-McKellar Act, 49 Stat. 30 (1935), extended the effective date of the contract holding restrictions. The Meade-McKellar Amendment of 1935, 49 Stat. 614 (1935), extended the services provided by previous air mail legislation. For a comprehensive study of early air mail legislation see P. David, The Economics of Air Mail Transportation (1934); Special Committee of the Senate to Investigate Air Mail Contracts, Investigation of Air Mail and Ocean Mail Contracts, S. Rep. No. 898, 74th Cong., 1st Sess. (1935). 45. 79 Cong. Rec. 2859-60 (1935).


47. 49 Stat. 1988 (1936), as amended, 46 U.S.C. § 1119 (1964). All appropriations for transportation of foreign mail (other than by air) and all powers and duties of the Postmaster General respecting ocean mail were transferred to the Commission.

48. The U.S. Maritime Commission was abolished by Reorganization Plan No. 21 of 1950, and the Commission’s functions transferred to the Federal Maritime Board in the Department of Commerce and to the Secretary of Commerce. 3 C.F.R. 1012 (1949-1953 Comp.) Reorganization Plan No. 7 of 1961 transferred the Federal Maritime Board’s subsidy award functions to the Secretary of Commerce and abolished the Board. 3 C.F.R. 875 (1959-1963 Comp.). By Department of Commerce Order No. 117-A and 117-B, the Secretary of Commerce delegated all maritime subsidy functions to the Maritime Subsidy Board composed of the Maritime Administrator, the Deputy Maritime Administrator, and the General Counsel of the Maritime Administration. 31 Fed. Reg. 8087, 8246 (1966).
comprehensive in its coverage, empowering the Commission to grant a construction-differential subsidy on vessels built, reconstructed, or reconditioned in the United States and suitable for use in the national defense; to grant an operating-differential subsidy on vessels utilized on essential trade routes; to grant loans for the construction of vessels, either with or without a construction-differential subsidy; to allow credit for obsolete vessels taken in exchange for new vessels; to make full payment for national defense features incorporated into the vessel; to guarantee ship mortgages; to establish construction reserve funds with income tax benefits accruing to subsidized operators; to train American citizens as licensed and unlicensed personnel on American flag vessels; to establish the U.S. Merchant Marine Academy; and to grant additional countervailing subsidies to offset the effect of government aid by other maritime nations to their ocean fleets.

Direct Government assistance to ocean shipping is granted through construction differential payments and operating differential subsidies. As to construction subsidies, section 502(b) of the Merchant Marine Act of 1936, provides that a

"Construction differential subsidy" may equal, but not exceed, the excess of the bid of the shipbuilder constructing the proposed vessel . . . over the fair and reasonable estimate of cost, as determined by the [Board], of the construction of the proposed vessel if it were constructed under like plans and specifications . . . in a principal foreign shipbuilding center . . . which is deemed by the [Board] to furnish a fair and representative example for the determination of the estimated cost of construction in foreign countries of vessels of the type proposed to be constructed: Provided, that the construction differential approved by the [Board] shall not exceed 33 1/3 per centum of the construction cost of the vessel . . . except in cases where the [Board] possesses conclusive evidence that the actual differential is greater than that percentage, in which case the [Board] may approve an allowance not to exceed 50 per centum of such cost . . .

This provision enabled the Commission to build ships for its own account and then sell them to subsidized operators at a price equal to not less than 67 1/2% of the construction cost of the vessel. Since 1954 subsidized ship construction has been undertaken pursuant to section 504 of the Act, which provides that the Government, the subsidized operator, and the shipyard may enter into a tri-partite construction contract for the account of the operator. The subsidized operator is obligated to pay only the estimated foreign construction cost of the vessel, which may not exceed 55% of the domestic cost of construction. Over the past several years, the estimated foreign construction cost has averaged approximately 46% of the domestic construction cost. Progress payments, based upon a complicated 1,000 point construction schedule, are made jointly by the operator and the Government to the shipyard. The subsidized operator pays 46% of the amount of each such progress payment, and the Government 54%. Therefore, on a typical dry cargo vessel built in an American shipyard to American standards and meeting the requirements of the Coast Guard, Public Health Service, Department of Agriculture, and American Bureau of Shipping, at a price of $12 million, the subsidized operator will pay about $5,520,000. A construction differential subsidy will cover the remaining $6,480,000 of the construction price. The purpose of the construction differential subsidy is to offset the difference between the price of a ship constructed to American standards and requirements in a United States shipyard and that of one built in a foreign yard.

The award of a construction differential subsidy contract is purely within the discretion of the Maritime Subsidy Board. This discretion was recently emphasized by the Board in that “the Board’s determination to aid the Owner in constructing a ship with the payment of construction subsidy is under a statute which gives to the Board a discretionary authority to grant this subsidy. The Owner has no statutory right to subsidy in any certain amount.”

Government assistance to subsidized American flag operators in the form of operating differential subsidy is granted by the provisions of Title 1965). The Board has been consistently provided with such evidence so that construction subsidy generally has not been less than 50%.


VI of the Merchant Marine Act of 1936. Section 603(b) provides, in part, that:

Such contract shall provide that the amount of the operating-differential subsidy ... shall not exceed the excess of the fair and reasonable cost of insurance, maintenance, repairs not compensated by insurance, wages and subsistence of officers and crews, and any other items of expense in which the [Board] shall find and determine that the applicant is at a substantial disadvantage in competition with such vessels of the foreign country hereinafter referred to, in the operation under United States registry of the vessel or vessels covered by the contract, over the estimated fair and reasonable cost of the same items of expense ... if such vessel or vessels were operated under the registry of a foreign country whose vessels are substantial competitors of the vessel or vessels covered by the contract.

Determinations by the Maritime Subsidy Board in making operating differential payments are extremely complex, requiring the acquisition of cost data on all major flag merchant fleets. Separate findings for each statutory item of expense—insurance, wages, repairs, maintenance, and ship's stores—must be made in each operating subsidy calculation. The Maritime Subsidy Board's primary consideration in making these determinations is the compensation of the American flag operator for the additional costs he incurs by hiring an American crew and purchasing his insurance, ship stores and repair work from American sources.

The Civil Aeronautics Act

In 1938, the financial conditions of the air industry were uncertain, and predictions of commercial chaos and bodily harm due to inadequate safety were conveyed by the industry to the Congress. Among the causes enumerated by industry spokesmen was the fact that the legislative provisions of the law were so worded that interpretation and administration by three different federal agencies were in many instances inconsistent and conflicting. Congress responded; the Civil Aeronautics Act of 1938 vested all responsibility for air transportation in one agency and made it clear that the public interest in air transportation went beyond the carrying of the mail:

68. 46 C.F.R. § 272 (1966).
69. 46 C.F.R. § 293 (1966).
71. F. Spencer, supra note 36, at 225.
72. 52 Stat. 973 (1938).
In the exercise and performance of its powers and duties under this Act, the Authority shall consider the following, among other things, as being in the public interest, and in accordance with the public convenience and necessity—

(a) The encouragement and development of an air-transportation system properly adapted to the present and future needs of the foreign and domestic commerce of the United States, of the Postal Service, and of the national defense;

(b) The regulation of air transportation in such manner as to recognize and preserve the inherent advantages of, assure the highest degree of safety in, and foster sound economic conditions in, such transportation, and to improve the relations between, and coordinate transportation by, air carriers;

(c) The promotion of adequate, economical, and efficient service by air carriers at reasonable charges, without unjust discriminations, undue preferences or advantages, or unfair or destructive competitive practices;

(d) Competition to the extent necessary to assure the sound development of an air-transportation system properly adapted to the needs of the foreign and domestic commerce of the United States, of the Postal Service, and of the national defense;

(e) The regulation of air commerce in such manner as to best promote its development and safety; and

(f) The encouragement and development of civil aeronautics. 73

Sections 406(a) and 406(b) authorize the CAB to determine and pay subsidies to airlines. Section 406(b)(3) reads as follows:

[T]he need of each such air carrier for compensation for the transportation of mail sufficient to insure the performance of such service, and, together with all other revenues of the air carrier, to enable such air carrier under honest, economical, and efficient management, to maintain and continue the development of air transportation to the extent and of the character and quality required for the commerce of the United States, the Postal Service, and the national defense. 74

It is this need clause, and the CAB implementation thereof, by which the Board has established various rates which fill the carriers' bursary so as to eliminate the gap between commercial revenues, plus service mail pay and operating costs, and an income which includes allowances for profit and income tax. 75

IV. RESTRICTED ENTRY

A. Air Carriers

The provisions of the Civil Aeronautics Act of 1938 and the Federal Aviation Act of 1958 provided the air carrier industry with "protection so efficacious that not one carrier has been certificated to perform domestic

73. The Federal Aviation Act of 1958, successor to the Civil Aeronautics Act of 1938, adopts these objectives verbatim, except that objective (e) was changed to read "The promotion of safety in air commerce," and objective (f) to read "The promotion, encouragement, and development of civil aeronautics." 52 Stat. 980, as amended, 72 Stat. 740, 49 U.S.C. § 1302 (1964).


trunk service which was not operating on May 14, 1938 and thus qualified for a certificate under the automatic-certification (grandfather) clause.\footnote{Comment, Is Regulation Necessary? California Air Transportation and National Regulatory Policy, 74 Yale L.J. 1416, 1420 (1965) (footnote omitted).}

This result is not due to any congressional or judicial mandate but to the CAB interpretation of public convenience and necessity as requiring the expansion of existing routes of the underprivileged carriers, as well as the Board's own doctrine of "presumption" of parallel services by different air carriers. Expansion of the route structure of an inauspicious carrier to include a more profitable route structure strengthens the financial condition of such a carrier, thereby reducing subsidy payments. Admission of a new carrier on a profitable route structure competing with a certificated carrier would destroy the opportunity to reduce subsidy payments by increasing profits. The only exception to the Board's interpretation of public convenience and necessity came in 1950 when public convenience and necessity was shown by a whole class of carriers, the non-schedules, which were simultaneously certified en masse by the Board rather than be exempted from the provisions of the Act.\footnote{R. Caves, Air Transport and its Regulators 169-191, (1962). See L. Keyes, Federal Control of Entry into Air Transportation (1951); Keyes, A Reconsideration of Federal Control of Entry into Air Transportation, 22 J. Air L. & Com. 192 (1955); Maclay & Burt, Entry of New Carriers into Domestic Trunkline Air Transportation, 22 J. Air L. & Com. 131 (1955).}

Entry into the certificated air carrier industry can be accomplished by embarking on Ixion's Wheel and initially providing a specialized service that subsequently evolves into a competitive situation with the trunklines, such as is now being done by the local air carriers.\footnote{Arguments are currently being made to remove operating restrictions on the local carriers so as to permit full competition with the trunklines, turning over the thin unprofitable routes to a subsidized "third-level" air carrier. See Elliott, Development of Third Level Air Transportation, 29 J. Air L. & Com. 182 (1963); Barnes, Airline Subsidies—Purpose, Cause and Control, Pt. I, 26 J. Air L. & Com. 311 (1959); Pt. II, 27 J. Air L. & Com. 29 (1960); Wright, Locals Ask Densest Short-Haul Markets, 44 Aviation Week & Space Technology, Feb. 7, 1966, at 35.}

By this method of service and route expansion, such competition in various markets does now exist. Another method of entry is to gain admission to a special segment of the industry. This was successfully done by Trans-Caribbean Airways in the New York to San Juan market.\footnote{Trans-Caribbean Airways, Charters, 30 C.A.B. 1560 (1960).}

B. Ocean Carriers

Entry into the subsidized American merchant fleet is similarly restricted. As of June 30, 1966, the Maritime Subsidy Board (hereinafter referred to as MSB) had outstanding operating-differential subsidy con-
tracts with fourteen steamship lines, an increase of two since 1939. The Board has six applications from ocean carriers seeking entry into the subsidy program. Of these six, half have been pending since 1957.

The primary obstacles to entry into the subsidized merchant fleet are lack of appropriations and various restrictive statutory provisions. Section 601(a)(2) of the Merchant Marine Act requires that "the applicant owns, or can and will build or purchase, a vessel or vessels of the size, type, speed, and number, and with the proper equipment required to enable him to operate and maintain the service, route, or line, in such manner as may be necessary to meet competitive conditions, and to promote foreign commerce . . . ."

The Act further requires that an applicant for operating differential subsidy have sufficient capital or net worth to make a down payment of 25% on the purchase price of a new vessel built in the United States when the 25 year statutory life of the vessels he currently operates has expired.

Additional statutory provisions restricting entry into, or the expansion of existing United States subsidized ocean service include section 605(c) of the Act which provides that:

[N]o contract shall be made under this title with respect to a vessel to be operated on a service, route, or line served by citizens of the United States which would be in addition to the existing service, or services, unless the [Board] shall determine after proper hearing of all parties that the service already provided by vessels of United States registry in such service, route, or line is inadequate, and that in the accomplishment of the purposes and policy of this Act additional vessels should be operated thereon . . . .

Section 101 provides that: "It is necessary for the national defense and development of its foreign and domestic commerce that the United States shall have a merchant marine (a) sufficient to carry its domestic waterborne commerce and a substantial portion of the water-borne export and import foreign commerce of the United States . . . ."

The Secretary of Commerce has interpreted "substantial portion" to
SEA AND AIR SUBSIDIES

mean that United States flag ships should carry 50% of America's waterborne foreign commerce.\(^7\) The ultimate issue to be resolved under these provisions is whether the proposed service would redistribute business from a present subsidized carrier to a new subsidized carrier or whether the United States carriers would obtain a greater proportion of the waterborne commerce. Where the result is a redistribution, entry or expansion is restricted.

V. ADMINISTRATIVE SUBSIDY DETERMINATIONS

Subsidy determinations by the CAB and the MSB differ primarily in procedure rather than substance. The CAB determines type, quality, and quantum of services to be provided, and the rate of subsidy is fixed in advance.\(^8\) The MSB, on the other hand, does not determine the final subsidy rate\(^9\) for several years after the expiration of the subsidy-rate year in question.\(^10\) Further, the CAB determines subsidy on a class basis rather than by individual carrier,\(^11\) while MSB subsidy determinations are considered on the basis of the individual carrier, permitting evaluation of the special requirements of the carrier in its trade route and its specifically identified predominant competitor.\(^12\) There is no inconsistency between the concepts, since, under section 406(b) of the Act, a CAB class rate can be reopened by an individual carrier to provide it with the opportunity to earn subsidy according to its individual "need."

The Federal Aviation Act provides the CAB with more flexibility in

\(^7\) Atlantic Express Lines of America Inc., Subsidy Application, Combination Passenger/Cargo Service, 2 SRR 725, 732 (1963).

\(^8\) Local-Service Class Subsidy Rate Investigation, 34 C.A.B. 416 (1961). Where the "final future" subsidy rate is inadequate, the rate can be reopened under section 406(a) of the Act.

\(^9\) The method of maritime subsidy requires a recognition of a distinction between actual costs and subsidized costs. Actual costs represent payment made to various factors of production. Where they differ, the MSB utilizes the homeport average of all American flag operators. Primary differences are in wages and bunkering fuel cost which differ between American ports. Subsidized costs are actual costs less subsidy. They represent privately incurred costs by the average subsidized American flag operator after subsidy payment. See A. Ferguson, E. Lerner, J. McGee, W. Oi & S. Sobotka, The Economic Value of the American Merchant Marine 108-09 (1961).

\(^10\) Section 603(c) of the Merchant Marine Act of 1936, as amended, 46 U.S.C. § 1173(c) (1964), originally provided for interim payments not exceeding 75% of the previous subsidy rate. The amount was subsequently increased to 90%. Act of Sept. 14, 1961, Pub. L. No. 87-243, 75 Stat. 513 (1961).


\(^12\) When the estimated cost of a predominant competitor cannot be obtained, the costs of other principal foreign competitors, in order of importance, are used. Therefore, where the predominant competitor does not operate a specific type of vessel, the MSB will consider foreign cost estimates of a similar vessel employed by a substantial competitor. See, e.g., American President Lines, Ltd., Subsidy Rate Determination for Combination Vessel, 7 SRR 847 (1966).
determining subsidy. The Act provides that the Board may "fix different rates for different air carriers or classes of air carriers, and different classes of service." Subsidy is then paid on the basis of the "need of each such air carrier." The Merchant Marine Act, however, provides that subsidy "shall not exceed the excess of the fair and reasonable cost of insurance, maintenance, repairs . . . wages and subsistence . . . " incurred by a substantial foreign competitor. The MSB therefore is not only confined to a "parity" formula but is also limited in application to each individual vessel of each subsidized line.

On March 3, 1967, the newly appointed Secretary of Transportation, Alan S. Boyd, proposed that the Maritime Administration and its subsidy functions be transferred to the Department of Transportation. Mr. Boyd further proposed that maritime subsidy payments be based on "need" rather than "parity." The tentative name of "variable subsidy system" was given to the proposal. A review of the administrative determinations under the "need" and "parity" principles will indicate their general compatibilities and incompatibilities under a "variable subsidy system."

A. Need v. Parity

Prior to 1961, the CAB determined the payment to the carrier on the basis of "need," i.e., the difference between revenue and expenses plus a return on investment. The carrier would initially total its revenues, make proper adjustments, determine the amount needed to break-even and provide a reasonable return on investment, then apply to the CAB for subsidy. In 1961, the CAB devised a class rate formula whereby need was computed on the basis of the total of the carriers break-even need, return allowances, and taxes. The predetermined subsidy rate was established by the Board as the rate per available seat-miles at density factors ranging from 300 to 600 revenue plane miles per station per day during the month

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97. Id. at 24, col. 1.
98. Id.
99. Since the early 1950's the trunk carriers have not received any direct subsidy payments from the CAB. Only the local-service carriers and other smaller segments of the air industry continue to receive this kind of subsidy. R. Caves, supra note 77, at 253. The need calculation does not merely provide a cost-of-service-plus-profit compensation but includes an increment whereby the carrier may continue development. North Central Airlines, Inc. v. CAB, 363 F.2d 983, 984 (D.C. Cir. 1966).
100. 34 C.A.B. 416 (1961).
The reasonable rate of return was set as the weighted average rate of return arrived at by applying rates of 21.35% to common stock equity, 7.5% to preferred stock equity, and 5.5% to the debt components of recognized investment. The rate of return after taxes could not be less than 9% or more than 12.75%. Under this class rate formula, operating cost had no direct relation to the amount of subsidy paid since such payment was now based on the class rate multiplied by available seat miles. The formula therefore provided an incentive to reduce operating costs, because the reduction was reflected as profits.

The class rate also provided that the CAB would share 50% of any profits earned between the established rate of return and a return of 15% on investment, and 75% of the profit in excess of 15%.

At a press conference on December 29, 1966, Chairman Murphy announced that the CAB was in the process of revising the 1961 class rate formula so as to relate subsidy payments to market pairs and route structure. This revision was subsequently released by the Board on March 31, 1967, and provided for a subsidy limitation of two round trips per day between market points on subsidy-eligible routes. The previous class rate formula was abandoned and provision made to relate subsidy payments to services between each pair of cities on a local carrier’s route. This method would specifically identify the uneconomical traffic levels and recognize routes that cannot be operated at a profit.

Allowable rate of return on equity capital was reduced from 16% to

101. The class rate formula provided by the Board, 34 C.A.B. at 469, features a sliding scale whereby a given density factor is related to the daily volume of plane miles at a station. This then has an analogous rate which, when multiplied by the total available seat miles, gives the amount of the subsidy. Thus, a subsidy rate of 3.11 cents per available seat miles would be paid a carrier operating 300 revenue plane miles per station per day. The rate would decline to 1.90 cents on the basis of 600 miles per station and flight increases beyond this point would not be eligible for subsidy. Therefore, as traffic volume increases, the subsidy for available seat mile decreases. Cook, Local Carriers Win New Subsidy Formula, 74 Aviation Week and Space Technology, March 13, 1961, at 135-59; Cook, Transcontinental Routes Awarded to Strengthen Delta and National, 74 Aviation Week and Space Technology, March 20, 1961, at 36-37.

102. 34 C.A.B. at 445.

103. The formula provided:

<table>
<thead>
<tr>
<th>Rate of return after taxes (per cent)</th>
<th>Percentage of profit refunded by carrier</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to D^1</td>
<td>0</td>
</tr>
<tr>
<td>D to 15</td>
<td>50</td>
</tr>
<tr>
<td>Over 15</td>
<td>75</td>
</tr>
</tbody>
</table>

(D^1 Represents the fair and reasonable differentiated rate of return.)


and CAB profit sharing was modified to provide for a “revenue growth adjustment” wherein 8.6 cents of each “growth dollar” would result in a subsidy reduction.

The apparent objective of the Board in promulgating the revised standard is to follow its previously announced policy of replacing direct government subsidy by internal subsidy, with revenue from profitable routes helping to defray expenses of serving unprofitable markets.

The parity concept, as enunciated by the Merchant Marine Act of 1936, is a labyrinthian concept in its administration. The data required to support parity determinations come not only from all the major maritime nations of the world, but also from a multitude of federal agencies such as the Coast Guard, Collector of Customs, Immigration and Naturalization Service, Department of Commerce and the Department of Labor. In a dynamic world economy, foreign cost data are almost obsolete upon receipt, yet they form the cornerstone upon which the MSB estimates the fair and reasonable expenses of a predominant foreign competitor as compared to the actual expenses of an American flag operator. The competency of the entire subsidy determination process is contingent upon the accuracy of reported costs and the cost to which the subsidy rate is applied. The American flag operator’s cost records are audited by the Board, with items of cost evaluated as to their reasonableness.

After these data are collected, analyzed and evaluated, a comparative manning estimate is developed on ships operating on all subsidized routes, including American flag and competitive foreign flag vessels. Foreign exchange rates are obtained from the Treasury Department, while wage and price indices are obtained from other federal agencies. A composite weighted differential is assigned, based upon the proportion of the trade carried by the respective foreign and American flag vessels on each trade route. Negative differentials are applied to offset any positive differentials. Notwithstanding the absence of precise arithmetical computation “because of the many variables which cloak the cyclical nature of the industry,” a subsidy rate:

107. This rate of return was the result of previously modified class rate formulae. Class rate II was promulgated by the Board on March 1 and 22, 1963 in Orders Nos. E-19340 and E-19405. Class rate III was introduced by the Board on August 28 and September 22, 1964, in Orders Nos. E-21227 and E-21311. Class rate III-A was promulgated on May 18, 1966, by Order No. E-23697. An offset computation normally relieves an air carrier of the numerous risks inherent in a future period rate. Trans World Airlines, Inc., Order No. E-22022 (April 12, 1965).
108. See Appendix attached hereto.
is administratively determined by the Board. The rate so determined is proffered to the operator and the operator is given an opportunity either to accept or to reject the proffered rate. Should the operator have any questions regarding the rate proffered, it is extended an opportunity to discuss with the staff. If a corrected determination is shown to be necessary through these discussions, but without consideration of new data, a new determination is made and a new rate is proffered to the operator.

If a mutually acceptable determination is not arrived at in accordance with these procedures, and if the operator rejects the proffered administrative determination, it is entitled to and may request a hearing under Section 606(1).

Section 603(b) of the Act then requires the subtraction of the estimated foreign cost from the actual cost experience of the American flag operator to determine "the excess" which is compensated for by subsidy payments.

In 1955, the MSB's predecessor promulgated the Manual of General Procedures for Determining Operating Differential Subsidy Rates. The Manual provides the standard by which the Board calculates operating differential subsidy. The twofold purpose of the Manual was announced by the Board: (1) to establish the factual basis on which the Board shall calculate operating differential subsidy rates; and (2) to delineate the areas of cooperative effort between the Board and the subsidized operators as to the collection of data on domestic and foreign operating costs and practices. The Manual is composed of seven parts: (1) wages of officers and crews; (2) subsistence of officers and crews; (3) maintenance and repairs; (4) hull and machinery insurance; (5) protection and indemnity insurance; (6) reports required to be submitted by operators; and (7) definitions of subsidizable items of expense.

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115. Id. at 1.
116. Id. at 7.
117. Id. at 15.
118. Id. at 23.
119. Id. at 27.
120. Id. at 35.
121. Id. at 49. A sample calculation in determining wage differential, assuming that substantial competition offered by the Netherlands is 35%, Norway 20%, and the United Kingdom 45%, is provided on p. 5 of the Manual as follows:

<table>
<thead>
<tr>
<th></th>
<th>United States</th>
<th>Netherlands</th>
<th>Norway</th>
<th>United Kingdom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number in Crew</td>
<td>50</td>
<td>55</td>
<td>44</td>
<td>52</td>
</tr>
<tr>
<td>Percentage of Overtime to Base Wages</td>
<td>37.22%</td>
<td>20.39%</td>
<td>22.31%</td>
<td>15.35%</td>
</tr>
<tr>
<td>Base Wages</td>
<td>$16,900</td>
<td>$4,340</td>
<td>$4,052</td>
<td>$4,240</td>
</tr>
</tbody>
</table>
B. Agreements Affecting Subsidy

Under section 412 of the Federal Aviation Act,\textsuperscript{122} the CAB determines whether a collective bargaining agreement is adverse to the public interest or in violation of the Act. The elements of public interest are found in section 102 of the Act.\textsuperscript{123} Section 401(k)\textsuperscript{124} requires, as a condition to holding a certificate of public convenience and necessity, adherence to Title II of the Railway Labor Act.\textsuperscript{125}

Since the risk of a strike loss represents an abnormal risk which is neither predictable nor measurable, the CAB had determined that strike losses must be borne by the carrier’s rate of return on investment, rather than its break-even need.\textsuperscript{126} However, since a carrier is required to show only “need” in addition to honest, economical and efficient management in determining its eligibility for subsidy payments, the CAB was remanded by the court, in \textit{American Overseas Airlines, Inc. v. CAB}, for denying subsidy payments for strike losses. The court stated: “The objective of the Congress is plain. It is the maintenance and continued development of air transportation to the extent and of the quality required for the national commerce, postal service, and defense. The objective is on a grand scale. It is for the public interest. It is vital. The words used are important, because they depict with clarity a congressional policy.”\textsuperscript{127}

| Overtime | 6,290 | 885 | 904 | 651 |
| Vacation (leave) | 850 | 602 | 504 | 429 |
| Area and Miscellaneous Bonuses | | | | |
| and other Allowances | — | 880 | 1,179 | 196 |
| Repatriation | — | — | 350 | — |
| Social Security | 590 | 899 | 247 | 117 |
| Welfare, Pension and Unemployment | | | | |
| Fund Payments | 650 | 501 | 170 | 70 |
| Total Monthly Wage Costs | 25,280 | 8,107 | 7,406 | 5,703 |

Differential—Excess of U.S. Cost

| Foreign | 17,173 | 17,874 | 19,577 |
| Unweighted Differential | 67.93\% | 70.70\% | 77.44\% |
| Competition Weight Factor | 35.0 \% | 20.0 \% | 45.0 \% |
| Weighted Differential | 23.78\% | 14.14\% | 34.85\% |
| Composite Weighted Differential | 72.77\% | | |

Foreign Exchange Rates

<table>
<thead>
<tr>
<th>$</th>
<th>£</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.263158</td>
<td>$0.1400</td>
</tr>
</tbody>
</table>


\textsuperscript{127} American Overseas Airlines, Inc. v. CAB, 254 F.2d 744, 748 (D.C. Cir. 1958).
The Board subsequently found that the American Overseas decision precluded the Board from disallowing strike costs per se but that under the test of honest, economical and efficient management, the Board will inquire into management performance during a strike, and where the losses are not attributable to failure of honest, economical and efficient management, the Board will allow their assignment to break-even need rather than return on investment.\textsuperscript{128} The Board subsequently developed a rationale, justifying this inclusion on the ground that the added subsidy did not represent payment for services not being performed but for the performance and development of services after the strike.\textsuperscript{129}

Section 412 of the Federal Aviation Act also requires Board approval of mutual aid agreements between air carriers. Pursuant to this requirement, the CAB disapproved a mutual aid agreement between American Airlines and Mohawk Airlines on the ground that in the event American sustained a loss due to a labor strike, payments made to it by Mohawk would increase Mohawk's subsidy need.\textsuperscript{130} An agreement which involves the contingency of indirect use of subsidy funds for strike protection of an air carrier is not in the public interest.\textsuperscript{131}

Under section 603(b) of the Merchant Marine Act, a subsidy cannot exceed the difference between the American operator's expenses (including wages) and the estimated cost of the same items to the competitive foreign-flag operator.\textsuperscript{132} Wages represent approximately 85\% of all maritime operating differential subsidy payments. Since the average American seaman earns four times the salary of his foreign counterpart, the operator pays only 28\% of the wage dollar, with the federal government subsidizing the remainder. Therefore, every wage increase agreed to by the operator is borne completely by the Government.\textsuperscript{133}

Until 1965 the MSB had accepted, for subsidy payment purposes, the results of collective bargaining agreements between subsidized operators and various maritime unions. On July 13, 1965, the Board disapproved three collective bargaining agreements between the American Merchant Marine Institute and the Marine Engineers Beneficial Association,\textsuperscript{134} the National Maritime Union\textsuperscript{135} and the International Association of Masters,
The basis for the Board's disapproval was that all the agreements exceeded the 3.2 presidential guideline. The Board further indicated that no longer are collective bargaining agreements to be deemed, ipso facto, to represent the fair and reasonable wage standards required by section 603(b) of the Act for subsidy payments.

The Secretary of Commerce reversed the Board on the grounds that the agreements were signed two years prior to the Board's decision without notice of the "new stricter standard." The Secretary further noted that the President's 3.2 guideline should not be the sole criterion against which to measure reasonableness of wage settlements. The Secretary established various procedures in reviewing the agreements but did not establish standards by which the reasonableness of a privately negotiated collective bargaining agreement can be administratively determined.

The MSB, like the CAB, will inquire into management performance during a strike to determine whether losses sustained could have been avoided by economical and efficient management. Under section 606(6) of the Merchant Marine Act and Article II-1 of the Operating Differential Subsidy Contract, the subsidized operator is required to conduct its operations in an economical and efficient manner. In determining the elements of "economic and efficient" management, the MSB looks to the conduct of other shipowners under similar circumstances, the foreseeability of the circumstances involved, and the comparative cost of available alternatives. In Grace Line Inc., the operator claimed additional subsidy for three ships idled in foreign ports for a cumulative total of 111 days. The Board first noted that of the 180 subsidized vessels on the Atlantic and Gulf coasts affected by the 1965 seagoing officers strike, only one other ship was held in a foreign port and then only for 16 days. The Board then concluded that without the additional subsidy of $344,085 being claimed by Grace, its net earnings on the vessels of $137,287 became a loss of $206,798 because of the idleness in a foreign port—"hardly an efficient and economical operation."

137. Opinion and Order, supra note 133, at 42.
138. Id.
140. The wording of section 606(6) and Article II-1 are synonymous and provide that the Operator shall conduct its business and its operations with respect to the vessels' services, routes, and lines covered by an agreement in the most economical and efficient manner, but with due regard to the wage and manning scale and working conditions prescribed by the United States.
142. Holding a vessel in a foreign port substantially increases costs since the crew must be maintained on full pay status in a foreign port. Upon arrival in a United States port the crew can be paid off on arrival.
C. Subsidy Reduction Programs

The CAB has continually set a standard that has resulted in the reduction of subsidy and the furthering of its ultimate and plausible goal of gradually eliminating direct Government subsidy payments. The latest summary of subsidy accruing to air carriers establishes a decreasing reliance upon subsidy. The total subsidy figure declined from $83,092,000 in fiscal 1964 to $68,065,000 for the fiscal year ending June 30, 1967, a decrease of $15,027,000 or 18 per cent. Factors contributing to this subsidy reduction are Board approval of short haul profitable market transfers from the trunklines to the local air service carriers, and the inauguration of the "use it or lose it" policy.

The transfer of short-haul profitable routes does not extend new services to new points nor does it improve existing services. It merely involves the substitution of a local carrier over routes which, although operated profitably by a trunkline, are by nature better adapted to the services of a local carrier. Thus Mohawk was substituted for Eastern, but without subsidy, on a route which was being profitably operated by Eastern, and North Central was permitted to operate a route between Madison, Wisconsin and Chicago which was in competition with Northwest but which eliminated intermediate stops requiring subsidy. When a carrier is awarded non-stop authority between two market points, thereby providing an opportunity for substantial profit, the Board's policy is to delete the new award from the class-rate subsidy computation and further adjust subsidy payment to eliminate the discrepancy between need and subsidy payable.

The basic issue in route awards to local service carriers is "whether the estimated subsidy cost is commensurate with the benefits that will

145. The policy relates to the services offered by the subsidized local air carriers and is codified at 14 C.F.R. § 399.11 (1966). Para. (b) states that "under this 'use it or lose it' policy, the Board will require each city to originate an average of five or more passengers per day during the 12-month period following the initial 6 months of operations. If a city is certificated on more than one segment, the five-passenger standard will be applied to each segment. If a city fails to meet this minimum traffic standard, the Board will, in the absence of unusual or compelling circumstances, institute a formal investigation to determine whether service should be suspended or terminated."
146. Eastern-Mohawk Transfer Case, 34 C.A.B. 274, 277 (1961). The Board distinguished the Supreme Court decision in Delta Air Lines v. Summerfield, 347 U.S. 74 (1954), as holding that the need of an air carrier is the limit of subsidy and not "that the Court would require the Board to grant subsidy to the extent of overall need where it has found in authorizing certain of the carrier's operations that they should not entail any right to subsidy." Id. at 278.
147. Id.
149. Local-Service Class Subsidy Rate Investigation, 36 C.A.B. 797 (1962).
flow from the authorization. Accordingly, the Board found that an award of the Des Moines-St. Louis segment to Ozark at an estimated annual subsidy cost of $131,279 was warranted by the substantial benefits accruing to the traveling public, the carrier and the Government. The basis for the Board's approval appears to be that the new route structure offered Ozark more flexibility in operations, thereby reducing operating costs and in turn reducing subsidy payments.

The Board has refused to authorize awards where the record showed that a route could not be operated without substantial subsidy, even though the carrier was willing to provide service on a non-subsidized basis to demonstrate the reasonableness of its financial forecast. Once an award of a route is made on a non-subsidy basis, it cannot be subsequently converted to a subsidy route without a full evidentiary hearing to ascertain the extent of the Government's obligation.

The CAB recognizes that development of air transportation does not require that all points in the United States be served, nor that all points served by an airline be profitable. The frequency of service and the volume of traffic that a carrier is operating are elements considered by the Board. The Board is mindful of the fact that the volume of traffic will result in some unprofitable points, as well as some profitable points, on any airline. In order to minimize the unprofitable points and still meet the long-range objectives of the Act, the Board adopted the "use it or lose it" approach in the Seven States Area Investigation. Under this policy, smaller communities are afforded the opportunity to demonstrate whether they can use and support air carrier service. The test is determined to a great extent on the amount of traffic developed by such communities. Subsidy cost is but one consideration in determining whether or not the service should be continued under the "use it or lose it" policy. Since the Board is committed to reducing local-service carrier subsidy whenever possible, the elimination of uneconomical cities and route segments from a route is an available method of accomplishing this reduction.

151. Id.
152. Board Member Gilliland dissented, noting that Ozark's commercial revenues in relation to its costs required subsidy in fiscal year 1965, at an average of $4.91 for every passenger it flew. Mr. Gilliland concluded that the result of this award was to "replace one deficiency by a larger one." Id.
Even though a city has met the minimum 5-a-day enplanement standard of the policy, the circumstances must be viewed in terms of the long-range objectives of local service carriers, one of which is continued control over subsidy and the gradual progress toward self-sufficiency. Thus the Board found that when the good citizens of Winona, Minnesota participated in a drive during the month of December to increase enplaning by donating airline tickets to college students for use during their Christmas vacation, the citizens merely generated "artificial" boardings which do not show genuine growth in traffic or need for service. However, the enterprise and industry which developed such a program convinced the Board that the community would support air service and endeavor to develop traffic potential.

The scope of subsidy determinations by the MSB differs somewhat from CAB subsidy considerations, and the reduction procedures therefore differ. Initially, the MSB's primary subsidy responsibility is to the international movement of cargo rather than the domestic and international movement of passengers. In addition, the MSB does not have the operational flexibility of the CAB; the MSB cannot refuse to relieve a trunkline from a loss operation solely because the transfer to a local service carrier would result in the increase of subsidy payments. Further, legislative provisions have given the initiative to the operator, once an operating differential subsidy contract is signed, to institute proceedings that result in a reduction of subsidy payments. Section 606(4) of the Merchant Marine Act provides "that if at any time the contractor receiving an operating-differential subsidy claims that he cannot maintain and operate his vessels on such service, route, or line, with a reasonable profit upon his investment, and applies to the [Board] for a modification or rescission of his contract to maintain such service, route, or line . . . ." This provision authorizes the Board to readjust the amount of subsidy payments when it determines that a change in the service is necessary for the accomplishment of the purposes of the Act. However, the matter must be originated by the operator, not the Board.

Further restrictions on maritime subsidy reduction programs include a statutory requirement that ocean services be maintained "regularly" and "permanently" unless their operations result in "heavy" financial losses. Paragraphs (a) and (b) of section 211 of the Merchant Marine Act

clearly require American flag service on routes and lines which are not profitable:

The ocean services, routes, and lines from ports in the United States, or in a Territory, district, or possession thereof, to foreign markets...essential for the promotion, development, expansion, and maintenance of the foreign commerce of the United States...the [Board] shall consider and give due weight to the cost of maintaining each of such steamship lines, the probability that any such line cannot be maintained except at a heavy loss disproportionate to the benefit accruing to foreign trade.

b) the vessels...should be employed in such services...with a view to furnishing adequate, regular, certain, and permanent service...104

The plain meaning of these provisions is that a service or route may be determined essential even though the operation will result in substantial losses. The Board allowed an operator to abandon service, thereby reducing subsidy payments, after the Board determined that a "heavy loss disproportionate to the benefit accruing to foreign trade" occurred when Grace Line showed a current annual loss of $1,657,000 on a trade route and an estimated future loss of $120,000 per voyage and an additional pro rata of ballast and lay-up cost of approximately $250,000 on the SSs Santa Alicia, Santa Cristina, Santa Regina, and Santa Mercedes.105 The Board found that "in the absence of any objection having been received from any of the American shippers or exporters who will be affected by the discontinuance...we do not feel impelled to require the continuation of the losses even though Grace does not have a right under section 606(4) to a contract modification to so provide."106

The MSB has approved a transfer of the interest in a trade route where the result of such a transfer was a possible subsidy recapture because of greater anticipated revenues.107 Approval of the transfer from one subsidized operator to another occurred on the basis that "prospects for greater revenue with possible subsidy recapture appeared to offer interesting possibilities for attainment with the net effect of achieving a more functional alignment of existing subsidized service."108

Operational flexibility reduces operating costs and accordingly reduces subsidy payments. The MSB, therefore, will approve a domestic leg on a foreign voyage if operational flexibility is thus attained. When an ocean carrier is operated in domestic and subsidized foreign trade on the same voyage, section 605(a) of the Act requires subsidy proration according

166. Id. at 87.
168. Id. at 1033.
to the degree of domestic operation. Such a proration does not eliminate all subsidy from the domestic portion of the voyage, and therefore a residue of subsidy may remain. Prior to MSB authorization of domestic participation by a subsidized carrier, section 805(a) of the Act requires a finding that no "unfair competition" to domestic carriers would result. When such a finding is made and a domestic leg permitted, the effect is competition with unsubsidized domestic carriers and not with foreign flag vessels.

In a decision involving an application by States Steamship Company to call at Hawaii to and from the Far East, the MSB found that coastal and intercoastal carriers are not fundamentally entitled to protection from subsidized operators. Further, the resulting advantage of the subsidized operator was not such "an overwhelming unconscionable advantage as to constitute unfair competition." Since the ratio of domestic to foreign trade was not disproportionate and the competition not unfair, the estimated annual operating subsidy recapture of $800,000, required by section 605(a), and the annual construction subsidy refund of $57,800 per vessel annually, as required by section 506 of the Act, justified States Steamship to call at Hawaii. The Board was upheld by the Secretary of Commerce on the ground that such factors as government aid in various forms, statutory restrictions and the projected trade growth were equalizing forces favoring domestic operators. The Secretary was subsequently upheld by the Federal District Court for the Northern District of California.

171. The Board had previously denied permission to Pacific Far East Lines to operate unsubsidized service between the Pacific Coast and Hawaii on the grounds that such service would be prejudicial to the objectives of the Merchant Marine Act. The court reversed the Board holding that "unfair competition" required a showing of cutthroat competition or competition that is unfair according to accepted legal or ethical standards. Pacific Far East Lines v. Federal Maritime Board, 275 F.2d 184, 186 (D.C. Cir. 1960).
173. Id. at 226.
174. This section provides in part that "if the subsidized vessel earns any gross revenue on the carriage of mail, passengers, or cargo by reason of such coastal . . . trade the subsidy payment for the entire voyage shall be reduced by an amount which bears the same ratio to the subsidy otherwise payable as such gross revenue. . . ." 49 Stat. 2003 (1936), as amended, 46 U.S.C. § 1175 (1964).
175. 49 Stat. 1999 (1936), as amended, 46 U.S.C. § 1156 (1964). This section provides that "if the vessel is operated in the domestic trade . . . he will pay annually to the [Board] that proportion of one twenty-fifth of the construction-differential subsidy paid for such vessel as the gross revenue derived from the domestic trade bears to the gross revenue derived from the entire voyages. . . ."
176. 5 SRR 1111 (1965).
VI. AIR SUBSIDY DECLINE

Total subsidies for the local air carriers have gradually declined since 1963. Subsidies, as a per cent of total local carrier revenues, have been declining over the last 13 years, along with subsidy per revenue passenger.

The CAB estimates that with the current rate of traffic growth and aircraft utilization, the local air carriers will have an operating profit of $1 million in 1970—a negative break-even need. With a required return and tax element of $70 million, total subsidy for the local carriers will remain near current levels.

VII. MARITIME SUBSIDY INCREASES

A recent study published by the Brookings Institution demonstrated the forces that contribute to substantial increases in direct subsidy payments and which are beyond the control of the subsidized American flag operator. These forces include the devaluations in foreign currencies, tariffs, price supports, price administration, cargo preference, and increases in the U.S. wage rates. These increases are shown by the following table:

<table>
<thead>
<tr>
<th>Item</th>
<th>1938</th>
<th>1949</th>
<th>1956</th>
<th>1964</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net subsidy accrual, after recapture (millions)</td>
<td>$3.6</td>
<td>$29.7</td>
<td>$106.2</td>
<td>$208.6</td>
</tr>
<tr>
<td>Number of ships under subsidy contracts</td>
<td>119</td>
<td>254</td>
<td>305</td>
<td>317</td>
</tr>
<tr>
<td>Average subsidy paid per ship (thousands)</td>
<td>$30</td>
<td>$117</td>
<td>$348</td>
<td>$658</td>
</tr>
<tr>
<td>Average subsidy in constant dollars (thousands)</td>
<td>$70</td>
<td>$140</td>
<td>$362</td>
<td>$655</td>
</tr>
<tr>
<td>Subsidy as per cent of freight and passenger revenues</td>
<td>c</td>
<td>c</td>
<td>18%</td>
<td>27%</td>
</tr>
<tr>
<td>Per cent of wage costs met through subsidy</td>
<td>40%</td>
<td>61%</td>
<td>72%</td>
<td>71%</td>
</tr>
<tr>
<td>Per cent of gross subsidy recaptured</td>
<td>70%</td>
<td>33%</td>
<td>17%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Source: Maritime Administration data.

a Estimated.
b Subsidy payments adjusted for changes in wholesale price index, 1957-59 base.
c Not available.


179. Id. at 32.

180. Id. at 33.

181. S. Lawrence, United States Merchant Shipping Policies and Politics 206 (1966).

182. Id.

183. Id.
VIII. Conclusions

The purpose of the subsidy is not just to help the carriers to furnish needed ocean and air services which are not self-supporting.\textsuperscript{184} The subsidy provides the framework by which payment is made to local air carriers to establish air service to small communities and to ocean carriers to carry the water-borne commerce of the United States. The justification for the expenditures of appropriated funds is not to aid particular air or ocean carriers but to make possible the public services that they provide.\textsuperscript{185}

The CAB has been provided with more elasticity than the MSB, both by statute and inherent operational characteristics, to have these services provided at less cost to the Government. Initially, the United States air industry is distinguished as an enterprise which excels uniquely because of its resources and technology. In 1966, there were 645 various Boeing aircraft in service, compared to 54 built by the British Aircraft Corporation.\textsuperscript{186} Aircraft orders for delivery between 1967 and 1970 show Boeing with 427 orders, compared with two for British Aircraft Corporation.\textsuperscript{187} The United States merchant marine, on the other hand, does not enjoy this delivery preeminence. In 1964, Japanese shipyards launched 715 vessels of 100 tons gross and over, Germany 193, Great Britain 179, Holland 140, Norway 121, and the United States only 80.\textsuperscript{188} This disparity in shipbuilding is the result not of technological deficiencies but of overlapping regulation and inspection requirements and design complexities. Estimated savings of 20 to 30 per cent per vessel could be realized upon simplification of design and regulatory and inspection requirements.\textsuperscript{189}

The CAB has statutory authorization to encourage local carriers to expand their route structure in order to reduce subsidies. With new short-haul jet equipment,\textsuperscript{190} the locals can compete effectively with the trunk-lines in the dense short-haul markets, and profits derived therefrom will substantially reduce direct government subsidy. This procedure, however,

\textsuperscript{184} These non-self-supporting air services are provided only by the local air carriers and other smaller segments of the air industry. R. Caves, Air Transport and Its Regulators 253 (1962).
\textsuperscript{185} Hearings, supra note 178, at 34.
\textsuperscript{186} Air Transport Association of America, supra note 144, at 42.
\textsuperscript{187} Id. at 43.
\textsuperscript{188} Shipping World and Shipbuilder, International Shipping & Shipbuilding Directory 499 (1966). During 1943-1944, United States shipyards launched 2,797 merchant vessels. Id.
\textsuperscript{190} The CAB had denied authority to the locals to acquire small jets. Upon a showing that the low seat mile cost would reduce subsidy, the CAB reversed itself and allowed the locals to purchase small jets such as the Boeing 737, DC-9, and BAC-111. Aviation Week & Space Technology, March 6, 1967, at 235.
can result in internal subsidy, whereby the local carriers will charge the
dense short-haul market passengers to help defray the cost of providing
services to marginal markets. The subsidy would probably remain and
only the porte-monnaie from which it came would change.\footnote{191}

All air market transfers, internal versus direct subsidy considerations,
and competition between trunklines and locals are undertaken in the
domestic environment. The MSB, however, must subsidize the "only
important segment of U.S. industry which sells virtually its entire product
in the international market, and under a price system which makes it
difficult for American operators to secure higher rates for superior ser-

\footnote{192}vices."\footnote{192} This difference in the primary operational environment of the
carriers subsidized by the CAB and the MSB must be recognized to
evaluate effectively the obstacles confronting the MSB in its attempts at
subsidy reduction. In a comprehensive study of the United States inter-
national air transport industry, Professor Sackrey noted that "during
the 1954-1963 decade, the [international air] industry flew 64.8 billion
passenger revenue miles, a truly remarkable achievement. . . . During the
1954-1963 decade, the nine carriers in the industry flew over 46 billion un-
utilized seat miles, an unutilized capacity equivalent to that required to
fly 46 million people an average distance of 1,000 miles!"\footnote{193}

As a partial answer to the unutilized seat miles problem, Professor
Sackrey quoted a recommended decision of a CAB Hearing Examiner
that "U.S. citizens have not demonstrated any solid preference for U.S.
flag services over those offered by foreign competitors."\footnote{194} Statistics sup-
port this observation. Air passenger travel between the United States and
foreign countries increased from 2,643,000 in 1956 to 9,780,000 in 1966.\footnote{196}
However, the U.S. flag airlines' share of the market decreased from 66.7
per cent in 1956 to 51.5 per cent in 1966.\footnote{196} International air carriage of
freight shows similar decreases. The average revenue per ton mile of
freight carried by the U.S. flag airlines decreased from 30.88 cents per

\footnote{191} See Dockser, Airline Service Abandonment and Consolidation—A Chapter In the
\footnote{192} S. Lawrence, supra note 181, at 216.
\footnote{193} Sackrey, Overcapacity in the United States International Air Transport Industry, 32
J. Air L. & Com., 24, 69 (1966). Mr. Herbert Elish, Administrative Assistant to the Chair-
man of the CAB, commented on May 5, 1967, before a seminar on the CAB and the Adminis-
trative Process at the George Washington Law School, that unutilized seat mile evaluation
can be misleading, and that a more valid conclusion can be reached by comparing operating
revenues. Such a comparison shows operating revenues for international and territorial
airlines in 1956 totaled over $471 million, while in 1963 the total exceeded $1 billion. Air
Transport Association of America, supra note 144, at 31.
\footnote{194} Sackrey, supra note 193, at 73.
\footnote{195} Air Transport Association of America, supra note 144, at 41.
\footnote{196} Id.
mile in 1956 to 19.91 in 1966, for a total decrease of 35.5 per cent.\textsuperscript{197} Domestic freight revenues, on the other hand, decreased from 20.66 cents per mile to 20.21, or a decrease of only 2.2 per cent.\textsuperscript{198} Since international U.S. flag air carriers are not limited in their route structure to international markets, and generally operate profitable domestic routes as well, the CAB is provided with further flexibility in this integrated route structure. Any increase in domestic profits, in excess of an approved domestic ratio of return, but insufficient to cover international need, can be offset against probable international losses.\textsuperscript{199}

Notwithstanding legislative and operational limitations, the subsidized American flag operator has retained a substantial share of the higher valued water-borne commerce by building and operating more high speed vessels than all other maritime nations combined. The more modern and faster American flag vessel obtains more valuable cargo shipped at higher rates.\textsuperscript{200} New shipping concepts, such as containerization, sea barge carriage, and surface effect ships, provide the subsidized operator with more effective tools to compete with foreign flag lines for the water-borne foreign commerce of the United States.\textsuperscript{201}

\textbf{IX. PROPOSALS}

In concluding this comparative study of sea and air subsidies, it should be noted that the subsidy program has been successful in providing the United States with the most modern (and still privately owned) air and ocean transportation systems in the world. This result is an essential ingredient of the complex and highly organized American economy. However, past accomplishments should not thwart efforts to continue these attainments through new cooperative institutions and revitalized enterprise so as to reduce the cost to the Government. The proposals offered by various writers in the air industry and by respective maritime groups properly reflect this effort.

The study has also revealed striking differences. They relate not so

\textsuperscript{197} Id. at 40.
\textsuperscript{198} Id.
\textsuperscript{199} Trans World Airlines, Inc., Mail Rates, Order No. E-22022 (1965), 34-35.
\textsuperscript{200} Foreign flag lines average \$30 revenue per deadweight ton carried while the average revenue earned by the subsidized American flag operator amounts to \$45 per ton. Committee of American Steamship Lines, Progress of the U.S. Liner Fleet Under the Merchant Marine Act, 1936 (1964).
\textsuperscript{201} Upon introduction of the containerization program the MSB had required a separate recapture accounting provision so that the Government could share in the higher profits. The MSB subsequently reversed itself on the grounds that separate recapture was illegal. Lykes Bros., Request for Construction Differential Subsidy, Docket A-30, (1967). See Wall St. J., May 9, 1967, at 18, col. 1 (editorial); N.Y. Times, May 11, 1967, at 93, col. 1.
much to the basic policies of the MSB and the CAB in reducing subsidy payments wherever technology and opportunity permit, but to the statutory authorities and operational institutions through which the administrative determinations by the respective agencies must be made. The parity concept found in the Merchant Marine Act of 1936 has remained intact for 31 years, notwithstanding its severe limitations upon MSB discretion in promulgating procedures to determine the amount of subsidy payments. As we have seen, the parity concept is an extremely cumbersome, expensive and complex principle to administer and determine. It not only requires the assimilation of a massive array of facts which must be evaluated and refined into a formula to arrive at a rate of subsidy, but is further complicated by the requirement that where there is a dispute as to the applicable rate and a hearing results, an oath of secrecy regarding this data will be imposed. More important, however, is the inescapable fact that there is no built-in provision in the Merchant Marine Act to provide an incentive for "efficiency and frugality." Recognizing this deficiency, the Interagency Maritime Task Force, after a careful study and evaluation of maritime subsidy programs, proposed that: "The subsidy rate (that is, cents of subsidy per dollar of revenue), would be calculated from average industry cost parity experience in the trading area or areas served. The subsidy would be paid at a different rate per dollar of revenue in the different areas, based on average recent U.S.-to-foreign cost differentials on the routes encompassed by the areas." This proposal represents a modification of the CAB "need" theory and has the advantage of providing a framework within which the subsidized ocean-going operator can effectively demonstrate "efficiency and frugality." The inherent limitation of this proposal is that its adoption would retain the requirement of accumulating detailed cost data and formula-making since it merely eliminates individual route determinations. Administrative parity determinations would still be substituted for market place judgments.

Various other proposals to change operating differential subsidy deter-

202. The Rules of Practice and Procedure of the MSB are codified at 46 C.F.R. §§ 201.1-01.186 (1967). Section 201.151 provides: "Upon objection to public disclosure of any Information sought to be elicited during a hearing, and a showing of cause satisfactory to the presiding officer, the witness shall disclose such information only in the presence of the presiding officer, official reporter and such attorneys or representatives of each party . . . after all present have been sworn to secrecy."

minations have been made, ranging from a payment to provide a reasonable rate of return to relating wages of American seamen to U.S. shoreside occupations. Such proposals fail to delimit a ship replacement procedure and do not consider the dual competitive nature of the American merchant marine.

One possible answer to the subsidy dilemma is to open the program to competitive bidding by all American flag vessels. The MSB has recognized that "unfortunately the differential character of the operating subsidy program, while providing assistance to the carriers, does not appear to furnish a sufficient incentive for the U.S. flag carriers to increase their participation in U.S. foreign commerce." Initially, the Board can determine, upon proper statutory authorization and the expiration of existing contracts, the number of carriers and the amount of voyages required to carry a "substantial portion" of the foreign water-borne commerce of the United States on, for example, Trade Route 10. The Board can then request bids from all existing Trade Route 10 carriers on the amount of subsidy required. To avoid the historical practice of bidding at a loss and forcing an efficient operator out of service, the Board can require submission by the operator of its actual costs incurred and revenues actually earned in the preceding year, plus its estimate of costs to be incurred and revenues to be earned for the bidding year. The average of the amounts representing costs and the average of the amounts representing revenue, plus reasonable profit, will represent

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204. S. Lawrence, supra note 181, at 153 n.58.
205. The subsidized operator must not only compete with other American flag carriers on routes with double and triple tracking, but also with non-subsidized operators and various foreign flag competitors.
206. United States Lines, Subsidy Route 12, Docket No. S-147, 5 SRR 151, 157 (1964). The Secretary of Commerce has recently noted that "subsidy does not guarantee profits nor does it assure that there will be no losses." Moore-McCormack Lines, Reorganization Proposal, 5 SRR 137, 139 (1964).
207. The average operating differential subsidy contract is for a period of 20 years and has been in effect since 1950. In addition to the original 63 contract pages, it has been amended from time to time by an additional 170 addenda.
208. Trade Route 10 is traffic between U.S. Atlantic ports and ports in the Mediterranean and Black Seas, Portugal, Spain and Morocco. The following American flag carriers provide service on Trade Route 10:

- American Export Isbrandsten Lines (Subsidized)
- American President Lines, Ltd. (Subsidized)
- Prudential Lines Inc. (Subsidized)
- Central Gulf Steamship Corp. (Unsubsidized)
- Isthmian Lines, Inc. (Unsubsidized)
- Levant Line (Unsubsidized)
- States Marine Lines, Inc. (Unsubsidized)
- Waterman Steamship Corporation (Unsubsidized)
the operator's bid. The operator with the higher revenue total and lower cost total would require the lesser amount of subsidy and would provide the service for Trade Route 10. Double and triple tracking would continue where the Board determines the traffic warrants the service of two or three subsidized lines. The unsuccessful operator would be induced to lower its costs and increase its revenues for the next bidding period which will be reflected in its subsequent bid price. The same procedure can be carried out on all existing essential trade routes. It would provide the efficient operator with sufficient funds to compete effectively with his predominant foreign competitor and at the same time compete effectively with his American flag competitor for subsidy. This procedure would effectively provide the spark which competition normally instills in American business enterprise.

The ship replacement subsidy program would continue, distinct from the operating subsidy but recognized for what in fact it is: a subsidy to American shipyards. Construction subsidy payments would include an amount sufficient to undertake full development of marine technological innovations. Through design simplification and an effort by cognizable government agencies to redelegate their regulatory and inspection responsibilities to one agency, savings could be effected and utilized to exploit these innovations more fully.

The bidding procedure can also be applied by the CAB in marginal markets. Under the revised rate formula, relating subsidy payment to city pairs, unprofitable traffic routes can now be localized and identified. Upon the designation of these routes and subsequent determination by the CAB as to the amount and extent of air service required to promote "adequate, economic, and efficient service by air carriers at reasonable charges without unjust discrimination," invitations can be issued to bid for the amount of subsidy required to provide air services to these points. The rationale of the CAB for its recently announced policy of substituting internal subsidy for direct Government aid is questionable.

The following is a typical local air carrier certification:

North Central Airlines, Inc., is hereby authorized, subject to the provisions hereinafter set forth, the provisions of Title IV of the Federal Aviation Act of 1958, and the orders, rules, and regulations issued thereunder, to engage in air transportation with respect to persons, property, and mail, as follows:


C.A.B. Certificate of Public Convenience and Necessity (as amended) for Route 86, North Central Airlines, Inc. (issued pursuant to C.A.B. Order No. E-24731 (1967)).
Since the national policy requires an adequate, economical and efficient air service, the nation should pay for it. Certainly the passengers in dense markets should not bear the cost of carrying out national policy. Under the bidding procedure, the nation would receive these required services at the lowest possible price.

Legislative and administrative acceptance of the bidding procedure will undoubtedly result in the elimination of inefficient air and ocean carriers. Such a loss would result in a somewhat leaner but more capable ocean-air transportation system, undertaking with "efficiency and frugality" the realization of the national policies enunciated in the Federal Aviation Act and the Merchant Marine Act.

APPENDIX

The principal components of the new formula are as follows:

A. The sum of the following expense provisions:
   (1) $2,000,000 per carrier;
   (2) $18,000 per station;
   (3) $18 per weighted departure;¹
   (4) 2.00 cents per available seat-mile;²
   (5) $3 per originated passenger;³ and
   (6) 19.0 cents per revenue ton-mile.⁴

B. Less: The revenue requirements of:
   (7) 6.00 cents per revenue passenger-mile;⁵ and
   (8) $5 per originated passenger.⁶

C. Less:
   (9) A fixed percentage of each carrier's subsidy computed pursuant to A and B above.⁷

D. Plus or minus:
   (10) A dollar adjustment based on measuring each carrier's subsidy computed pursuant to A, B, and C, above, against its own adjusted subsidy need for the base period. The subsidy payable is adjusted by 70 per cent of the difference to increase payments to those

¹. Departures are weighted as follows: DC-3 and Nord-262 at 1.000; and all other equipment types at 1.7000.
². Available seats are based on 24 seats for DC-3 and Nord-262; and 40 for all other equipment types (including jets). Appropriate provision would be made for aircraft types smaller than the DC-3.
³. Derived from required passenger loads as follows: DC-3 and Nord-262, 6-8 for 1-2 round-trips; all other equipment, 13-17 for 1-2 round-trips.
⁴. Id.
⁵. Id.
⁶. Id.
⁷. The percentage for each carrier is derived from a curve fitted to passenger revenue per route-mile as experienced in the year ending June 30, 1966.
carriers for which the computed subsidy is less than the adjusted need and conversely to reduce it in those instances where the computed subsidy exceeds the adjusted need.

E. The total cumulative subsidy otherwise due and payable to each carrier pursuant to A, B, C, and D, above, could not exceed ceilings established for each carrier.8

The total cumulative subsidy otherwise due and payable to each carrier pursuant to A through E, above, shall further be subject to a revenue growth adjustment, as follows:

(11) The adjustment to each carrier's subsidy for revenue growth realized from its system operations as measured against the revenues realized in the base year9 will be 15 per cent of gross system passenger revenue growth less cost offsets as follows:

2.00 cents per increased standard available seat-mile10 and

$3.00 per increased originated passenger.

The increases are to be measured against the standard available seat-miles and originated passengers realized in the year ended June 30, 1966. Provided, however, that the percentage of recognized increased seat-miles shall not exceed the percentage growth in system passenger revenues less 15 percentage points.

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8. The established ceilings are set forth on the estimated subsidy rate for each individual local-service carrier as the gross computed subsidy.


10. For the purpose of the revenue growth adjustment available seats are based on 24 seats for DC-3 and Nord-262, 40 seats for all other piston and turbo-prop equipment larger than DC-3, 50 seats for BAC-111 and DC-9 equipment, and 60 seats for B-727 equipment. Appropriate provision would be made for aircraft types smaller than the DC-3.