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# THE PARTICIPATION OF THE UNITED STATES IN WORLD AIR TRANSPORT: STATISTICS AND THE NATIONAL INTEREST

BY OLIVER J. LISSITZYN†

IN recent years, much concern has been expressed in the United States about what appears to be a continuing decline in the United States' share of world air transport activity. This concern, enhanced by a deterioration in the financial position of U.S.-flag international air carriers in 1961, has begun to have a palpable effect on American air transport policy, tending to modify it in the direction of greater restrictions on the opportunities of foreign air carriers to serve the United States international travel market. The evidence adduced for the decline in the United States share of world air transport activity has consisted generally of two sets of statistics: (1) The number of passengers arriving in and departing from the United States by U.S.-flag and foreign-flag air carriers; and (2) the number of passengers travelling across the North Atlantic between the United States and Europe by U.S.-flag and foreign-flag air carriers.<sup>1</sup>

But how significant are these statistics? What are their limitations? What bearing do they have on the national interest? Are there other, and possibly more significant, statistical data? And if the share of the United States in world air transport activity is, indeed, declining, do the statistics help us to understand the causes of this decline? There has been, so far, little public discussion of these questions. Yet the answers to these questions may well be relevant to a reconsideration of the international air transport policy of the United States<sup>2</sup> and thus to the direction of development of the international law of civil aviation.

The first set of statistics—that of the number of passengers arriving in and departing from the United States by air—appears in monthly, semi-annual and annual (fiscal year) reports of the U.S. Immigration and Naturalization Service (INS).<sup>3</sup> These reports contain figures not only on the nationality of the carriers, but also on the passengers, distinguishing United States citizens from aliens. They thus supply information pertinent to the suggestion that “the long run goal for American flag airlines should be to carry approximately the same percentage of total international air passengers as is represented by the percentage of U.S. citizens to total travelers” (that is, of travelers to and from the United States).<sup>4</sup>

The statistics contained in the INS reports for the period 1948-1961 can be summarized as follows:

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<i>Fiscal Year (ending June 30)</i>	<i>Number of Passengers Arriving in or Departing from the United States by Air</i>	<i>Proportion of U.S. Citizens to Total Arrivals and Departures by Air (percent)</i>	<i>Proportion of Arrivals and Departures by U.S.-Flag Air Carriers to Total Arrivals and Departures by Air (percent)</i>
1948	943,419	57.7%	75.6%
1949	1,057,750	59.5	74.8
1950	1,094,628	62.7	74.7
1951	1,335,244	64.6	70.9
1952	1,529,341	63.9	68.1
1953	1,714,618	65.9	67.2
1954	1,852,722	66.1	66.4
1955	2,205,810	68.1	68.3
1956	2,642,939	68.6	66.7
1957	3,052,796	66.7	62.6
1958	3,402,333	66.0	60.3
1959	4,063,964	64.3	58.0
1960	4,576,425	63.0	54.7
1961	4,954,311	61.2	49.6

The INS statistics, however, are not complete. Several types of air travel are not included.<sup>5</sup>

(1) The most notable omission is that of transborder air travel on flights originating or terminating in Canada. Such travel has been heavy. Canadian sources indicate that the number of passengers flying between the two countries in both directions rose from approximately 952,000 in calendar year 1955 to approximately 1,461,000 in 1959, and that the proportion travelling by Canadian air carriers rose from 48% in 1955 to 64% in 1959.<sup>6</sup> Most of the other passengers flew by U.S.-flag air carriers, since the number travelling by third-nation air carriers has been very small. The share of U.S.-flag air carriers in trans-border air travel has thus declined steeply, and if the figures for such travel are added to those released by INS, U.S.-flag air carriers appear to have carried in 1959 little more than half of the total number of international air travellers to and from the United States.

(2) Air travel between Mexico and "land ports" in the United States was not included in the figures for the years preceding 1958.

(3) United States military personnel flying by commercial aircraft (as well as by military transports) are not included, although civilians carried in military transports are counted. By all indications, military travel by chartered and scheduled commercial aircraft has been heavy.<sup>7</sup>

Even more significant are certain other limitations of the INS statistics. First, they show the *number* of passengers, but not the *distances* travelled by them; thus, a passenger flying from Texas to Mexico or from Miami to Nassau counts for as much as a passenger travelling from India or Australia to New York. These statistics, therefore, do not indicate the productive capacity (e.g., in available ton-miles) or the sales of this capacity (e.g., in revenue ton-miles) of the airlines concerned. Secondly, they do not include cargo and mail traffic, which is of appreciable signifi-

cance in terms of tonnage and airline revenues. Thirdly, they may distort the impression of the relative standing of U.S.-flag and foreign-flag airlines in world air transport by including passengers carried by a foreign airline between the United States and a third country (e.g., by Air France between New York and Mexico), but excluding passengers carried by a U.S.-flag air carrier between two foreign countries (e.g., by Pan American between Paris and Rome).

Taken together, all these limitations make the INS statistics a rather unreliable indicator of the share of the United States in world air transport activity.

Similar limitations impair the significance of the other frequently cited set of statistics—that of passengers travelling over the North Atlantic between the United States and Europe. These statistics, derived from compilations by the International Air Transport Association (IATA), have been published in the annual Air Transport Progress issues of *American Aviation* (before 1959) and *Airlift* (since 1959) and in other periodicals.<sup>8</sup> For 1946-1949, similar statistics were collected and published by the U.S. Civil Aeronautics Board.<sup>9</sup> The share of the U.S.-flag air carriers in the number of revenue passengers travelling by scheduled air services over the North Atlantic (including the so-called "Polar" route) between the United States and Europe, as shown by IATA statistics, has fluctuated as follows:

Calendar Year	Share of U.S.-Flag Air Carriers (percent)
1948	68.1%
1949	65.4
1950	59.5
1951	53.5
1952	50.6
1953	51.5
1954	52.5
1955	53.8
1956	52.4
1957	48.4
1958	41.6
1959	40.0
1960	39.8

During this period, the total number of passengers flying on the route has increased tremendously—from 211,139<sup>10</sup> in 1948 to 446,293 in 1953 and 1,534,346 in 1960.

In addition to sharing some of the defects of the INS statistics, such as ignoring the factor of distance, these figures have some of their own. First, these figures relate to only one of the major international air transport markets. The fluctuations in the North Atlantic traffic do not necessarily correspond to those in the other markets. Secondly, these statistics do not include the traffic of the sole non-IATA carrier performing scheduled services across the North Atlantic—Icelandic Airlines, which was reported to have carried more than 40,000 passengers in 1960, as contrasted with 1,748 in 1952, its first year of operation.<sup>11</sup> The addition of this traffic reduces the proportion of North Atlantic passengers travelling

by U.S.-flag airlines. Thirdly, they do not include passengers carried on non-scheduled (charter) flights. The number of such passengers was 129,000 in the six months from April to September 1960.<sup>12</sup>

With all their limitations, the two sets of statistics agree in suggesting that the share of the U.S.-flag air carriers in the number of passengers travelling to and from the United States, after an initial post-World War II decline, began to rise slightly after the Korean War, reaching a secondary peak around 1955, but has declined rapidly thereafter. The INS figures also indicate that the share of the U.S.-flag air carriers in the traffic exceeded the proportion of United States citizens among the passengers before 1956, but has fallen below it since then, despite a decline in the latter.

But to what extent are these statistics and facts relevant to the national interest in air transportation? This interest is complex. It includes economic, military and political considerations.

From the economic point of view, air transportation is an increasingly important means of travel and communication. It also provides gainful employment for labor and capital, directly and indirectly. International air transportation, moreover, enters into the international balance of payments in a variety of ways. It is a service that can be sold abroad, and may be regarded, to that extent, as an item of export; it provides a market for aircraft and accessory equipment; and it stimulates travel and trade. There is a national interest in the proper performance by air transport of all these functions. But it is evident that such performance cannot be adequately tested by the share of U.S.-flag air carriers in air travel between the United States and foreign countries as measured by the number of passengers. Some of these functions have no direct or necessary relation to the magnitude of U.S.-flag international airline operations. American businessmen and travellers, for example, may find the services provided by foreign-flag air carriers adequate for their purposes on many international routes.<sup>13</sup> American labor and capital find gainful employment in domestic as well as international transport activities. American equipment is purchased by foreign-flag as well as U.S.-flag operators. The magnitude of U.S.-flag international airline operations, furthermore, is not adequately portrayed by percentages of the numbers of passengers carried to and from the United States. As already pointed out, such numbers do not indicate the distances flown, the magnitude of cargo and mail traffic, or the traffic carried by American airlines between foreign countries (Fifth Freedom traffic). The latter is particularly relevant to any appraisal of the role of air transport operations in the balance of payments. By carrying a passenger from one foreign country to another, an American-flag carrier may earn an amount of foreign exchange sufficient to offset the dollars which are earned by a foreign-flag airline when it transports an American citizen between the United States and a foreign country.

From the military point of view, commercial air transportation is primarily of significance as providing a reserve of airlift capacity for emergencies. All agree, however, that the critical wartime need will be for aircraft capable of carrying heavy cargo—a task for which passenger transports are generally unsuitable without time-taking modifications such as the installation of large cargo doors and strengthening of floors.<sup>14</sup> Statistics of numbers of passengers flown between the United States and

foreign countries are, therefore, of little relevance to the principal military interest in the capabilities of commercial air transport.<sup>15</sup> Such statistics, moreover, are an uncertain guide even to the personnel-carrying capabilities of the airlines, since they do not reflect the distances flown, and do not include the capacity utilized for Fifth Freedom traffic.

The political significance of air transport is rather elusive. It is widely assumed that a first-rate air transport industry enhances national prestige. In addition, the availability of rapid communication with far-away countries for diplomatic and other purposes may have political advantages. It is clear that statistics of the numbers of passengers arriving in and departing from the United States by U.S.-flag airlines are of little use in measuring the performance of these political functions by air transport. There is no necessary relation between the reputation of the United States in the more critical areas of the world, or the need for rapid communication with such areas, and the volume of air travel by U.S.-flag air carriers between, let us say, New York and Bermuda. The prestige of the United States abroad is more likely to be affected by such factors as the quality of American equipment and service, the nature of the relationships between the U.S.-flag air carriers and the peoples of the countries which they serve, and the contribution that air transport activities identified with the United States make to the satisfaction of the needs of such peoples. It cannot be denied, of course, that the financial condition of U.S.-flag air carriers may affect their performance abroad and thus the prestige of the United States. But this is only one of many relevant factors. Moreover, as suggested below, a decline in the U.S.-flag air carriers' share in passenger travel to and from the United States, or even in total world air traffic, need not lead to financial difficulties for the carriers, particularly if the total traffic maintains a healthy rate of growth.

Of very little relevance to the national interest in air transport is the comparison between the percentage of air travellers to and from the United States who are United States citizens and the share of all air travellers carried by U.S.-flag air carriers to and from the United States. The proportion of United States citizens among air travellers is likely to continue to decline, particularly if the United States is successful in its efforts to attract more foreign tourists. Yet this cannot possibly have any effect on, let us say, the military need for an airlift reserve, or on most of the other needs of the nation that air transport serves. These needs will not diminish simply because more foreigners fly to the United States. But the decline in the proportion of United States citizens among air travellers is probably a contributing cause of the decline in the share of U.S.-flag air carriers in the travel to and from the United States, since aliens tend to travel by foreign-flag airlines to a greater extent than do United States citizens.<sup>16</sup>

It should be clear that no one or two sets of statistics can suffice to measure the adequacy of the performance by the United States air transport industry of its national interest functions, or of the participation by the United States in world air transport activities. But if, nevertheless, it is desired to have some fairly simple indications of the fluctuations, in terms of capacity and revenue traffic, in the share of the United States in world air transport, perhaps the most meaningful figures are those published by the International Civil Aviation Organization (ICAO).<sup>17</sup> These

figures have the advantage of covering many types of traffic and services and of measuring the factors of distance and capacity as well as payloads. They show that the participation of the United States in the total international air transport services of ICAO members has fluctuated as follows:

Calendar Year	No. of ICAO Members Included	Available Ton-Miles, Scheduled Airlines, All International Services*, ICAO Members (In thousands)	Share of U.S.-Flag Carriers (percent)	Revenue Ton-Miles, Scheduled Airlines, Scheduled Inter- national Services, ICAO Members (In thousands)	Share of U.S.-Flag Carriers (percent)
1951	57	1,606,959	37.9%	1,016,755	37.2%
1952	58	1,828,826	38.1	1,147,796	37.4
1953	61	2,172,965	36.6	1,284,681	36.9
1954	65	2,443,292	37.8	1,404,240	38.8
1955	66	2,848,863	38.0	1,644,203	38.9
1956	70	3,311,337	38.3	1,939,282	38.9
1957	72	3,966,849	37.2	2,254,036	36.7
1958	73	4,605,067	35.2	2,507,319	34.6
1959	74	5,179,190	34.2	2,907,510	34.6
1960	83	6,527,373	31.8	3,542,645	33.4

\* Including non-scheduled services of scheduled airlines.

These figures show trends which are roughly similar to those indicated by the statistics previously examined—a slight rise after the Korean War to a peak in 1955 and 1956, then a decline. But the amplitude of the fluctuations in the United States share shown in the ICAO figures is smaller than that indicated by the other statistics. The actual decline in the United States' share of the air transport activities of all the countries which are now members of ICAO is, furthermore, likely to be even smaller than that shown by ICAO statistics, since the latter include, for later years, some countries newly admitted to ICAO whose share in international air transport activities was not included in ICAO figures prior to their admission.

The ICAO statistics of international air traffic further show that the United States remains far ahead of any other ICAO member in this activity. In terms of revenue ton-miles, the share of the United States in 1960—33.4%—was greater than the combined shares of four runners-up—the United Kingdom (14.1%), the Netherlands (6.9%), France (6.4%) and Scandinavia (4.5%). In terms of rate of growth since 1953, the United States was ahead of a majority of its main ICAO competitors:

Country	Traffic in 1960 as Percentage of Traffic in 1953	
	Available Ton-Miles, Scheduled Airlines, All International Services*	Revenue Ton-Miles, Scheduled Airlines, Scheduled International Services
United States	260.4	249.4
United Kingdom	301.9	257.5
Netherlands	228.2	226.4
France	176.7	155.9
Scandinavia	249.6	252.3
All ICAO members	300.4	275.8

\* Including non-scheduled services of scheduled airlines.

But how reliable are the ICAO statistics? They are based on statistical reports filed with ICAO by the member states, and such reports may contain inaccuracies. In some of the less developed countries, the techniques used in the collection of air transport statistics are far from perfect, and may produce figures which understate the magnitude of the operations of those countries' air carriers. Consequently, there may be a tendency in the ICAO figures to overstate the share of the United States in world air transport activities. But there is reason to believe that statistical coverage and accuracy in most countries are improving and are tending, to that extent, to reduce any under-reporting of foreign-flag operations and consequently any overstatement of the United States share.

The ICAO statistics have certain other limitations. The transborder traffic between the United States and Canada is not included in the figures for "international" traffic. More importantly, the ICAO statistics cover the air transport operations of ICAO members only, thus excluding those of the U.S.S.R., Communist China, and most of the smaller Communist-dominated countries (Hungary, Rumania, East Germany, Bulgaria, Albania, Mongolia, North Korea and North Vietnam).<sup>18</sup> Communist China's international air transport operations are still of small magnitude, but those of the Soviet Union have been growing rapidly since 1955. The official statistics of the traffic of Aeroflot, the Soviet airline, published in 1961<sup>19</sup> do not report international traffic separately, but its growth has been apparent, and suggests that the decline of the share of the United States in world-wide international air transport traffic has been steeper than that indicated by ICAO figures.

Another, much less important, limitation of ICAO statistics is the non-inclusion of the traffic of non-scheduled operators.

It has already been pointed out that certain of the functions of air transport, such as those of providing a field for gainful activity and a market for equipment, are performed by domestic as well as international operations. Domestic services and their equipment also have some military significance and may prove to be invaluable in national recovery efforts after a nuclear attack. Pertinent to any inquiry into the share of the United States in world air transport activities, therefore, are statistics of the United States' share of *all* air transport operations, domestic as well as international. Figures given in the ICAO Digest of Statistics No. 85 show that the share of the United States in the over-all (domestic and international) air transport capacity and revenue traffic of ICAO members has been as follows:



Calendar Year	No. of ICAO Members Included	Available Ton-Miles, Scheduled Airlines, All Services*, ICAO Members	United States Share	Revenue Ton-Miles, Scheduled Airlines, All Scheduled Services, ICAO Members	United States Share
		(In thousands)	(percent)	(In thousands)	(percent)
1951	57	4,542,284	60.6%	2,842,061	59.2%
1952	58	5,307,055	62.0	3,216,436	60.9
1953	61	6,264,028	62.6	3,642,680	61.3
1954	65	7,197,322	62.0	4,144,682	60.6
1955	66	8,417,573	62.7	4,839,308	61.6
1956	70	9,727,271	62.6	5,579,992	60.7
1957	72	11,472,748	63.0	6,276,168	60.0
1958	73	12,271,719	60.4	6,552,317	58.0
1959	74	13,775,975	60.5	7,502,638	58.5
1960	83	16,010,285	58.6	8,438,829	56.0

\* Including non-scheduled services of scheduled airlines.

These figures suggest that the United States is still predominant in world air transport activities, that a post-Korea peak in its share of these activities was reached in 1955, and that the decline in its share between 1955 and 1960 was not very great. The ICAO figures, however, do not cover the traffic of the U.S.S.R. and certain other Communist-dominated countries, as already mentioned. In the post-World War II period, Soviet air transport traffic statistics were first published in absolute figures (as distinct from rates of growth) in 1961.<sup>20</sup> These statistics indicate that the growth of Soviet air transport activities has been as follows:

Calendar Year	Millions of Ton-Miles Flown			Index of Total Ton-Miles (1955 = 100)
	Passengers	Cargo and Mail	Total	
1940	12.0	15.9	27.9	8.0
1950	74.0	95.9	169.9	49.0
1955	174.0	172.8	346.8	100.0
1958	397.0	273.6	670.6	193.4
1959	564.0	300.4	864.4	249.3
1960	750.0	385.5	1135.5	327.4

It may be noted that the Soviet traffic more than tripled between 1955 and 1960, while that of the United States (according to ICAO figures) did not even double, increasing from 2,982 million ton-miles in 1955 to 4,728 million in 1960.

The traffic of other non-ICAO Communist-dominated countries may be roughly estimated as follows:<sup>21</sup>

Countries	1955	1960
	Millions of Ton-Miles	
Mainland China	7	55
Mongolia, N. Korea, N. Vietnam	2	5
East-Central Europe	8	18
Total	17	78

It is apparent that the addition of the Soviet and other non-ICAO traffic to that reported by ICAO results in a considerable diminution in the

share of the United States in world air transport activities, and in a steeper decline of that share (from 57.3% in 1955 to 49.0% in 1960) than that suggested by ICAO figures alone. Soviet traffic, moreover, is likely to continue to grow rapidly. For the current Seven-Year Plan (1959-1965), the planned average annual increase in over-all ton-mileage is 29%.<sup>22</sup> If the plan is fulfilled—and in recent years Aeroflot has been generally successful in fulfilling its annual traffic increase plans—the Soviet traffic in 1965 will be close to 4 billion ton-miles. Nevertheless, the United States still remains far ahead of any other country in the volume of air transport operations, both domestic and international, and is likely to remain so through 1965.

It has been pointed out above that one of the functions of air transport—that of providing an airlift reserve—is most closely related to the capacity for the carriage of heavy cargo. The annual IATA figures for North Atlantic traffic, as well as ICAO figures, supply some indication of the relative position of the United States with respect to cargo-carrying capacity, although they make no distinction between heavy and light cargo:

Calendar Year	Share of U.S.-Flag Air Carriers in Tons of Cargo Carried by IATA Members Across North Atlantic between United States and Europe	Share of U.S.-Flag Air Carriers in Number of All-Cargo Flights Operated by IATA Members Across North Atlantic between United States and Europe	Share of U.S.-Flag Air Carriers in Revenue Cargo Ton-Miles, Scheduled International Services, ICAO Members	Share of U.S. Air Carriers in Revenue Cargo Ton-Miles, All Scheduled Services, ICAO Members
	(percent)	(percent)	(percent)	(percent)
1953	42.4%	42.4%	38.9%	51.9%
1954	40.1	43.2	41.4	50.4
1955	38.4	45.5	39.5	52.3
1956	42.4	65.1	42.4	53.3
1957	45.4	69.0	39.2	53.6
1958	44.1	67.1	36.4	51.9
1959	46.0	69.1	36.7	52.5
1960	44.1	65.5	34.3	50.1

These figures show that the United States share of cargo traffic carried by the airlines of ICAO members, after reaching a post-Korea peak around 1956, has somewhat declined. The ICAO and IATA figures do not include the cargo traffic of the non-scheduled operators, which is considerable.<sup>23</sup> They also do not include the cargo traffic of the Sino-Soviet bloc countries which are not members of ICAO. This traffic (including mail) may be estimated as follows:<sup>24</sup>

Countries	1955	1960
	(Millions of ton-miles)	
U.S.S.R.	172.8	385.5
Other non-ICAO bloc countries	7.5	35.0
Total	180.3	420.5

If these figures are added to the ICAO figures, the share of the United States in total world air cargo traffic appears to have declined considerably from 1955 to 1960, since the total air cargo traffic of the scheduled serv-

ices of the United States, domestic and international, was only 746 million ton-miles in 1960.

It is apparent that the share of the United States in world air transport activities, particularly in passenger traffic, has been declining since 1955. What have been the causes of this decline? Has it been due, as suggested by some, to an increasing encroachment by the large and efficient air carriers of certain small European nations—particularly the Netherlands and the Scandinavian countries—on the traffic between the United States and other European countries, in alleged violation of the Bermuda capacity principles? Or to cost disadvantages of U.S.-flag air carriers? The available statistics suggest some answers to these questions.

Trends in the distribution of the North Atlantic (including "Polar") passenger traffic between the United States and Europe among the foreign-flag IATA carriers serving the market are indicated by the following figures:

Carrier	Share of the Number of Passengers on Scheduled Services (percent)			
	1953	1955	1959	1960
BOAC	11.4%	8.8%	13.7%	12.3%
Air France	7.6	7.8	8.3	8.2
SAS	9.8	7.9	8.5	7.9
KLM	8.6	8.0	7.8	7.6
Lufthansa	—	1.2	5.5	6.4
SABENA	4.3	3.9	4.1	4.6
Alitalia-LAI	1.5	2.3	3.3	3.9
Swissair	3.4	3.8	3.8	3.7
Irish Airlines	—	—	1.8	1.9
El Al	1.9	1.3	2.1	1.8
Qantas	—	—	.5	.7
Air India	—	—	—	.7
Iberia	—	1.3	.9	.6

These figures show that contrary to a widespread impression, the two European air carriers—KLM and SAS—most frequently accused of encroaching on the traffic between the United States and third countries in Europe have not been even able to hold their own share of the North Atlantic market since 1953. These figures also show that the greatest inroads on the market have been made by the "younger" carriers, particularly Deutsche Lufthansa, the West German airline, and Alitalia, the Italian carrier. Other figures, cited above, suggest that the sole non-IATA air carrier in the market, Icelandic Airlines, has also made a large gain since 1953. The growth of the share of the German airline, which has been particularly striking, is easily explainable. Travel between the United States and Germany is heavy. The mere appearance of the new German airline in the market was bound to reduce the share of the U.S.-flag air carriers by attracting a substantial proportion of this travel to the new airline. A lesser but comparable effect is produced by the appearance of each new carrier. This conclusion is also borne out by the statistics of the international traffic of ICAO members:

Nationality of Air Carriers	Share of Available Ton-Miles, Scheduled Airlines, All International Services,* ICAO Members (percent)		Share of Revenue Ton-Miles, Scheduled Airlines, International Scheduled Services ICAO Members (percent)	
	1953	1960	1953	1960
	United States	36.6%	31.8%	36.9%
United Kingdom	14.6	14.7	15.1	14.1
Netherlands	8.7	6.6	8.4	6.9
France	10.1**	6.0	11.3**	6.4
Scandinavia (SAS)	5.6	4.7	4.9	4.5

\* Including non-scheduled services of scheduled airlines.  
\*\* Air France only.

These figures show that the share of the foreign nations with the older and larger air carriers has tended to decline even as has the share of the United States. They suggest that the imposition of new restrictions on the operations of KLM and SAS would not be an effective remedy for the decline in the United States share of world air transport activity.<sup>25</sup>

It is widely believed that part of the explanation of the decline of the United States share in the traffic between the United States and foreign countries lies in the special attractions that foreign-flag airlines have for many Americans. These attractions include the "glamour" of foreignness; the reputation for superior passenger service that certain foreign-flag carriers have; and the sentimental attraction that an airline flying the flag of a foreign country has for some Americans who have ties of ancestry or memory with that country. An offsetting factor, of course, is American patriotism and, most recently, the desire to help redress America's unfavorable balance of payments. The available statistics do not permit an evaluation of the importance of these factors. But it may be thought that the superior reputation for service that some foreign-flag airlines have somehow reflects cost differentials which are unfavorable to U.S.-flag air carriers. Lower costs, it might be suggested, enable foreign-flag airlines to offer superior service at no increase in fares.<sup>26</sup>

Do the U.S.-flag air carriers suffer a cost disadvantage in comparison with foreign-flag air carriers? Comparisons of the financial statements of companies of different nationalities are difficult because of differences in accounting practices and the artificiality of some currency conversions. More meaningful are comparisons among the *trends* of the unit costs of the various carriers, since the accounting practices of a particular company tend to remain the same from year to year. Financial statistics published by ICAO<sup>27</sup> reveal the following trends in the unit operating costs of the major airlines of ICAO members:

Carrier	Operating Expenses Per Revenue Ton-Mile (U.S. Cents)					1959 As Percentage of 1953
	1953	1955	1957	1958	1959	
Pan American	68.3	58.1	56.8	57.1	54.3	79.5%
Panagra	85.6	81.6	79.4	78.3	71.4	83.4
TWA*	75.9	70.7	69.2	68.5	57.1	75.2
Northwest*	74.5	55.9	49.1	46.4	50.7	68.0
Braniff*	87.6	78.4	69.5	73.9	71.5	81.6
BOAC	67.7	68.3	72.4	70.4	66.3	97.8
KLM	63.4	59.1	64.5	66.4	63.1	99.5
Air France	71.8	70.8	68.2	66.7	74.8	104.1
SAS	76.8	70.2	77.7	77.7	74.2	96.6
Lufthansa	—	160.9	94.5	89.6	90.4	—
Alitalia	**	**	74.0	75.3	69.2	—
SABENA	66.6	66.6	71.8	75.0	77.4	116.2
Swissair	71.1	66.4	62.3	63.4	69.6	97.9
Japan Airlines	68.9***	56.9	55.6	57.2	59.3	86.0***
Qantas	60.9	62.5	63.9	66.6	69.5	114.1
Air India	62.5	63.5	62.8	67.7	67.0	107.2
30 major inter- national carriers	70.5	65.1	66.7	68.2	64.4	91.3
All ICAO****	60.7	58.4	59.6	58.8	58.5	96.4

\* International services.  
 \*\* Not comparable.  
 \*\*\* 1954.  
 \*\*\*\* 1959 as percentage of 1954.  
 \*\*\*\*\* Including domestic services.

These figures suggest that the competitive position of the major U.S.-flag air carriers in terms of unit operating costs has been improving rather than deteriorating.<sup>28</sup> But financial statistics are lacking for most of the non-IATA carriers which have been able to operate at cut rates; it is possible that with respect to these carriers the position of the U.S.-flag airlines is not so favorable. The rapid increase in the transatlantic traffic of Icelandic Airlines, a non-IATA carrier, as well as the activities of certain other non-IATA carriers on routes to Central and South America suggest that the lower rates offered by these carriers are a factor in the decline of the United States share of world air traffic.

Published statistics,<sup>29</sup> furthermore, suggest that the competitive position of the U.S.-flag air carriers is not deteriorating in terms of efficiency, as very roughly measured by revenue ton-miles produced per employee:

Carrier	Revenue Ton-Miles Produced Per Employee			1960 As
	1953	1959	1960	Percentage of 1953
Pan American	15,795	26,070	29,516	165.1%
Panagra	12,143	20,144	23,763	165.9
TWA*	20,603	30,024	31,440	145.7
Northwest*	18,873	28,040	37,600	148.6
Braniff*	15,382	21,021	15,279	99.3
BOAC	7,853	12,427	14,754	187.9
KLM	7,965	11,859	13,141	165.0
Air France	9,450	13,311	13,859	146.7
SAS	9,872	11,648	11,977	121.3
Lufthansa	—	9,532	11,724	—
Alitalia-LAI	13,774**	16,628	17,442	126.6
SABENA	8,811	10,679	9,298	105.5
Swissair	10,805	13,186	13,075	121.0
Japan Airlines	—	20,956	23,819	—
Qantas	7,943	12,501	16,353	205.9
Air India	7,652	8,499	8,633	112.8
All IATA	13,029	17,249	18,178	139.5

\* Including domestic services.

\*\* 1953 figure derived from ICAO, Digests of Statistics Nos. 53 and 85.

Here, again, a comparison of trends is more reliable than comparisons among the various carriers in any one year, since some carriers prefer certain kinds of work to be done for them by independent contractors or other airlines, while others have the same kind of work done by their own employees. Company policies in this matter are not likely, however, to change very frequently.

The trends in the costs and efficiency of operation, revealed by the statistics given above, lend no support to the notion that a high degree of protectionism or reinstatement of direct operating subsidies for U.S.-flag international air services is imperative as a remedy for the decline in the United States' share of world air transport activities. As has been pointed out by some observers, this decline has come in a period characterized in the United States by two recessions and a general slowing down of the rate of economic development.<sup>30</sup> Here, indeed, may lie one of the deeper causes of the decline. The following figures show that among the major industrialized nations of the non-Communist world, the United States had one of the lowest rates of growth between 1953 and 1959 in terms of gross national product and export trade:<sup>31</sup>

<i>Country</i>	<i>Percentage of Increase in Gross National Product, 1953 to 1958</i>	<i>Percentage of Increase in Export Trade, 1953 to 1959</i>
France	57.9%	65%
West Germany	56.2	122
Netherlands	50.4	67
Japan	45.3	185
Italy	42.5	131
Sweden	38.8	50
Norway	37.8	53
Switzerland	35.7	51
United Kingdom	34.6	21
Canada	30.0	19
Denmark	29.8	53
Belgium	27.3	54*
United States	21.6	25

\* Including Luxembourg.

It is generally recognized that the rate of economic growth in the Sino-Soviet bloc has also been much higher than that in the United States.

To recapitulate: The decline in the share of the United States in the air transport activities of ICAO members since 1955, as measured by capacity and revenue traffic, has been too small and slow to warrant great alarm. But if the activities of the U.S.S.R. and other non-ICAO members of the Sino-Soviet bloc are added to those of ICAO members, the decline appears to have been steeper. It has been caused by a multitude of factors, including the following:

- (1) The rapid development of Soviet air transport.
- (2) The relatively slow growth of the American economy, and the recessions of 1958 and 1960.
- (3) The continuing increase in the number of foreign-flag air carriers, including those operating to and from the United States.
- (4) The decrease in the proportion of United States citizens among the travellers to and from the United States.
- (5) The special attractiveness of foreign-flag air carriers to some American citizens because of "glamour," reputation for superior service, or sentimental ties with ancestral lands.
- (6) The operation on some routes of low-rate services by non-IATA carriers.

Many of these factors will continue to operate in the foreseeable future, and some further decline in the United States share of world air transport activities may be expected.

As already mentioned, the concern caused in the United States by the decline in the United States share of world air transport activities has been enhanced by reports of a deterioration in the financial position of U.S.-flag air carriers in 1961. But there need be no connection between the two phenomena. As a matter of fact, since 1955 all of the major U.S.-flag international air carriers have ceased to receive direct subsidy from the United States—a fact which hardly indicates financial stringency. The rate of return on investment of U.S.-flag international airlines increased steadily from 1958 to 1960.<sup>32</sup> The deterioration in the

financial position of U.S.-flag air carriers in 1961 appears to have been related to two factors: (1) The business recession of 1960-1961 in the United States; and (2) overinvestment in new jet equipment which has led to severe drops in load factors in 1961. But these factors have affected foreign-flag as well as U.S.-flag carriers.<sup>33</sup> If traffic continues to increase, it will tend to catch up with the dramatic increase in capacity that followed upon the large-scale introduction of the jets in 1959-1961.

The national interest of the United States does require a healthy and growing U.S.-flag air transport industry. But the health and rate of growth of the industry do not necessarily depend upon the proportion of total world air traffic, or of traffic to and from the United States, that it carries, as the following hypothetical situations suggest. Suppose world air transport stops growing altogether, but the United States holds its own in terms of the proportion of the total traffic. This means a static situation—one in which U.S.-flag carriers have stopped growing while the nation's population and economic needs—and possibly military requirements for airlift—continue to increase. Suppose, on the other hand, that the total world air traffic grows at the rate of 20% a year, while the traffic carried by U.S.-flag airlines grows at the rate of 15% a year. This means that the *share* of the United States in world air transport activities continues to decline. Yet a traffic growth of 15% a year would probably assure, if properly managed, the financial health of the U.S.-flag carriers, and would mean a corresponding growth of their carrying capacity and therefore of their ability to serve the needs of the nation. Which of these two possible situations would be better from the standpoint of the national interest?

Preoccupation with the *share* of U.S.-flag air carriers in world air transport activities—or, more commonly, with their share in passenger travel to and from the United States—serves to divert much needed attention from the problem of assuring a healthy over-all rate of growth of world air transport. Yet, without such growth, the optimum development of the United States air transport industry is not likely to become a reality.

#### FOOTNOTES

<sup>1</sup> See, e.g., Bluestone, *Air Transportation—Some Nonregulatory Problems* (processed, U.S. Department of Commerce, October 30, 1959), 23-24; Stoffel, *American Bilateral Air Transport Agreements on the Threshold of the Jet Transport Age*, 26 *J.A.L.C.* 119, 130 (1959); *Air Transport Association of America, Facts and Figures About Air Transportation* (22nd ed., 1961), 10-11; U.S. Federal Aviation Agency, *Report of the Task Force on National Aviation Goals: Project Horizon* (September 1961), 106-117; *International Air Transportation Problems*, Hearing before the Aviation Subcommittee of the Committee on Commerce, U.S. Senate, 87th Congress, 1st session, September 22, 1961, pp. 22-29, 42-60.

<sup>2</sup> In October 1960 a \$300,000 U.S. Government contract was awarded jointly to two economic research firms in Washington for "a broad study of international aviation problems" to aid "in developing new U.S. international air transport policies." *FAA News*, No. 141, October 25, 1961.

<sup>3</sup> U.S. Department of Justice, Immigration and Naturalization Service, *Report of Passenger Travel Between the United States and Foreign Countries* (processed).

<sup>4</sup> Bluestone, cited *supra*, n. 1, at 22, 27.

<sup>5</sup> For source, coverage and definitions, see U.S. Department of Justice, Immigration and Naturalization Service, *Circular of September 1, 1960, Report of Passenger Travel Between the United States and Foreign Countries*.



<sup>6</sup> Canada, Dominion Bureau of Statistics, Civil Aviation, 1955, 11; *ibid.*, 1959, 11; Canada, Air Transport Board, Origin and Destination Statistics, Mainline Scheduled Traffic Survey of Revenue Passengers, 1955-1959 (processed, May 1960), 186; letter from Mr. K. Studnicki-Gizbert, Head, Statistics Section, Economics Division, Department of Transport, July 12, 1961. These figures do not include traffic between Canada and Hawaii, and in some other respects may not be strictly comparable with the INS statistics.

<sup>7</sup> Cf., e.g., Department of Defense Appropriations for 1961, Hearings before the Subcommittee of the Committee on Appropriations, U.S. House of Representatives, 86th Congress, 2d session (1960), Part 4, pp. 489, 495; Military Air Transportation (1961), Hearings before a Subcommittee of the Committee on Government Operations, U.S. House of Representatives, 87th Congress, 1st session (1961), 44.

<sup>8</sup> E.g., in IATA [*Institut des Transports Aériens*] Bulletin. Cf. also Aviation Week, May 1, 1961, 41.

<sup>9</sup> See, e.g., U.S. Civil Aeronautics Board, Analysis of Transatlantic Passenger Traffic Outbound from and Inbound To New York Via United States and Foreign Scheduled Air Carriers, 1949 (processed).

<sup>10</sup> Passengers to and from New York, including non-revenue passengers. See source cited *supra*, n. 9.

<sup>11</sup> New York Times, July 13, 1961; Aviation Week, April 24, 1961, 45.

<sup>12</sup> U.S. Civil Aeronautics Board, Order No. E-16967, June 20, 1961, 4. In 1960, IATA carriers transported 158,978 passengers across the North Atlantic on charter flights, including those between Canada and Europe, as compared with 16,830 in 1953. IATA, World Air Transport Statistics, Year 1960 (1961 ed.), 36-39.

<sup>13</sup> Fears of discrimination by foreign-flag carriers against American business interests have not been borne out by the facts. Foreign-flag airlines are normally eager to earn dollars by attracting American passengers and shippers.

<sup>14</sup> The wartime traffic of the U.S. Military Air Transport Service is expected to consist of cargo to the extent of 70%. Cf., e.g., Department of Defense Appropriations for 1958, Hearings before a Subcommittee of the Committee on Appropriations, U.S. Senate, 85th Congress, 1st session (1957), 1114. Some "outsized" military cargo cannot be carried in commercial transport aircraft of most existing types.

<sup>15</sup> The position of the United States in world air transport with respect to cargo is further discussed *infra*.

<sup>16</sup> In fiscal year 1960, according to INS statistics, 63.7% of United States citizens arriving or departing by air travelled by U.S.-flag air carriers, as compared with only 39.6% of the aliens.

<sup>17</sup> ICAO, Digests of Statistics, Traffic (especially Digest of Statistics No. 85, Traffic 1947-1960, where revised figures for many years are given). For purposes of this article, metric units have been converted and some ratios computed.

<sup>18</sup> Czechoslovakia and Poland are members of ICAO and the statistics of their air transport operations are included in the ICAO figures. Yugoslavia became a member in 1960. Previously, Yugoslav statistics were reported in IATA Bulletin (before 1957) and IATA, World Air Transport Statistics (since 1957).

<sup>19</sup> See *infra*.

<sup>20</sup> U.S.S.R., Tsentralnoye Statisticheskoye Upravlenie pri Sovete Ministrov SSSR, Narodnoye Khozyaistvo SSSR v 1960 Godu (1961), 574. For purposes of this article, metric units have been converted, and passenger ton-miles have been calculated on the assumption that 1 passenger equals 200 pounds.

<sup>21</sup> The estimates here given, which include a judgment factor, are based on scattered official and press reports, including especially the following: Hungary, Central Statistical Office, Statistical Pocket Book of Hungary, 1960, p. 84; Rumania, Anuarul Statistic al R.P.R. 1961, pp. 284-287; People's China, September 16, 1955, p. 12; U.S. Consulate General, Hong Kong, Current Background (mimeographed), No. 429, November 26, 1956, p. 20; U.S. Consulate General, Hong Kong, Survey of China Mainland Press (mimeographed), No. 1450, January 15, 1957, pp. 7-8; Grazhdanskaya Aviatsia, 1958, No. 1, p. 12; *ibid.*, 1960, No. 2, p. 10, No. 6, pp. 11-12, and No. 8, p. 19; The Aeroplane and Astronautics, November 13, 1959, p. 470; Aviation Week, July 17, 1961, pp. 47, 52.

<sup>22</sup> Aviation Week, January 5, 1959, p. 29; Grazhdanskaya Aviatsia, 1959, No. 2, pp. 2-3. In 1961, it was announced that fares on some important domestic routes had been cut by an average of 15%. New York Times, December 2, 1961. This action must be contrasted with the upward trend of fares in the United States.

<sup>23</sup> IATA figures also do not include the cargo traffic of Icelandic Airlines, a scheduled non-IATA carrier, which was less than 250 tons in 1959 and 1960, as contrasted with a total of 46,032 tons for the IATA carriers in 1960. See Airlift, February 1960, pp. 34-35; Aviation Week, September 19, 1960, p. 45.

<sup>24</sup> See sources cited *supra*, notes 20 and 21.

<sup>25</sup> Even if such restrictions should serve to reduce the volume of traffic flown by these carriers between the United States and third countries, there is no assurance that U.S.-flag air carriers would be substantially benefited thereby. Other foreign-flag carriers would be the most likely beneficiaries. A passenger who, in the absence of restrictions, would fly from the United States to Europe by KLM or SAS, thereby indicating preference for a foreign-flag carrier,

is more likely, if prevented from flying by KLM or SAS, to choose another European airline than a U.S.-flag carrier.

<sup>26</sup> Cf., e.g., Williams and Bluestone, *Rationale of Federal Transportation Policy* (U.S. Department of Commerce, April 1960), 32; *International Air Transportation Problems*, Hearing, cited *supra*, n. 1, at 43.

<sup>27</sup> ICAO Digests of Statistics Nos. 48, 55, 62, 66, 66A, 73, 79, 83, *Financial Data*; 15 ICAO Bulletin 174-175 (1960). For purposes of this article, metric units have been converted and certain ratios calculated.

<sup>28</sup> The trends of operating expenses per available ton-mile, not shown here, are very similar.

<sup>29</sup> See annual tables in IATA Bulletin (before 1957) and IATA, *World Air Transport Statistics* (since 1957).

<sup>30</sup> It will be noted that the steepest declines in the United States share of both international and domestic traffic occurred in 1958 and 1960—years characterized by recessions in North America but not elsewhere.

<sup>31</sup> U.S. Senate, Committee on Commerce, *The United States and World Trade: Challenges and Opportunities*, Sen. Report No. 446, 87th Congress, 1st session (June 26, 1961), 20.

<sup>32</sup> See Air Transport Association of America, *Facts and Figures About Air Transportation* (22nd ed., 1961), 21; U.S. Civil Aeronautics Board, *Quarterly Reports of Air Carrier Financial Statistics* (December issues for each year).

<sup>33</sup> SAS reported a net loss of approximately \$16.8 million in the fiscal year ending September 30, 1960. *Aviation Week*, July 10, 1961, p. 34. KLM had a net loss of approximately \$11.5 million in the first nine months of 1961. KLM, *Interim Report, Nine Months Ended September 30th, 1961*.