Journal of Air Law and Commerce

Volume 18

1951

Air Traffic Forecasting for the New York - New Jersey Port District - Part II

Alex L. Hart

Follow this and additional works at: http://scholar.smu.edu/jalc

Recommended Citation

Alex L. Hart, *Air Traffic Forecasting for the New York - New Jersey Port District - Part II*, 18 J. Air L. & Com. 33 (1951)
http://scholar.smu.edu/jalc/vol18/iss1/3

This Article is brought to you for free and open access by the Law Journals at SMU Scholar. It has been accepted for inclusion in Journal of Air Law and Commerce by an authorized administrator of SMU Scholar. For more information, please visit http://digitalrepository.smu.edu.

AIR TRAFFIC FORECASTING FOR THE NEW YORK–NEW JERSEY PORT DISTRICT — PART II*

By ALEX L. HART

Chief, Airport Planning Bureau, Department of Airport Development, Port of New York Authority, since 1948. Ph.D. *Formerly*, Director of Research and Planning with Eastern Air Lines, Inc., 1943-1948; research analyst with the Federal Reserve Bank of New York; research fellow and instructor in Economics at the University of Minnesota and The Pennsylvania State College.

INTRODUCTION AND METHODOLOGY

THE Port of New York Authority's air traffic forecast, completed last summer after almost eighteen months of intensive research and study, projected not only the volume of air passenger traffic to be expected at airports in the New York-Northeastern New Jersey Metropolitan Area but also the anticipated volume of air cargo and mail. The preceeding article in this series discussed the preparation of the passenger traffic forecasts. The present article will describe the construction of the cargo and mail estimates.

While the broad aspects of the methodology used in estimating the three different classes of traffic were the same, significant differences in handling of the material must of necessity be expected because of the nature of the problems involved.

At the present time roughly 80 percent of airport traffic is related to passenger travel. From a practical point of view, then, airport planning in the past has centered on the passenger aspects of airport development. The size of terminal buildings, the number of aircraft movements, the requirements for highways and parking lots, and the extent of hangar and related facilities are, for the most part, functions of air passenger volume.

Since the end of World War II rapid development has occurred in the air freight field. Long a by-product of passenger transportation, air cargo bids fair to stand on its own legs as an affiliated rather than a dependent operation. If the projection of passenger traffic requires understanding and acumen as concerns both air and competing intercity transport, the projection of air mail and cargo traffic demands imagination and vision in even greater measure.

The large terminal-type airport must plan separate facilities for the reception and dispatch of mail, express and freight. Furthermore,

* Continued from Autumn issue of JOURNAL, 17 J. Air L. & Com. 379 (1950).

since the present high cost of ground handling for these classes of traffic is one of the major factors in preventing more rapid development of mail and cargo services, new freight terminal facilities must be of the most modern and efficient type economically justifiable in the light of reasonably expectable traffic volumes.

As with passenger traffic, the cargo and mail forecasts involved a review of the total surface and air market, followed by an apportionment of the traffic between the two modes of transport, and finally by an estimation of the share of the national traffic to be handled at airports in the New York Metropolitan Area. The five approaches to forecasting outlined in the previous article were employed in arriving at cargo and mail projections.

However, the limitations imposed by the infancy of the air freight industry, and its relatively small size when compared with freight transportation generally, called for the imposition of considerably different emphasis within the framework of the over-all study. Of equal importance was the provision of a forecast methodology which would permit periodic review and revision in the light of rapidly changing air cargo and parcel developments.

Domestic and Overseas Air Cargo

In 1948 air cargo carried only two-hundredths of one per cent of the vast movement of freight within the United States. By far the greatest portion of this movement consisted of raw and unprocessed materials transported in bulk at low rates.

The market for air cargo is limited to goods which have a much higher value per pound than the raw and unprocessed materials which constituted the major part of this country's freight movement. It is restricted to that minor part of the total which moves over relatively long distances. It is further limited to goods and industries where speed can be translated into marketing and distribution benefits substantial enough to offset higher rates. Shipments moving by air for emergency reasons, of course, provide exceptions to normally controlling economic factors.

Some indication of the commodities which will constitute the backbone of the air cargo market is shown by the data in Table 16. The four major scheduled airlines received 36 per cent of their freight weight in the three important machinery categories, industrial and electrical machinery and automobile parts. Textile fibers and manufactures, including apparel, produced 18 per cent and printed matter another 9 per cent of the weight. The four non-scheduled carriers had 20 per cent of their traffic in the above-mentioned machinery categories, 20 per cent in nursery and greenhouse stock, and 18 per cent in textiles. This is the character of the air freight market today although it appears

that textiles, including apparel, and nursery and greenhouse stock have increased their relative position since 1948.

TABLE 16—DOMESTIC AIR FREIGHT COMMODITY PATTERN
(Percentage Distribution of Tonnage Shipped)
1948

Commodity Group	*Four Scheduled Airlines*	*Four Non-Scheduled Airlines*
Textile Fibers and Manufactures	17.9%	17.5%
Industrial Machinery	12.3	5.6
Automobile Parts and Machinery	12.1	10.2
Electrical Machinery	12.0	3.7
Printed Matter	9.3	2.0
Nursery and Greenhouse Stock	3.8	19.7
Metals and Manufactures	3.5	1.1
All Other Shipments	29.1	40.2
Total	100.0%	100.0%

Commodities moving by rail express, parcel post, freight forwarder, less-than-truckload, and less-than-carload provide a similar pattern and give further evidence of goods most eligible for transportation by air. Important among commodities moving by parcel post and rail express are automobile equipment and parts, electric household appliances, men's and women's apparel, drugs, perfumes, and cosmetics. Industrial commodities, of which more than half of the total volume is shipped by parcel post, express or freight forwarder, include clocks, jewelry and silverware, apparel, transportation equipment, and industrial leather.

Air cargo carries each of these commodities in varying degrees. However, most of the commodities forming a substantial part of present air traffic move in even greater volume on the competing services. It is clear that the future growth of air cargo will be closely related to increasing carriage of those commodities presently moving by air and a consequent further diversion of traffic from competing services.

In addition, a substantial portion of air cargo tonnage will consist of traffic movements made possible by the speed of air transportation. For example, agricultural perishables offer a promising market for development of such traffic.

The rate of growth of air cargo volume, in large part, is largely dependent upon reductions in the cost of providing the service. The major possibility for reductions in air cargo operating costs lies in the introduction of new and more economical aircraft. Improvement of ground handling and terminal operations also offers opportunity for future savings as volume develops. Additional factors that may permit cost reductions include all-weather flying, improvements in aircraft utilization, and the establishment of less restrictive operating standards — such as higher gross take-off weights — for cargo aircraft as compared with passenger aircraft.

Terminal expenses are high for air cargo shipment because of the ground transportation cost from the downtown business area to the airport together with the rehandling of cargo which this operation requires. In this respect air transportation is to be compared with the railroads in contrast with door-to-door delivery generally possible with truck operation.

Forecast of Domestic Air Cargo

In the past twenty years there has never been a period of air cargo volume decrease. Four periods of noteworthy increases are apparent — 1931, 1935, 1941-1942, and 1946-1948. The first two, although showing pronounced percentage increases, are related to extremely small tonnage. The third resulted from war-time traffic expansion. Postwar growth, reflecting the introduction of air freight services, witnessed annual increases ranging up to almost 200 per cent. It is believed these large percentage increases will not be seen again, and the diminishing rate of growth evidenced in the last few years is expected to continue. Cargo projections have been based on a 25 per cent increase for 1950, with a decline to 4 per cent by 1980. It is expected that the average length of haul of air cargo will remain relatively stable at about 1000 miles.

The New Jersey-New York District is presently loading about 28 per cent of the nation's originated air cargo tonnage. Since such traffic initially has been more highly developed on selected high density routes, it is not likely that this District will continue to enjoy its current high share. It is anticipated that the New York-Newark share will decline to 25 per cent by 1965 and 23 per cent by 1980.

The forecast of total domestic cargo to be enplaned is shown in Table 17 together with the forecast of domestic air cargo to be handled at New York and Newark Airports.

TABLE 17—FORECAST OF DOMESTIC CARGO MOVEMENTS
(Total Tons)
1950-1980

Year	*U.S. Total Enplaned*	*Port of New York Handled**
1949	169,400	72,400
1950	211,800	88,900
1965	778,200	291,800
1980	1,517,500	523,600
Per Cent Increase 1980 over 1949	795.8%	623.3%

* Port of New York air cargo handled on an inbound, outbound, and rehandled in-transit basis.

Overseas Air Cargo Traffic

The speed advantage to be gained through moving cargo by air is much more pronounced in overseas than domestic service. In addition

to the long haul nature of overseas traffic and consequent greater differentials in in-transit times, overseas air cargo offers a much greater frequency of schedules than boat and tends to eliminate trans-shipment on cargo consigned to inland destinations. Time savings can often be measured in terms of weeks. Fewer handlings and generally better stowage conditions frequently result in savings on packaging materials, tare weight of the shipments, and claims.

Air cargo has an additional advantage in that it is the only genuine overseas express service. No such service existed in overseas trade prior to the advent of the airplane. Although this is an obvious advantage, it also stresses the need for a long term promotional program. The scheme and tempo of merchandise distribution abroad has placed little premium on speed. Historical customs barriers, export and import regulations, and foreign exchange controls have played a major part in preventing that type of closely knit industrial integration which requires speed in transit.

Despite the likelihood that introduction of new and more efficient long haul aircraft will make possible a proportionately greater reduction in overseas than domestic air cargo rates, it is anticipated that overseas rates will remain substantially higher than domestic. More important, the wide divergence between overseas air cargo and overseas steamship rate levels will continue to present a major obstacle to all but minor diversion of total overseas tonnage.

Similar again to its domestic counterpart, overseas air cargo has competed for a wide variety of types of shipment, though due to the higher rate level it has been more restricted to small, high unit value, manufactured goods. Various types of textile shipments, machinery parts, and chemicals have supplied the bulk of air cargo exports while textiles, scientific equipment, nursery stock, furs, and jewelry constitute the greater part of imports. The concentration upon small, high value shipments in overseas air cargo is confirmed by a 1948-1949 sample survey of air cargo exports from the Port of New York, which showed a 38 pound average weight per shipment and an average value per pound of $7.43. About 35 per cent of the weight and 95 per cent of the shipments were in movements of under 100 pounds. The average value per shipment was $284.00.

Overseas air cargo, a rapidly growing young industry, is similar to domestic air cargo in that both carry but a small fraction of the vast movement of goods in their respective fields. Total foreign trade of the United States from 1923 to 1940 averaged 100 million tons annually. Commodities handled in bulk, such as petroleum, coal, and iron, comprise the major part of foreign trade cargoes. Although about 28 per cent of total United States foreign trade is classified as merchandise traffic, the approximate 25¢ per pound average value of this traffic as compared with over $5.00 per pound for air cargo indicates that only a small fraction of even this tonnage can be attracted to air cargo.

As with domestic air cargo, the rapid postwar expansion of overseas air cargo has been gradually subsiding. Volume has been continuing to increase but at a decreasing annual rate. A continuation of this trend is foreseen, with a gradual decline in the annual rate of increase from 21 per cent in 1950 to 4 per cent in 1980. The 1980 forecast of United States overseas air cargo is 303,500 tons, which amounts to seven-tenths of one per cent of the prewar level of general merchandise tonnage.

The New Jersey-New York Port District currently enplanes 21 per cent of the nation's overseas air cargo tonnage. From the point of view of dollar value of air cargo, the New Jersey-New York District has consistently ranked as the major port. With increased development of the relatively new trans-Atlantic air market, it is reasonable to expect that this Port District's share of national overseas air cargo will tend to increase during the near term future. Not only were air cargo services introduced later on trans-Atlantic routes, but unsettled political conditions have retarded the movement of all but emergency shipments. Air cargo to Latin America, on the other hand, is already well developed. Although it is not expected that the Port of New York's share of overseas air cargo tonnage will equal its share of overseas surface merchandise traffic, it is anticipated that the New York-New Jersey Port District will capture 25 per cent of the nation's overseas air cargo tonnage in the future.

The forecast of originated United States overseas air cargo is given in Table 18 along with the forecast of overseas air cargo to be handled at Port of New York airports.

TABLE 18—FORECAST OF OVERSEAS AIR CARGO MOVEMENTS
(Total Tons)
1950-1980

Year	*U.S. Total Originated*	*Port of New York Handled*
1948	36,000	7,700
1949	na	8,900
1950	50,800	11,200
1965	163,400	40,900
1980	303,500	75,900
Per Cent Increase 1980 over 1948	743.1%	885.7%

DOMESTIC AIR MAIL TRAFFIC

An analysis of mail potentials is particularly appropriate at this time in view of the recent inauguration of air parcel post service and because of the imminence of an "All-Up Policy" under which first class mail would be carried by aircraft rather than surface carriers whenever delivery would be expedited thereby.

Air parcel post was inaugurated in September 1948, and is now offered as a companion service to surface parcel post. Both services

compete with rail and air express for the well-developed and expanding volume of parcel traffic.

A good deal has been said in the last few years concerning the application of the "All-Up Policy" to the carriage of first class mail. Since mail traffic is a federal monopoly, a single decision by the appropriate federal agency could transfer all long haul letter mail from surface carriers to air carriers. In view of the proposals in this direction and in keeping with the historic policy of the Federal government in expediting letter mail, it is expected that all first class mail moving over 1,000 miles will go by air after 1960 and that all first class mail over 500 miles will so move after 1965.

Though mail volumes do reflect business fluctuations, there has been little or no relationship between mail and economic growth trends during the past two decades. Except for the depression years of the thirties, tons of mail per 1,000 population have remained relatively constant.

The lack of any substantial direct relationship with economic indices is attributable, in part, to the fact that a large portion of mail is personal in character and levels of personal income have little bearing upon the sending of a personal letter. The forecast of total domestic letter mail, of which air mail is a part, has been related, therefore, directly to population growth.

Forecast of New York City Domestic Air Letter Mail

The New York City share of surface letter mail tonnage has remained consistently at about eight per cent of the national total.[13] In the case of air mail, New York in the mid-thirties generated slightly over 13 per cent of total domestic air letter mail. Its share declined to 10 per cent in 1941 and to 9.8 per cent in 1949. It is evident that its share of all letter mail will, in the future, approximate its share of surface letter mail. Accordingly, it has been concluded that this City's share of total letter mail (surface and air) will remain at eight per cent during the period of this forecast.

In 1931 air mail penetration of total New York City letter mail stood at 1.2 per cent and has shown a gradual, steady increase to 3.6 per cent in 1941 and 6.1 per cent in 1949. Most of the City's air letter mail is concentrated in the higher mileage brackets. A survey of air mail interchanged between this City and 54 major cities indicates that air mail constitutes less than 2 per cent of letter mail under 500 miles but accounts for 22 per cent in the 500-1,000 mile distance bracket, 29 per cent in the 1,000-2,000 mile bracket, and 44 per cent over 2,000 miles.

As previously noted, the forecast has applied the "All-Up Policy" to letter mail moving over 1,000 miles in 1960 and to letter mail moving

[13] Based on Cost Ascertainment data for New York and Brooklyn Post Offices.

over 500 miles by 1965. This results in an estimated increase in air penetration of the New York City letter mail tonnage from the 6.1 per cent penetration in 1949 to 19 per cent in 1960 and 45 per cent after 1965.

The forecast of domestic originated letter mail for the nation and for New York City is given in Table 19, together with the air mail forecast for New York City.

TABLE 19—FORECAST OF DOMESTIC LETTER MAIL ORIGINATED (TONS)
1950-1980

	National	*New York City* *	
Year	*Total Letter Mail*	*Total Letter Mail*	*Air Mail*
1949	310,300	28,100	1,600
1950	314,500	25,500	1,700
1965	351,700	28,500	12,800
1980	384,800	31,200	14,000
Per Cent Increase			
1980 over 1949	24.0%	10.9%	772.9%

* Based on Cost Ascertainment data for New York and Brooklyn Post Offices.

Domestic Parcel Post

Small parcel traffic has evidenced consistent growth characteristics. Over the past two decades parcel volumes have been increasing more rapidly than population but more slowly than national income. Future parcel volumes have been projected on the basis of historical relationships with both population and economic indices. Account has been taken of the fact that changes in business practices and methods of distribution have in the past and are currently having substantial effect upon parcel traffic services. Increasing use of truck delivery for parcels moving short distances and bulk shipments of merchandise by mail order houses designed to take parcel deliveries out of the higher zone classifications are examples of negative influences on volume, while the increasing retail adoption of hand-to-mouth buying methods has been a positive influence. In net effect, however, these developments constitute no bar to continued parcel traffic growth.

In determining the share that parcel post will receive of the total small parcel traffic, major consideration has been given to recent trends in the division between express and parcel post services. Parcel post received 51 per cent of the total in 1929, declined gradually to 33 per cent in 1941 and then moved up to 45 per cent by 1949. Current rail express rate increases have changed competitive relationships and will cause some further diversion to parcel post. It is anticipated that parcel post's share of total small parcel traffic will fluctuate between 50 and 55 per cent.

Forecast of New York City Domestic Air Parcel Post

New York's prewar share of domestic parcel post volume averaged nine per cent. Since this City is a major distribution center, the impact of postwar rail express rate increases has been particularly noticeable. The New York share of parcel post rose to 10.2 per cent in 1948. A further increase to over 13 per cent in 1949 is to be attributed largely to railway express labor difficulties. In 1950 New York's share is expected to recede to 11.0 per cent followed by a gradual upward trend to about 12.0 per cent in 1980.

Only two-tenths of one per cent of national parcel post tonnage moved by air in the first year of air parcel post service. It is difficult to forecast future penetration on the basis of this limited experience. However, New York's status as a distribution center and its high volume of shipments suited to air transportation provide a favorable environment for air parcel post growth. Further, it is felt that the past relationship of air to rail express provides a reasonable basis for establishing a general level of expectancy for the City's air parcel post. Accordingly, air transport's share of New York parcel post has been based on the division of New York express as between air and rail.

In 1949 the airlines carried five per cent of total New York area express shipments and this penetration is expected to increase to 12 per cent by 1980. An equivalent penetration on a shipment basis for parcel post will result in the four per cent poundage penetration which has been used for forecasting purposes.

The forecast of originated parcel post for the nation as a whole and for New York City is given in Table 20 together with the air parcel post forecast for New York City.

TABLE 20—FORECAST OF DOMESTIC PARCEL POST ORIGINATED (TONS)
1950-1980

	National	*New York City*	
Year	*Total Parcel Post*	*Total Parcel Post*	*Air Parcel Post*
1949	3,600,000*	484,200*	900
1950	3,100,000	340,600	1,700
1965	3,800,000	439,700	11,000
1980	4,700,000	544,600	21,800
Per cent Increase			
1980 over 1949	29.5%	12.5%	2,322.2%

* Tonnage of parcel post in 1949 was abnormally high because of rail express labor difficulties.

Port Authority airports handle mail not only from the City of New York but also from an extensive surrounding area. In addition, much air mail matter passes through the airports and must be rehandled in transit. It is necessary, therefore, to combine letter mail and parcel post data and to translate them into terms of airport mail to be handled.

TABLE 21—FORECAST OF DOMESTIC LETTER MAIL AND PARCEL POST TO BE HANDLED AT PORT OF NEW YORK AIRPORTS
1950-1980

Year	*Total Tons*
1949	14,600
1950	17,600
1965	108,400
1980	125,400
Per Cent Increase 1980 over 1949	759.6%

OVERSEAS AIR MAIL TRAFFIC

To an increasing extent letter mail will be subjected to the competition of other forms of overseas communication and this will tend to hold down its rate of growth. Least affected, however, will be that part of overseas mail transported by air. This service experienced a gradual but substantial increase from 33 tons in 1932 to 368 tons in 1941. A tremendous upsurge occurred during the war, followed by a decline in volume with the return to peacetime conditions. About 5,000 tons of overseas air letter mail were transported during the year 1949.

Time savings inherent in air over surface transportation are unusually great in overseas movement due to both faster in-transit times and greater schedule frequency. These factors will continue to play a large part in obtaining for air services an increasing share of total letter mail. As early as 1942, 22 per cent of trans-Atlantic, 40 per cent of Latin American, and 50 per cent of trans-Pacific letter mail went by air transport; the national average was 36 per cent. In 1949 more than 65 per cent of the nation's overseas letter mail went by air.

Well before World War II many countries in Europe were moving first class mail under a single mail rate structure by either air or surface, whichever gave the earlier delivery. It is probable that the United States Government will soon adopt the "All-Up Policy" for the carriage of overseas mail. The forecast anticipates that all overseas letter mail will move by air beginning in 1955.

International air parcel post was initiated in March, 1948. It is offered as an expedited service, particularly adapted to the overseas movement of small packages. While this new service is destined to have a place, in the postal scheme for sample, personal, and other premium shipments, no great air penetration of the parcel post market can be expected due to a ten to one rate differential for the typical two pound shipment. As with domestic parcel post, it is anticipated that the greatest diversion will come from small shipments presently moving by air cargo and that by 1980 penetration will not exceed an estimated five per cent of total overseas parcel post.

intercity transportation in the nation as a whole, as well as to a study of competitive relationships between air and surface transport. It would appear well to summarize briefly the specific results of the study for all classes of air traffic — passengers, cargo, and mail.

The growth of air traffic during the coming thrity years will be stimulated by technological improvements in both aircraft and navigational aids. Turbo-prop and turbo-jet aircraft will make possible shorter flight times at lower fares.[14] Reduction or elimination of engine and propeller noises and vibration together with high altitude performance will mean great improvements in comfort. Airline operations will be freed from the vagaries of weather so that schedule dependability will compare favorably with that of surface carriers. At the same time, the safety record of the air transport industry will continue to improve.

The long term trend of increasing national income and population during the next three decades will mean an expanding national transportation market for both intercity passenger travel and commodity shipment. Thus, the growth in air traffic will result in part from (1) the increase in the national transportation market, and from (2) an increasing air share of this total market.

The domestic airlines in 1980 will account for 22 billion passenger miles of travel compared with 6.6 billion in 1949. By 1970 air travel will exceed intercity rail travel. Air transport will carry almost all of the common carrier passenger traffic moving beyond 1,000 miles and more than half of the traffic moving between 150 and 1,000 miles, but an insignificant part of travel under 150 miles.

Common carrier travel between the United States and other countries will double by 1980 and two-thirds of the travelers will use air services.

The New Jersey-New York Metropolitan District will maintain its position as the major air traffic center of the nation for the next thirty years, with air passengers in 1980 increasing to 2½ times the number in 1949, air cargo almost 7½ times, and air mail nearly 7 times.

For the nation as a whole, air cargo tonnage is expected to increase ninefold by 1980. The survey anticipates an "All-Up Policy" that would call for first class mail delivery by air when such delivery would be quicker than by surface transportation. Under such a policy, air mail tonnage would be multiplied seven times by 1980.

APPENDIX

Statistical data for Port of New York Airports for the year 1950 have now become available and permit a comparison of the first forecast year

[14] What is meant here is that airline fares and tariffs are expected to become more competitive with those of surface carriers, even though inflationary price increases may force all carriers to increase charges.

Forecast of Port of New York Overseas Mail

The New Jersey-New York Metropolitan District is the largest generator of overseas mail; more important, its Port acts as a gateway for the dispatch of the major portion of the country's mail to all of Europe, Africa, and the Near East. In addition, much mail for Latin America clears through its port. Before the war, about 75 per cent of all overseas letter mail and parcel post was processed at the Port of New York. Currently, about 72 per cent of overseas surface letter mail and 46 per cent of overseas air letter mail are processed through this city. As discussed in the chapter on overseas passengers, the relative decline in the importance of Europe as an American market and the growing importance of Latin America will tend to prevent New York from regaining its prewar share.

However, as the volume of overseas mail moves downward from the currently inflated postwar levels, the Post Office will find administrative and operational advantages in consolidation of services at fewer ports. This will serve to increase the portion of overseas mail handled through the New York Port. It is anticipated that by 1970 the New York-New Jersey District share of overseas letter mail and parcel post will stabilize at about 65 per cent.

The Port of New York air letter mail forecast has been based on application of the "All-Up Policy" by 1955, while the air parcel post forecast has been based on a five per cent penetration of total New York-Northeastern New Jersey parcel post by 1980. Combination of the forecasts for dispatched air letter mail and air parcel post, in terms of traffic to be handled at the airports, results in the following estimates of overseas mail traffic for the Port Authority airports.

TABLE 22—FORECAST OF OVERSEAS LETTER MAIL AND PARCEL POST TO BE HANDLED AT PORT OF NEW YORK AIRPORTS
1950-1980

Year	*Total Tons*
1949	4,000
1950	4,700
1965	4,900
1980	6,100
Per Cent Increase 1980 over 1949	52.1%

SUMMARY

A review of all the factors involved in the generation of intercity traffic makes it clear that the nation's transportation future depends basically on what the American economy will be like in the years ahead. Past trends reveal that traffic volumes and economic activity are closely related. The whole of this Forecast study has led, therefore, from an analysis of the state of the economy to a consideration of

with actual operating results. These figures include traffic reported by both the scheduled and irregular air carriers at La Guardia, Newark, and New York International Airports. Progress has been made by the airlines in all six service characteristics—dependability, safety, frequency, comfort, cost, and speed—with resulting improvements to airline service. However, the major factors in 1950 air traffic development have all stemmed from national defense activities, particularly in the last half of the year. The Forecast itself, was completed prior to the outbreak of the Korean conflict and represented a projection of long-range trends in the development of national and Port District air traffic over the next thirty years.

It is to be noted that National Income in the first half of 1950 was running above the long-term trend. While the Forecast anticipated a National Income of 223 billion dollars at 1949 prices for the year 1950, the Department of Commerce reports an Income for the second quarter of the year alone at an annual rate of 229 billion dollars.

Total New York-Newark airport passenger traffic for 1950 was 108 percent of the forecast volume. Domestic passenger traffic was 110 percent while overseas passengers were 97 percent of the forecast. The developments of the last six months related to stepped-up mobilization of the American economy have led to an increase in domestic travel volume considerably ahead of that which would have been expected in normal peacetime. The same elements have led to a curtailment of increases in overseas travel because of unsettled international conditions.

Airmail volume is running slightly behind the forecast. Domestic mail is 93 percent and overseas mail 95 percent of forecast respectively. Changes in the air parcel post rate structure and consequent higher charges for such air shipments effective in November tended to prevent the traffic of the last quarter from reaching its expected volume as far as air parcel post traffic is concerned. Volume of air cargo in 1950 was 103 percent of forecast. Domestic cargo was 104 percent of anticipated volume, overseas 94 percent.