

PSF: NELSON A. ROCKEFELLER

Box 177

Box [REDACTED]

177

3 items

Subject File
PSF: Nelson A. Rockefeller

report in file

PSF: Rockefeller ~~Folder~~

file
confidential

COUNCIL OF NATIONAL DEFENSE

COORDINATOR OF COMMERCIAL AND CULTURAL RELATIONS
BETWEEN THE AMERICAN REPUBLICS

MENT BUILDING
N. D. C.

June 14, 1941

Dear Mr. President:

I am sending you herewith a report on Latin American Air Transportation which has been compiled by Mr. Wm. A. M. Burden, our Special Consultant on Aviation. Mr. Burden is one of the country's leading specialists in the economics of air transportation and has spent several months in preparing this report. I believe that the report is the most comprehensive treatment of the subject of Latin American air transportation, both as regards basic historical and economic data and discussion of policy, available under one cover.

In order to get an accurate picture of the current problems in this critically important field, it has been necessary to include a considerable amount of confidantail material.

Sincerely yours,



Nelson A. Rockefeller
Coordinator

The President

LATIN AMERICAN AIR TRANSPORTATION

PREPARED FOR THE
COORDINATOR OF COMMERCIAL AND CULTURAL
RELATIONS BETWEEN THE AMERICAN REPUBLICS

BY WILLIAM A. M. BURDEN
SPECIAL CONSULTANT IN AVIATION

~~CONFIDENTIAL~~

PSF
Nelson Rockefeller

16

LATIN AMERICAN AIR TRANSPORTATION
(Preliminary)

Prepared for
the
Coordinator of Commercial & Cultural Relations
between the American Republics

by
William A. M. Burden
Special Consultant in Aviation

FOREWORD

Transportation facilities profoundly affect commercial and cultural relations between the American republics. The Coordinator has consequently made transportation an object of special study. Analyses of Latin American shipping, rail, and highway facilities have already been made.

This report in turn deals with air transportation facilities of the republics. It has been made considerably more comprehensive than would have been justified had it dealt with a long established mode of transportation on which numerous published monographs were available. It is in a sense a compilation of source material as well as a tentative analysis of basic problems.

The presentation is in effect a study preliminary to a more succinct final version. Criticism, both general and specific, will be welcome as an aid to this ultimate effort.

The study is divided into four main parts:

Part One "The Development of Latin American Air Transportation 1920-1941" presents a fairly detailed story of the growth of airlines with special emphasis on the factors which have created the problems confronting us.

Part Two "The Present Latin American Air Transportation System" is divided into two sections; "The Basic Position of the System", which treats operations from the traffic, economic and operational viewpoints, and "Analysis of Pan American Airways 1929-1940".

Part Three "Future Policy" outlines the major problems for which solutions must be found if the system is to fulfill the requirements of the United States and the other American republics. This part is divided into four sections; "Improvement of U. S. International Services", "Future Development of Local Services", "The Problem of Combatting Axis Air Transport Activities in South America", "Monopoly or Competition". Each section is designed to stand on its own feet as a more or less self-contained discussion and therefore repeats certain pertinent background material presented in previous sections.

Part Four "Suggestions" summarizes briefly the more important recommendations resulting from the study.

William A. M. Burden
Special Consultant in Aviation

June, 1941

ACKNOWLEDGMENT

The incompleteness, inaccuracy, and inconsistency of published material made it necessary to rely to a considerable degree on first hand information in the preparation of this report. Its completion on the present scale would have been impossible without the wholehearted cooperation of a large number of persons in government and in the aviation industry both in the United States and in Latin America. The assistance of Mr. Wm. Barclay Harding, Director of Aviation and Transportation of the Coordinator's Office, has been invaluable. It is only possible to mention here a few of the many others who have been especially patient and helpful.

Civil Aeronautics Board

Hon. Harlow Branch, Chairman
Mr. George P. Baker, Member
Mr. L. Welch Pogue, General Counsel
Mr. Samuel E. Gates, International Counselor
Mr. Walter E. Peck

Department of Commerce

Mr. Carroll L. Wilson, Director,
Bureau of Foreign and Domestic Commerce
Dr. Amos E. Taylor, Chief, International Economics Unit
Mr. Lew B. Clark, Acting Chief, American Republics Unit

The Library of Congress

Mr. Lewis Hanke, Director, The Hispanic Foundation

Department of State

Mr. Thomas Burke, Chief,
Division of International Communications

Pan American Airways Corporation

Mr. M. J. Rice, Executive Assistant to Mr. E. E. Young

Pan American-Grace Airways, Inc.

Captain Harold R. Harris, Vice-President

The Grace Line

Mr. Russell Gorman

American Export Airlines, Inc.

Mr. Dudley P. K. Wood, Vice-President

National Aviation Corporation

Mr. Frank F. Russell, President

Council on Foreign Relations, Inc.

Mr. Edgar P. Dean

Special thanks are due to my co-workers, Mr. F. C. Meltzer, Mr. William Keyes, and Miss Giulietta Talamini, for their loyalty and tireless effort and to my secretaries, Miss Emily Cale and Miss Alice Devereaux. A blanket acknowledgment must be extended to the literally hundreds of persons both here and in Latin America who have taken very considerable pains to obtain necessary information.

CONTENTS

PAGE

FOREWORD

ACKNOWLEDGMENT

PART ONE

THE DEVELOPMENT OF LATIN AMERICAN AIR TRANSPORTATION 1920-1941

I	LATIN AMERICA	1
	Geographic, Economic, and Cultural Characteristics - Foreign Trade and Transportation - Internal Trade and Transportation	
II	DEVELOPMENT PERIOD 1920-1934	7
	Pioneers Establish Local Services 1920-1927 - Companies Backed by European and U. S. Governments Develop Trunk Services 1928-1934	
III	PERIOD OF EXPANSION AND POLITICAL RIVALRY 1935-1941	40
	German Expansion 1935-1940 - The Rise of Nationalism 1935-1941 - Equipment Modernization and Expansion of the Pan American System 1935-1940 - Activities of Other European Nations	
IV	LATIN AMERICAN AIR TRANSPORTATION SINCE THE WAR	66
	Italy Establishes Rome-Rio de Janeiro Service December, 1939 - German Services in South America Hampered - Increased Traffic Strains Pan American's Facilities - Possible Competition	

PART TWO

THE PRESENT LATIN AMERICAN AIR TRANSPORTATION SYSTEM

I	THE BASIC POSITION OF THE SYSTEM	77
	Introduction - Coverage, Size, and Volume of Operations - Character, Distribution, and Volume of Traffic	
II	ANALYSIS OF OPERATIONS OF PAN AMERICAN AIRWAYS	107
	Comparison with European Air Transport Companies - Comparison with Operations of Other Latin American and U. S. Domestic Airlines	

	PAGE
PART THREE FUTURE POLICY	
INTRODUCTION	121
I IMPROVEMENT OF U. S. INTERNATIONAL SERVICES	123
Increase in Capacity of Service - Rates and Traffic Promotion	
II FUTURE DEVELOPMENT OF LOCAL SERVICES	133
Extent and Ownership of Present Local Networks - The Latin American Owned Air Transport Industry - What Part Should the United States Play in Local Air Transport Development?	
III THE PROBLEM OF COMBATTING AXIS AIR TRANSPORT ACTIVITIES IN SOUTH AMERICA	147
Axis Activities a Serious Threat to the United States - The Essentials of a Sound Anti-Axis Program	
IV U. S. AIR TRANSPORT POLICY AS APPLIED TO LATIN AMERICA (MONOPOLY OR COMPETITION?)	154
Past Policy - Future Policy - Conclusions	
PART FOUR SUGGESTIONS	
GENERAL	177
INTERNATIONAL SERVICES	178
Short Term - Long Term	
LOCAL SERVICES	180
Short Term - Long Term	
COMBATTING AXIS INFLUENCES	182

INDEX OF MAPS		OPPOSITE PAGE
I	(Population Distribution and Surface Configuration of	
II	(South America	2
III	Latin America - Pan American Highway and Principal Railroads	3
IV	Air Lines in Latin America - 1927	12
V	Air Lines in South America - 1934	35
VI	Air Lines in Mexico, Central America, and Caribbean Countries - 1934	36
VII	Air Lines in South America - 1941	83
VIII	Air Lines in Mexico, Central America, and Caribbean Countries - 1941	82
IX	Pan American Airways System - Passenger Traffic Flow - 1940	92
X	Air Mail Volume between the United States and Latin America	99
XI	New York to Buenos Aires - Shrinkage in Travel Time	130

PART ONE

THE DEVELOPMENT OF LATIN AMERICAN AIR TRANSPORTATION

1920 - 1941

I LATIN AMERICA

GEOGRAPHIC ECONOMIC AND CULTURAL CHARACTERISTICS AFFECTING LATIN AMERICA'S TRANSPORTATION SYSTEM

Latin America stretches from the Rio Grande southward to the Antarctic. Its total area of more than 8,000,000 square miles is roughly two and one-half times that of the United States but its population of 123,000,000, approximately 26,000,000 of whom are white*, is a little less than our own and only one-quarter the population of Europe. About three-quarters of the Latin American people live in South America, somewhat more than half the balance being in Mexico, with the remainder about equally divided between the West Indies and Central America.

The convenient term "Latin America" should not mislead one into the belief that the area is a uniform political or economic unit. It comprises twenty independent republics widely divergent in size, composition of population, social structure, type of government, and degree of economic development. Each country must be considered individually and any generalizations must be carefully qualified when applied to individual cases.

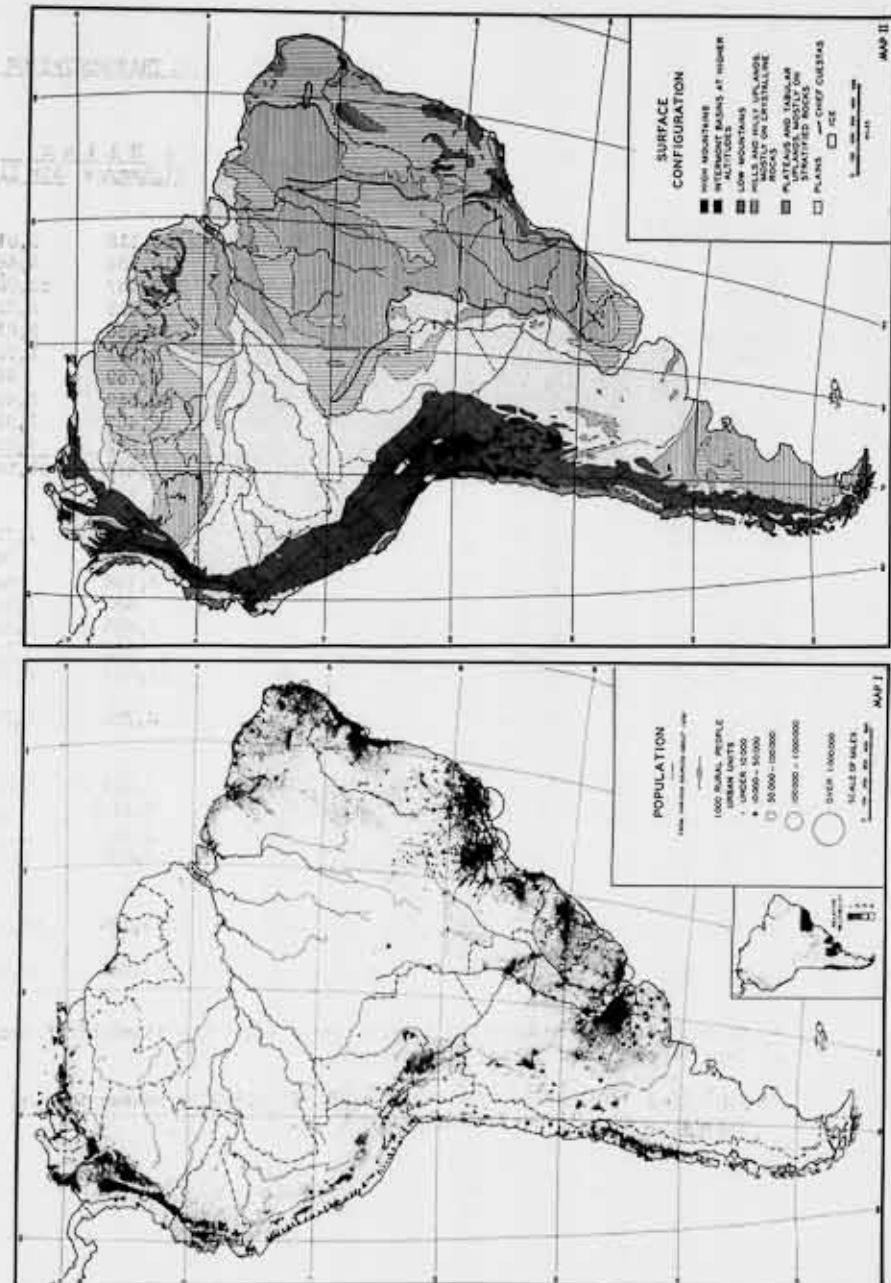
However, despite these divergences there are certain basic fea-

*15-18 million are negroes, another 15-18 million pure Indian, and the remainder mestizos.

tures of Latin American geography and economics which have contributed to the rapid and early growth of air transportation in almost all countries. In this respect conditions in South America are typical of those throughout the area. That continent has the smallest total population and lowest density per square mile of any continent except Australia. The population is distributed around the margins of the land mass and the few major hubs of dense settlements - Rio de Janeiro, Buenos Aires, Santiago, and Lima - are separated by great distances (Map I). There is a paucity of large cities closely spaced. The continent is primarily dependent on agriculture and mining and is comparatively young in the scale of economic development. Its total import trade in 1936 was less than that of France, its total export trade less than that of Germany.

High mountain ranges and great areas of jungle are serious geographic obstacles to the construction of highways and railroads (Map II). As a result, the ground transportation system is inadequate and fragmentary in the extreme (Map III). Only three areas, centering on Rio de Janeiro, Buenos Aires, and Santiago, possess rail networks even remotely comparable to those of Europe and the United States and there are few systems connecting two or more countries. Santos, Brazil's chief port, for example, is not connected by rail with Rio de Janeiro, the capital. Surface passenger travel between countries is largely limited to steamships. Highway mileage passable for motor cars has increased substantially in recent years but is still surprisingly low. A large part of the continent depends on cart roads and mule trails. In the interior the Amazon River and tributaries constitute the only ground transportation system for an area two-thirds the size of the United States.

POPULATION DISTRIBUTION AND SURFACE CONFIGURATION IN SOUTH AMERICA



AREA POPULATION AND TRANSPORTATION FACILITIES

Country	Area in Sq. Miles	Population	Route Miles		
			Railroads	Highways*	Air Lines
<u>South America</u>					
Argentina	1,079,965	12,762,000	25,804	253,115	5,514
Bolivia	506,792	5,000,000	1,867	10,154	5,495
Brazil	5,275,510	42,395,000	23,106	129,057	32,061
Chile	296,717	4,597,000	5,490	22,613	2,285
Colombia	448,794	9,055,000	2,164	14,536	5,613
Ecuador	275,956	5,000,000	761	3,311	1,750
Paraguay	161,647	950,000	296	3,759	580
Peru	482,133	7,000,000	1,857	16,559	6,435
Uruguay	72,153	2,093,000	1,789	22,467	1,653
Venezuela	552,051	5,422,000	580	5,882	3,670
Total	6,951,698	88,256,000	63,714	481,275	63,256
<u>Central America</u>					
Costa Rica	23,000	607,000	600	405	1,720
El Salvador	13,176	1,665,000	428	3,709	260
Guatemala	45,452	2,466,000	607	3,786	636
Honduras	44,275	1,000,000	810	693	1,680
Nicaragua	60,000	850,000	260	1,550	1,640
Panama	52,380	535,000	165	870	780
Total	218,283	7,123,000	2,870	11,013	6,716
Mexico	763,944	19,154,000	13,231	56,923	9,756
<u>West Indies</u>					
Cuba	44,164	4,370,000	3,779	2,214	1,279
Dominican Republic	19,532	1,520,000	145	2,141	320
Haiti	10,204	2,800,000	183	1,545	
Total	73,700	8,490,000	4,107	5,900	1,599
Total 20 Latin American countries	8,007,625	123,025,000	83,922	555,109	81,329**
United States	3,026,789	132,630,000	237,536	3,065,000	39,746

* Passable for motor cars but in most cases below the standard of secondary roads in the United States.

** Excluding 9,523 miles over ocean and 1,955 miles in possessions of foreign powers in Latin America.

OF THE TWENTY LATIN AMERICAN REPUBLICS

Inhabitants per 1,000 Sq. Miles	Route Miles per 1,000 Sq. Miles			
	Railroads	Highways	Air Lines	Country
<u>South America</u>				
11,800	23.9	234.4	5.1	Argentina
5,900	3.7	20.0	6.9	Bolivia
12,900	7.1	39.4	9.8	Brazil
15,500	18.5	76.2	7.7	Chile
20,100	4.8	31.9	12.5	Colombia
10,900	2.8	12.0	6.3	Ecuador
5,900	1.8	23.3	3.6	Paraguay
14,500	3.9	34.3	13.3	Peru
29,000	24.8	311.7	22.9	Uruguay
9,700	1.6	16.7	11.0	Venezuela
12,700	9.2	69.2	9.1	Total
<u>Central America</u>				
26,400	26.1	17.6	74.8	Costa Rica
126,800	32.5	281.5	19.7	El Salvador
54,300	13.4	83.3	14.0	Guatemala
22,600	18.3	15.7	37.9	Honduras
14,200	4.3	25.8	27.3	Nicaragua
16,500	5.1	26.9	24.1	Panama
32,600	13.1	50.5	30.7	Total
25,100	17.3	74.5	12.8	Mexico
<u>West Indies</u>				
98,900	85.6	50.1	29.0	Cuba
78,600	7.5	110.7		Dominican Republic
254,800	17.9	151.4	10.8	Haiti
115,200	55.7	80.1	21.7	Total
Total 20 Latin American countries				
15,400	10.5	69.3	10.2	
43,800	78.5	1,012.6	13.1	United States



In Central America, Mexico, and the West Indies the same general conditions prevail. Mountain barriers abound and surface transportation is, to say the least, unsatisfactory. Central America is heavily dependent on river boats and mules for transportation and while northern Mexico has a relatively extensive railroad system, the southern part of the country is inadequately supplied with railways or highways. Except for Cuba the larger West Indian Islands have only rudimentary surface facilities; travel between the smaller islands is limited to infrequent steamship service, largely of doubtful quality.

The populations, areas, and transportation facilities of the Latin American republics are tabulated on the preceding pages. The importance of the airplane in transportation is evident from the fact that there are nearly as many miles of airlines in the area as there are miles of railroads. In only six of the twenty republics does railroad mileage exceed airline mileage. All the Central American countries and two of the South American countries have more airline mileage per thousand square miles of area than has the United States.

FOREIGN TRADE AND TRANSPORTATION - ECONOMIC AND CULTURAL TIES WITH EUROPE

Latin American communication lines have been determined by the basic pattern of trade movements, modified profoundly in the case of ground transportation by geographical barriers. Trade is primarily an exchange of raw materials for the manufactured goods produced in Europe and the United States, and the main arteries of surface transportation are connections with those continents. Trunk airline development has been similar although direct air connection with Europe was retarded somewhat by the

great geographical barrier of the South Atlantic.

It is impossible to understand the development of commercial aviation in Latin America without a clear realization of the area's close economic and cultural ties with Europe, ties which are particularly strong in the case of South America. Trade with Europe has always predominated over that with the United States except when Europe was at war. In 1936-1938 Europe accounted for nearly one-half of the total dollar value of Latin American exports and imports, as compared to only a little over one-quarter for the United States. Passenger travel, influenced by the closer cultural and historical association with the old world, follows the same pattern, especially as far as South America is concerned.

The differentiation between South America and the rest of the Latin American area in respect to European influence is due to fundamental causes. While Mexico was conquered and settled by Spaniards as was most of Latin America, it has been controlled in recent years by men of Indian descent, representatives of a large suppressed majority which is neither pro-European nor pro-U. S. but instead passionately nationalistic. Due to their influence and also to propinquity to the United States, Mexico has moved away from the European orbit. The same has been true of Central America. The West Indies, of course, have been primarily under British and U. S. influence since colonial times.

In South America, however, the European influence continues strong. The government and business of most of the republics are controlled by men of Spanish and Portuguese descent who in language, background, ideals, and temperament are far more sympathetic with continental Europe than with England or the United States. For centuries the business

and cultural interests of the ruling classes in South America have been primarily on the European continent. They have looked to France as the fountainhead of culture and to Germany as the acme of technical excellence. England, despite her many investments there, has kept aloof from South American life and culture and has never been particularly admired. Transportation to Europe has been decidedly better than to the United States and social and business trips to that continent have greatly outnumbered those to North America. Until recently a large proportion of the wealthy aristocracy of Latin America actually lived in Europe with only occasional journeys to the country of their birth. Santos Dumont, the great Brazilian aeronautical pioneer whom Latin America considers the father of aviation*, was one of these self-enforced exiles. It is typical of the lack of knowledge and understanding between our two continents that Santos Dumont is almost unknown here while the Wrights are almost ignored by Latin Americans.

Europe, on her part, has shown a much more active economic and cultural interest in South America than has the United States. An enormously greater number of European citizens have migrated there to live. There are 2,000,000 first and second generation Germans and 6,000,000 first, second, and third generation Italians on the continent today as compared to 23,000 U. S. citizens**. South America has had her eyes fixed on Europe until very recently and the United States, to a large part of the continent and particularly to the countries of the East Coast, has been far off, vague, and not particularly "simpatico".

This economic and cultural background does much to explain the

* Dumont made his first flight in Paris on October 23, 1906.

** In addition to the 23,000 U. S. citizens in South America, there are another 20,000 in Mexico.

very important part which European interests have taken in the development of South American commercial airlines and the sympathetic reception their projects have received.

INTERNAL TRADE AND TRANSPORTATION

Trade and passenger movements within Latin America are much smaller than might be expected from the size and population of that area. Less than a tenth of the export and import trade of the American republics was exchanged between themselves in 1940 and inter-country travel is very limited. This is partly because few of the products of the republics are complementary and partly because of the diversity of social, cultural, and governmental standards. However, an additional highly important factor has been the lack of surface communication which has impeded the breaking down of these barriers.

Internal lines of surface communication for the most part reach from the inland areas of agricultural and mineral production to the seaports from which the products are shipped abroad (Map III). While the internal airlines have followed the same pattern to some degree, they have also provided communications between cities and countries without direct surface connections and have opened up hitherto inaccessible, undeveloped areas. Aside from the time saving, air transportation has created for the first time safe and comfortable travel between many of the Latin American republics. The implications of such a development for the future of Latin American solidarity are obvious.

II DEVELOPMENT PERIOD 1920-1934

PIONEERS ESTABLISH LOCAL SERVICES 1920-1927

The end of the World War of 1914-1918 marked the beginning of commercial airline development throughout the world. The performance of the airplane had improved as a result of intensive war time research to the point where it was a practical, if imperfect, commercial vehicle. Postwar conditions gave the leading aeronautical powers every incentive to foster airline operations.

The establishment of airlines ushered in a new era in Latin American transportation. The airplane's ability to provide high speed travel regardless of geographical obstacles and at a very low investment per mile of route suited it to the requirements of a continent where such barriers were great and funds for transportation facilities very limited. The Latin American nations were not prepared, however, technically or financially to carry through the early stages of airline development. They had no aircraft manufacturing facilities (they have few today) and very few trained pilots. Capital was also lacking for Latin American investors were accustomed to a high rate of return and showed little interest in risky aeronautical ventures. Their governments, though fully aware of their transport deficiencies and willing to grant franchises

freely, were reluctant to provide substantial subsidies.

Europe and the United States, on the other hand, found themselves at the close of the war with a superabundance of the aeronautical facilities which Latin America lacked. They were left with a large aircraft manufacturing industry, a vast number of military airplanes, and a large body of personnel trained in aircraft operation. All nations were anxious to prevent these aeronautical assets from atrophying. The Allies could put but a small part of theirs to peace time military use and Germany was forbidden any military aviation whatsoever by the Versailles Treaty.

The desirability of high speed transportation was thoroughly realized by the United States and European governments and there was, in addition, a deeprooted, if somewhat uninformed, optimism among a few U. S. and European business men as to air transport's commercial possibilities. Most important European governments had prepared extensive airline programs while the war was still in progress. Our own Post Office mail service started in May, 1918 and in the next few years numerous private companies, usually with government support, started lines in England, France, and Germany. Most countries were fully occupied in establishing their own networks for the first few years after the war but occasionally a venturesome private group began an isolated operation on some other continent over a route which appeared particularly favorable. The Germans, who were restricted as to their European activities by the Allies, were leaders in this type of operation. They found South America an unusually favorable field for, in addition to its natural potentialities for air transportation, it was free from French and British domi-

nation and provided a sympathetic atmosphere because of its numerous German colonies.

At first the pioneers were limited to their own resources but in the middle 1920's they began to get backing from their home aircraft industries and governments. Nevertheless, early operations were limited to short local services confined to one country. The small amount of capital available, the short range of existing airplanes, and the diplomatic difficulties involved militated against more ambitious projects.

The German activities, though somewhat haphazard on the surface, give evidence of following a carefully worked out plan. Between 1920 and 1929 they sponsored several local operations as national lines of their respective countries, a type of organization which they had been forced to use in Europe because of post war restrictions.* This method of organization had advantages in that nationally incorporated companies were regarded sympathetically by local governments and concessions were granted to them somewhat more freely** than to foreign incorporated lines. The German sponsored companies were not national in the true sense, however. While resident Germans occasionally contributed funds, there was little if any genuine Latin American capital involved because Latin

* Germany, not being an Allied signatory of the treaty of Versailles, was barred from the C.I.N.A. convention. Nationals subscribing to this convention granted each other reciprocal transit rights with a minimum of restrictions. Nations which were not included could very easily be discriminated against and Germany found it difficult to obtain rights. To avoid these difficulties Germans incorporated "national companies" in various European countries, notably Finland, Latvia, and the Baltic nations. These lines obtained operating rights in many areas from which German national companies would have been excluded.

** Most Latin American countries now require that all lines be nationally incorporated.

American investors simply were not interested in this type of venture. Local subsidies were also small so support from home was necessary.

Three German Pioneer Operations

Three lines which now play an important part in South American air transportation were founded by Germans in this pioneering period.

SCADTA (Sociedad Colombo-Alemana de Transportes Aereos), in Colombia, the first successful airline in South America and one of the first in the world, was established in 1920 by a completely private Austro-German group* with no support from the German government. The success of the enterprise was primarily due to the fact that its route was extremely favorable for air transportation. The line connected the isolated mountain capital, Bogota (or rather its rail head, Girardot), with the port of Barranquilla. The airplane time for the 650 miles was some seven hours while the only surface connection by rail and steamer down the Magdalena River took at least a week in the wet season and a month or more in the dry. This tremendous time saving, plus a reasonably good safety record, produced heavy traffic despite an extremely high fare of 30-40 cents per passenger mile.** The line thus proved profitable from the start even though its subsidy income was negligible - a unique achievement for that time and an unusual one even today.

In 1925-1926 Dr. von Bauer, SCADTA's energetic managing director, developed ambitious plans for expansion in the Caribbean area, hoping to

* French and German groups arrived in Colombia in 1919 with the intention of establishing airlines but the French effort collapsed after a few months. The Germans started experimental operations in 1920 and began regular service early in 1921.

** Rates on trunk lines in South America now average about 10 cents per mile.

connect with the United States. Concessions were obtained in Central America and von Bauer made trips to Washington in 1925 and 1926 in an endeavor to secure entry permits and interest U. S. capital. However, Washington was cold to the idea of German sponsored operations in the vicinity of the Canal and the project was dropped. This critical attitude on the part of the U. S. government, combined later with the establishment of a U. S. operated network, has up to the present prevented European sponsored airlines from establishing themselves in the Caribbean, Mexico, or Central America.

In connection with its expansion plans SCADTA, which by then was receiving help from the German aircraft industry, cooperated with Kondor Syndikat, which had been incorporated in Germany in 1924 as a survey company, in an ambitious program for flying boat operation in South America and the Caribbean.

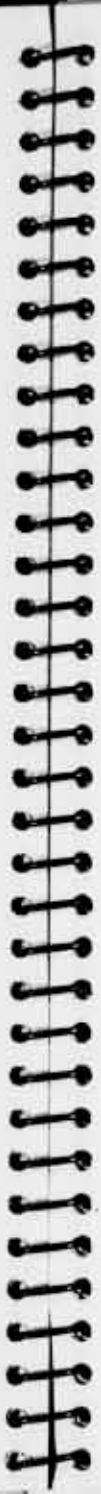
Syndicato Condor, a German owned but Brazilian incorporated successor to Kondor Syndikat, opened a line in 1927 between Rio de Janeiro and Rio Grande do Sul via Porto Alegre (900 miles).* This beginning of German air transport activity in Brazil is of considerable significance, for Brazil was to become the base of German airline operations throughout the continent - a logical development in view of its large German population and strategic position on any air route to Europe. Deutsche Luft Hansa, the German government owned combine which took over most of the multitudinous German air transport companies in 1926, has had a substantial interest in Condor from the first, an inter-

* In the same year the Porto Alegre - Rio Grande section was transferred to VARIG, a new company formed for the purpose of taking it over.

LAB (Lloyd Aereo Boliviano), a third relatively successful German operation which started at about this time, was organized in Bolivia in 1925 with the backing of the German Junkers group of aircraft manufacturing companies and airlines. High mountains made surface travel in Bolivia very difficult (LAB's first route, the 200 mile run from Cochabamba to Santa Cruz, took four days to cover by the fastest surface transportation, as compared to three hours by air), and there was consequently enthusiastic local support for an airline. German residents in La Paz provided part of the capital and the Bolivian government granted a fairly substantial subsidy. Weather and terrain made operating conditions difficult, and while the enterprise kept going, it was not really profitable.

The period during which individual pioneers dominated Latin American air transport came to an end in 1928 when large government backed companies began the development of an international trunk route system in the area.

<u>Classification</u>	<u>Latin American</u>		<u>U.S.Domestic</u>
	<u>1921</u>	<u>1927</u>	<u>1927</u>
Miles of Routes	600	5,700	8,900
Miles Flown	54,000	472,000	5,780,000
Passenger Miles	50,000	1,490,000	1,900,000



are summarized on the preceding page. While the growth in these first seven years was striking, the Latin American system in 1927 was only two-thirds the size of our U. S. domestic system except as to passenger transportation.* The pioneers' achievement, though substantial, was still only a small part of the task of providing air transportation for a continent and a half.

In six years some 5,200 miles of route had been placed in operation, 4,300 miles of which were inaugurated in the last six months of 1927. Local systems had been established in areas where surface transportation was extremely primitive, principally in Colombia and Bolivia, but these systems were isolated from each other. There was no airline development on the west coast proper for this area did not attract European pioneers. Cities were smaller, fewer, and farther apart than on the east coast and, more important, local development there was not potentially part of an ultimate trunk route to Europe, as was the case in the East. Perhaps for the same reason, we find development in Mexico and Cuba just beginning at the close of the pioneering period entirely under U. S. auspices. Up to the middle of 1927 South American air transportation was completely under German sponsorship.

These small pioneer operations were not airlines in the modern sense. They operated two- to four-place single-engined airplanes cruising at 80-90 miles per hour and serviced with the sketchiest ground equipment. Schedule frequency was low, once or twice a week being typical. The German operations principally used the Junkers F-13, a single-

* In 1927 U. S. domestic operations were confined largely to the carriage of air mail. Only a few small companies offered passenger service.

engined all-metal low-wing monoplane powered with one 185 HP B.M.W. engine. Cruising speed was about 85 miles per hour, payload about 800 pounds with a 300 mile range.

Regularity was naturally unsatisfactory and the safety record poor. SCADTA, the only company for which accurate figures are available and one of the best operated, flew only 674,000 miles per fatal accident involving passengers from 1921 through 1927.

Passenger fares were very high, 30-40 cents per passenger mile being typical, as compared to the 12-15 cents charged by U. S. domestic lines during this period and the 15-20 cents per mile charged by Pan American at the beginning of its through service in 1930. Traffic was slight, partly because of high fares and partly because of fear, and load factors did not exceed 20%-30% except in the case of SCADTA.

No accurate cost or financial figures are available but certain generalizations are possible. Expenses were very high partly because of the low utilization of equipment and partly because of the extraordinary expenses incidental to operating in an undeveloped area far from fuel supplies or aircraft factories. Commercial revenues were low except in the case of SCADTA. Local subsidies were slight and help from home governments meager. In short, it is difficult to see how any of the operators other than SCADTA with its very heavy passenger traffic did much better than break even.

Nevertheless, these pioneer lines were primarily commercial in spirit and intent. The men who started them believed in the ultimate profitability of air transportation and in several cases risked their own small capital to try to prove it.

COMPANIES BACKED BY EUROPEAN AND U. S. GOVERNMENTS DEVELOP TRUNK SERVICES 1928-1934

Until late in 1927, seven years after the beginning of its airline development, Latin America was still without trunk lines connecting any two countries and without air connections to other continents, connections which were particularly necessary to an area dependent on its overseas trade. Establishing them was a major task for intercontinental airlines demand the best of airports, equipment, and communications facilities and as they cover extremely long distances, require not only a high degree of technical competence but also a relatively large amount of capital in comparison with local services.

The individual foreign pioneers we have been describing lacked the resources for a task of this magnitude as did the Latin American governments themselves. Fortunately for the development of Latin America's air transportation system, a new and powerful force entered the field in the latter 1920's when the major European governments, having completed their own local networks, began the development of a worldwide air transport system. The United States soon followed the European lead. Latin America was to be the beneficiary of this widespread urge for expansion.

Three fundamental motives have led governments to subsidize international air routes to Latin America:

1. An attempt to promote international communications for purposes of national prestige and national propaganda in the cultural, commercial, and political fields.
2. The development of communications to create new trade.

3. A belief in the indirect military value of airline development in regions strategically important to the developing country.

The prestige and propaganda motives* were most important in the early years of trunk line development. Later, as the technical performance of the airplanes improved to the point where it could carry a really commercial volume of traffic at reasonable cost, the purely commercial motive became of greater significance. More recently, as international conditions became disturbed, the elements of political propaganda and the indirect value of airlines to national defense (or aggression) grew in importance as motives and came to dominate the air transport policies of Germany.

The French Open First Trunk Line Service 1928

The French opened the first air service between Europe and South America and as part of it the first trunk line connecting the important South American republics. The route had been part of the French government's air transport program since immediately after the war, but it had been neglected until 1924 when private interests undertook the task of bringing the project to fruition. In that year M. Marcel Bouilloux-Lafont, a wealthy banker with large interests in the Argentine, began to acquire control of Latecoere which operated from Toulouse to Casablanca, Morocco, and obtained the promise of a substantial subsidy from the French

* The desire to solidify disassociated geographical sections of an empire was the controlling motive in the creation of the world's first intercontinental airlines by England (to Africa, India, and Australia 1926-1930), Holland (to the Dutch East Indies 1927), and France (to Morocco and Indo-China 1921-1925), but it was inoperative in Latin America as neither European nations nor the United States owned important colonies in that area.

government for the extension of the line to Buenos Aires. In 1928 he completed the acquisition of the company and renamed it "Compagnie Generale Aeropostale".

The project, which was for a mail service only, was carried out in a lavish manner for the period with expenditures estimated at \$1,500,000 for airports and radio equipment on the South American section. Service was inaugurated in November, 1927 between Natal and Buenos Aires (2,900 miles) and in March, 1928 the overwater link was opened with obsolete destroyers, thus giving through service from Toulouse to Buenos Aires. Later in the same year Aeroposta Argentina, Aeropostale's Argentine subsidiary, began mail and passenger operations from Bahia Blanca to the southern oil producing center of Comodoro Rivadavia (590 miles) and from Buenos Aires to Asuncion, Paraguay (660 miles). France was thus linked with Brazil, the Argentine, and Paraguay, and these South American countries were connected with each other by air for the first time.

The Aeropostale schedule between Paris and Buenos Aires was eight days, a saving of eight days over the steamship time and twelve days faster than the best steamer service between New York and Buenos Aires. This striking saving gave French commercial interests a very considerable advantage over their U. S. competitors.

After the extension of its system from Buenos Aires to Santiago in 1929, Aeropostale had ambitious plans for expansion up the west coast of South America to Peru and from Natal up the east coast to the French West Indies. These were well advanced in 1931 when the company went bankrupt due to its subsidy being withheld as a result of a French political intrigue in which the management was involved. Because of this crisis the

Asuncion service was discontinued, the operations of Aeroposta Argentina taken over by the Argentine Post Office Department, and further expansion plans abandoned. The Paris-Buenos Aires route continued to operate, however. Aeropostale was operated in a rather haphazard romantic fashion (described magnificently in Antoine de St. Exupery's "Vol de Nuit") but the safety record was reasonably good. The line did a considerable amount of night flying with mail, which is noteworthy as none of the other companies in South America have yet begun regular night operations.

German Airship and Airplane Services

The Germans, with their considerable local network already operating in South America, were naturally extremely anxious to open a trunk line from Germany and worked steadily toward that end. Their progress was slower than that of France or the United States for they aimed at an all-air service which on that route was beyond the capabilities of the airplane of the time. They were further hampered by the financial difficulties of the Reich during this period.

In 1931 the Germans began seasonal Zeppelin service with the "Graf Zeppelin" from Friedrichshafen to Pernambuco, a non-stop run of 5,000 miles which was quite practical for the airship though the flying boats of the early 1930's could not even bridge the Dakar-Natal gap of 1,900 miles. This was the first all-air service between Europe and South America and the only passenger service operated between the two continents until the opening of LATI's (Linee Aeree Transcontinentali Italiane) Rome-Rio de Janeiro service in December, 1939.

The service was much liked by the Brazilians despite its seasonal nature and had great prestige value for Germany for many South American

officials made use of it, usually at the expense of the German government. The Brazilian government built a \$2,000,000 airship terminal for the line which was completed in 1936, after which time the service terminated regularly at Rio de Janeiro instead of Pernambuco. The "Graf" made three round trips late in 1931 and flew a regular summer service (April-October) from 1932 through 1936. After the explosion of the "Hindenburg" in 1937 the Deutsche Zeppelin Reederei gave up all commercial airship operations due to its inability to obtain helium from the United States for future airships.

Despite the relatively few trips the volume of traffic was not inconsiderable. About 1,000 passengers were carried to and from South America in 1936 or about one-quarter of Pan American's 1940 traffic across the North Atlantic. The fare was \$461 (7.0 cents per mile), as compared to Pan American's present North Atlantic fare of \$425 (11.9 cents per mile), but a large proportion of traffic consisted of South American officials travelling on passes. No subsidy was received from Brazil except for the free terminal facilities but a substantial subsidy must have been paid by the German government.

Luft Hansa operated a few experimental combination airplane and steamship mail trips from Berlin to Rio de Janeiro in 1930-1931* and made unsuccessful efforts to develop a flying boat which could span the trans-Atlantic section. By 1933, however, the company had developed a technique for all-airplane operation across the South Atlantic based on the use of

* Luft Hansa flew the mail from Berlin to the Canary Islands (3,000 miles), where it was picked up by regular Hamburg-America steamships, which turned it over to Sindicato Condor at Fernando do Noronha to be flown to Rio de Janeiro, 1,700 miles).

catapult mother ships. Catapult take-offs increased the useful load of the small Dornier two-engined flying boats sufficiently for them to cover the 1,900 mile distance from Bathurst, British Gambia, to Natal non-stop with a small load of mail. The English motive in granting the Germans landing rights was rumored to be a desire to see that the French had competition on the South American route even if the English could not provide it themselves. Experimental trips began in 1933 and regular service was inaugurated in February, 1934 on a once-a-week basis and operated with extreme regularity.

England Neglects Latin America

Concentration on the problem of air transportation to her colonies caused England to neglect Latin America from the airline standpoint, despite her large investments there. Her official air transport plans which were drawn up as early as 1920 omitted Latin America, except for a proposed service among the British Caribbean possessions which has not yet been put in effect. To this day, there is not a single British controlled or operated airline in the entire area with the possible exception of the recently inaugurated British West Indian Airways. The affiliation of this line with England, however, is remote being limited to the nationality of its operator.

The United States Enters the Field

In spite of the fact that the Great Circle distances between New York and the principal east coast capitals of South America are shorter than between the same points and the principal European cities, the original airline routes were as much as 1,000 miles greater. The west coast capitals were from 1,700 to 4,500 miles nearer New York. Moreover, both the east and west coasts could be reached from the United States by an

entirely overland route*, while that from Europe involved (and still does) an overwater hop of some 1,900 miles. Nevertheless, in the immediate post war period the United States was less interested in Latin America as a field for commercial airline development than were European nations.

Air Route Distances between New York, Berlin, Paris, and Several South American Capitals

	<u>New York</u>		<u>Berlin</u>	<u>Paris</u>
	<u>1932</u>	<u>1940</u>		
Rio de Janeiro	7,000	5,600	6,600	6,000
Buenos Aires	7,100#	6,500#	7,900	7,300
Santiago	6,300	5,900	8,600	8,000
Lima	4,600	4,200	9,100	8,500

The few U. S. scheduled operations which started in these early years were concentrated in areas adjacent to the United States. The first, Aero Marine Airways, opened a winter passenger and mail service from Key West to Havana (110 miles) in 1921 and received financial support from the U. S. Post Office Department. The line was primarily dependent on tourist traffic and was handicapped by the short season. It failed financially in 1923.

In 1922 U. S. citizens began charter service among the oil fields near Tampico, Mexico, but it was not until April, 1928 that the operation developed into a scheduled airline, Mexicana (Compania Mexicana de Aviacion), its first route being from Tampico to Mexico City. South America with its infinitesimal North American population was far more remote than Mexico to U. S. aeronautical adventurers and few of them even visited it.

* The longest overwater section of Pan American's original route through the Caribbean and then down the east coast of South America was 385 miles. The route down the west coast via Central America was entirely overland.

Non-uniformity in Buenos Aires-Santiago differentials due to dissimilar routings.

In the later trunk line development the United States also lagged behind the French and German governments. While our general lack of interest in Latin America was partly responsible, there were basic reasons for the delay in our air transport structure itself. From 1918 until 1926 when the air mail system was turned over to private companies, all scheduled air transport operations in the United States were under the supervision of the U. S. Post Office Department. This department had given thought to eventual mail service to South America as early as 1918* but the technical problems of operating the domestic service gave little time for other plans and the project was dropped. A few farsighted aviation enthusiasts developed schemes for airlines to Latin America but profitable operation was impossible without heavy government subsidy and serious private capital took little interest in ventures which lacked government backing.

Beginning of Permanent U. S. Services - Pan American Airways

1927. A violent and spectacular change in this apathy took place in 1927-1928 when a combination of circumstances produced almost unlimited government and private support for air transport expansion in foreign fields. Within the next two years a U. S. system of trunk airlines grew up in Latin America far exceeding that established by European nations.

The Lindbergh flight to Paris in May, 1927 touched off general enthusiasm for aviation in the United States which soon reached fever proportions. Superimposed on the violent stock market speculation of 1928-1929, this unbridled public interest produced a boom in aviation securi-

* The 1918 report of the Postmaster General contained an elaborate program for an air mail service to Central and South America.

ties which made it easy to finance almost any aeronautical venture, sound or unsound. Hitherto conservative business and government circles became more sympathetic toward air transport projects. This combination of events simplified the task of individuals who were anxious to start airlines. The Post Office Department had turned the domestic air mail system over to private contractors by competitive bidding in 1926-1927 and numerous companies were organized and financed to undertake the task.

At the same time widespread attention was given to the operation of U. S. airlines to foreign countries. Latin America, because it could be reached without long overwater hops, was the only technically possible field of foreign expansion in the existing state of the art, except for Canada. The government's attention was also focussed on the growth of European sponsored airlines in Latin America. The State, Post Office, and Commerce Departments were receiving complaints from U. S. business men that thanks to Aeropostale's service their European competitors could send letters to South America in several days less time than it took steamship carried mail to reach that continent from the United States. The War and Navy Departments became vitally interested as a result of SCADTA's application for landing rights in Florida and the Canal Zone in 1925 and 1926. Alarmed at the possibility of a German line operating near the Canal, they opposed the granting of these concessions and pushed a program for the establishment of a U. S. air transportation system in Latin America.

For private and government enthusiasm to be translated into concrete action two things were necessary - the formation of private companies prepared to operate airlines abroad and the passage of legislation permitting the government to subsidize those lines.

In 1926-1927 at least three groups were planning to start services between Key West and Havana as the opening wedge in the Latin American air transport field. There was much jockeying for position but when in July, 1927 the contracts were let for carrying ordinary U. S. mail, Pan American Airways, Inc. was the successful bidder. Service on this 110 mile route was inaugurated on October 28, 1927. It was the first link in the Pan American system which was to cover 12,200 miles by the end of 1929 and 18,000 miles by the end of 1930.

The airplanes of 1928-1929 were so expensive to operate* and passenger traffic at the time was so meager that airlines could not exist without liberal government aid. The U. S. domestic lines were more favorably situated than the foreign ones in that their airway facilities were supplied by the Federal government and most of their airports by the municipalities. Yet in the early days of passenger carrying (1930-1931) they were unable to cover more than 20%-30% of their costs by commercial revenues.

A U. S. line operating outside of the United States has to furnish its own ground equipment, build some of its own airports, and import gasoline, often at high prices. In the early stages of development operating costs were over twice as high as those of domestic companies and the operators contended that they would be forced to make large capital investments abroad which could only be written off over a term of years. They

* The Ford Trimotor of 1929 cost typical well run lines 65 cents per mile (43 cents per ton mile) to operate. The modern Douglas DC-3 (introduced in 1936) can be operated for about 70 cents per mile (27 cents per ton mile) despite its 75% higher seating capacity. Even today, with this much more efficient equipment and much higher commercial revenue, the domestic lines are still dependent on subsidy to a considerable degree and the foreign lines are heavily dependent thereon.

also felt and with some reason that subsidies had to be much higher than in domestic service and should be guaranteed for a considerable period, if private capital were to be attracted to the foreign air transport field.

Of course, European governments faced a similar subsidy problem. They met it frankly by paying direct operating subsidies. In addition, their post offices paid for the carriage of air mail at rates far below the revenue derived from the sale of air mail stamps. The United States, however, having entrusted its early airline development to the Post Office Department, became enamoured of the fiction that air mail service alone justified the creation of airlines and that the whole cost of supporting such lines should be borne by the Postal budget. The payment which was ostensibly for carrying the mail only consequently had to include the subsidy - that is, it had to be high enough to permit the airline to operate profitably. Air mail payments were thus greater than either the stamp revenue or the true commercial value of the air mail service. The latter might be defined as the amount which the airlines would have charged for carrying an equivalent weight of passengers.* This excess represents the best working definition of subsidy.

Passage of Foreign Air Mail Act and Letting of Foreign Air Mail Contracts 1928-1929. The Kelly Air Mail Act which had been signed on February 2, 1925, authorized the letting of such air mail subsidy contracts for the carriage of domestic mail (the term of the contracts was not fixed), but there was no authorization for similar contracts in foreign operation.

The desirability of encouraging U. S. airline service in Latin

* Actually it is cheaper to fly a pound of mail than a pound of passengers as passengers require expensive and heavy equipment which is not needed for mail.

America by financial assistance had been studied intensively by an inter-departmental committee* in 1927. President Coolidge, in his annual message to Congress, recommended the establishment of such a service and the granting of "liberal long term contracts for carrying our mail". The Foreign Air Mail Act authorizing such contracts was signed by the President on March 8, 1928.

The Act contained no policy clause and was very broadly drawn.** It authorized the letting of ten-year contracts for the carrying of foreign air mail by competitive bidding. The rates were not to exceed \$2 per mile for 800 pounds or less.# The Postmaster General was authorized to award contracts to "the lowest responsible bidders that can satisfactorily perform the service required to the best advantage of the government". This very general language left broad powers to the Department in selecting the successful bidder.

Advertisements were issued for seven foreign air mail contracts pursuant to the Act. Three well financed and relatively competent companies, Pan American Airways, Inc., Pan American-Grace Airways, Inc., and NYRBA (New York, Rio and Buenos Aires Line, Inc.) were bidders## and fourteen other companies, most of them speculative and irresponsible, bid on one contract or another.

* Composed of the Assistant Secretaries of State, War, Navy, Commerce, and the Assistant Postmaster General.

** As passed, it did not authorize mail payments on return flights from Latin America to the United States. This deficiency was corrected by amendment.

Loads in excess of 800 pounds were to be paid for at the rate of \$1 per pound per 1,000 miles but in practice this weight was seldom exceeded.

NYRBA never actually submitted a bid as the East Coast contract it was anxious to obtain was not advertised until after the company was absorbed by Pan American.

Pan American Airways* had been financed heavily by a group representing the leading aircraft manufacturing companies and a number of important steamship companies. It also joined W. R. Grace & Company, which had long operated steamships on the west coast of South America, in forming Pan American-Grace Airways in February, 1929 (capital \$1,000,000 - 50% owned by each) to bid on the West Coast air mail contracts.

NYRBA, which was organized in June, 1929, raised some \$5,000,000 by a public offering of stock and between September, 1929 and February, 1930 inaugurated operations without mail pay from Santiago to Buenos Aires and up the east coast via Rio de Janeiro to Miami. It was anxious to obtain a U. S. mail contract on this route.

The most impartial review of the awards indicates that it was Postmaster General Brown's intention that the Pan American group be granted all foreign air mail contracts if it were legally possible to do so. Six of the seven contracts were awarded to Pan American and the seventh to Pan American-Grace despite the fact that these companies were the highest bidders in practically every case. The advertisements for bids gave a maximum of 32 days** to institute service despite the fact that some of the routes were nearly 5,000 miles in length and the bidders had to secure landing rights and concessions from foreign countries. These conditions helped Pan American greatly because it had laid its plans long in advance. NYRBA which had established an elaborate, if rather amateurish, organization and was actually flying the route on which it was anxious to bid was,

* Then the operating company for Aviation Corporation of the Americas.

** Except in the case of the short Miami-Nassau route, where six months were given.

it is stated, informed by the Postmaster General* that it would have to sell out to Pan American before the contract would be advertised.

The Postmaster General's policy in establishing a monopoly in foreign air transportation is, of course, highly controversial but it can be justified in view of the status of U. S. aviation at that time. Very few of the seventeen bidders were qualified to conduct the service and if contractors of questionable ability had been allowed to enter the field, the repercussions on U. S. prestige would have been most unfortunate. In addition, the Latin American system seemed to require a certain essential unity; it would have complicated the operating and diplomatic problem to split it up among a number of small companies. NYRBA, however, was reasonably well prepared for the task and it would have been possible to experiment with the principle of competition in the foreign field at a minimum of risk by at least permitting it to bid on a contract.

Inauguration of Major Services. The seven contracts which had been let between March, 1928 and October, 1930 (summarized in the table below) covered approximately 22,600 miles, or about three times as much as the total mileage of all airlines operating in South America at the end of 1927.

Service was inaugurated under these contracts with great promptness. The Pan American System** put about 17,800 miles of routes in operation in the two years between January, 1929 and January, 1931. This compares with the 13,200 route miles inaugurated by the German and French companies in the ten years from 1921 through 1931.

* See Page 718 "Investigation of Air Mail and Ocean Mail Contracts", Parts 1, 2, and 3 Consolidated. U. S. Government Printing Office, Washington, 1935.

** As used in this report the term Pan American System refers to the entire operations of Pan American, Pan American-Grace, and their subsidiaries.

Service was opened from Miami to San Juan, Puerto Rico (1,400 miles), via Havana in January, 1929. In September this route was extended via the Antilles to Paramaribo, Dutch Guiana (1,400 additional miles). Service from Miami to the Canal Zone (2,100 miles) via Cuba and the Central American republics was inaugurated in February, as was a route between Brownsville, Texas, and Mexico City (470 miles). The latter was extended to Guatemala in September. In the course of this expansion Pan American acquired two pioneer American companies, Compania Mexicana de Aviacion and West Indian Aerial Express, which latter had been operating between Santo Domingo and Puerto Rico (410 miles) since 1927. In May, 1930 service was extended from Curacao to Venezuela.

Foreign Air Mail Contracts Let under
Foreign Air Mail Act of 1928

FAM No.	Awarded Date	To	Service Begun	No. Other Bidders	Rate Per Mile	Weekly Round Trips	Termini	Route Mileage Original	1940
4	May 29 1928	PAA	Sept. 15 1928	1	\$2.00	7	Miami Havana	251	*
5	July 13 1928	PAA	Feb. 4 1929	1	2.00	1	Miami Paramaribo	2,064	6,201
6	July 13 1928	PAA	Jan. 9 1929	1	2.00	3	Miami Port of Spain	1,430	1,908
7	Oct. 24 1928	PAA	Jan. 2 1929	1	2.00	3	Miami Nassau	188	188
8	Feb. 16 1928	PAA	March 10 1929	6	2.00	7	Brownsville Mexico City	472	1,259
9	March 2 1929	PAG	May 17 1929	4	1.80	2	Canal Zone Montevideo	2,320	6,905
10	Sept. 24 1930	PAA	Nov. 27 1930	-	2.00	1	Paramaribo Buenos Aires	3,600	6,115

Pan American-Grace was the successful bidder on the route from Cristobal to Mollendo, Peru (2,300 miles), which was later extended to Santiago and Buenos Aires (2,200 additional miles). Service was inaugurated

* Consolidated with FAM 5.

rated to Mollendo in May, to Santiago in July, to Buenos Aires in October, and to Montevideo in January, 1930. In the process of this expansion Pan American-Grace acquired Peruvian Airways, a pioneer American service started in 1928 by pilots who had come to Peru on a crop-dusting expedition.

Pan American Acquires Local Services in Colombia, Cuba, Mexico, and Brazil 1927-1933. During the early stages of its trunk line program Pan American had been balked in obtaining operating rights in Colombia. It overcame this obstacle in 1931 by purchasing a 45% interest in SCADTA (later increased to over 80%). In the same year the company founded the small UMCA (Uraba, Medellin and Central Airways) in cooperation with the Colombian aeronautical pioneer Gonzalo Mejia. In September, 1932 Pan American purchased CNCA (Compania Nacional Cubana de Aviacion), a line which had been established by the Curtiss interests in 1930 and which in 1932 was operating 740 miles of local routes. These purchases gave the company an interest in extensive local operations in Colombia and Cuba which, with Mexicana's local lines in Mexico, were its first departure from the purely trunk line type of operation.

Besides purchasing existing local lines the company initiated important new local services of its own in Mexico and Brazil. In October, 1932 a new subsidiary, Aerovias Centrales, S. A., was formed in Mexico to operate a route from El Paso to Mexico City with a branch to the west coast town of Mazatlan (1,300 route miles in all).* In 1933 Panair do

* This company later expanded its operations on the west coast of Mexico opening service to Los Angeles in 1934. Its network reached a maximum of 2,300 route miles in that year. In 1935 its operations were taken over by Pan American's other Mexican subsidiary, Mexicana.

Brasil, a locally incorporated but wholly owned subsidiary which had been carrying out Pan American's Santos-Buenos Aires operations since 1931, opened an important local service up the Amazon from Belem to Manaus (900 miles) on which the Brazilian government paid a subsidy.

These developments added some 4,900 miles of local routes to the Pan American System, of which about 2,200 miles consisted of new routes and the remainder of lines which were already in operation. In December, 1932 Pan American's system covered some 22,000 miles as compared to 28,550 miles for U. S. domestic lines. It is noteworthy that the Germans, even after their extensive expansion of 1935-1940, were operating only 15,800 route miles in December, 1940, or 28% less than Pan American did eight years previously.

The Pan American System inaugurated only 5,700 route miles of new service in the three years 1932-1934. There were sound reasons for this. The company had established its basic system on most of which it had mail contracts at \$1.80 to \$2.00 per mile. There was little incentive to open new routes without mail pay unless they were necessary to secure franchises or for political reasons and as the U. S. Post Office Department was suffering from budget restrictions due to the depression, there was no opportunity for obtaining additional mail contracts. Moreover, the company was faced with a major task in developing traffic and getting its schedules running smoothly and very sensibly concentrated on these problems.

The European sponsored companies also expanded their route mileage very little in these three years. The German government, as we have pointed out, was financially poor and was forced to confine its

efforts to establishing a link to Europe. Local German companies, therefore, received little aid from home. SCADTA expanded its Colombian network considerably but Condor added little mileage and Lloyd Aereo Boliviano actually decreased the length of its system. French expansion was stopped completely by the bankruptcy of Aeropostale in 1931.

Pan American Escapes Cancellation of its Air Mail Contracts.

In February, 1934 President Roosevelt cancelled the mail contracts of the domestic airlines. The Army Air Corps operated a skeleton mail service during the period of cancellation which was marred by a series of fatal accidents in three months of operation. In May new mail contracts were let by competitive bidding, for the most part at lower rates. As a result, the domestic lines suffered financially and did not return to really profitable operations for at least two years thereafter.

It was rumored that serious consideration was given to cancelling Pan American's contracts and that they would have been cancelled except for the fact that the Navy was unable to operate the full Pan American service. Furthermore, the Department of State was alarmed at the diplomatic repercussions of U. S. naval air operations in foreign countries.

The company was given an opportunity for a public hearing on January 3, 1935, to determine whether its contracts should be cancelled. They waived this opportunity and the Post Office Department in a letter dated January 10th reported the results of its investigation together with conclusions and recommendations to the President. It concluded that all Pan American's contracts might be cancelled "because they were awarded as a result of negotiation and not by competitive bidding as required by

law". The report further stated, "It is not believed, however, that the cancellation of these contracts would be in the public interest, as such action would probably disrupt American air service to the Latin American countries and might result in great havoc to our trade relations with these countries there is no other air company that can immediately render comparable service to these countries".

While "our country should have an efficient and successful American air transport system in the Latin American field to compete favorably with companies of England, Germany, France, and others", the report stated that mail payments under existing contracts were "considerably in excess of what should be paid". An immediate 25% reduction in rates was recommended. It was never made, although by certain rearrangements and elimination of routes the company's mail revenues were reduced about 10%.

Pan American's escape from cancellation and from serious loss of revenue in a critical period was a tribute not only to adroit management but to the important role which the company played in our foreign policy.

Establishment of Local Airlines by South American and U. S. Independent Interests 1929-1932

While the establishment of trunk line service dominated Latin American air transport development during this period, there was some independent formation of local lines. Three operations, one government sponsored and two highly individual in origin, are worthy of mention as they are fore-runners of important types of enterprise.

LAN Chile (Linea Aerea Nacional), the earliest purely national

line of this type, was established by the Chilean military air force from Santiago to Arica (1,100 miles) in 1929 and in 1934 was incorporated as Línea Aérea Nacional, a national commercial company with capital furnished by the Chilean government. The line at first carried mail only but soon began passenger service and enjoys a government monopoly of local passenger traffic. A similar project was started in Peru in 1928 and in Brazil in 1931.

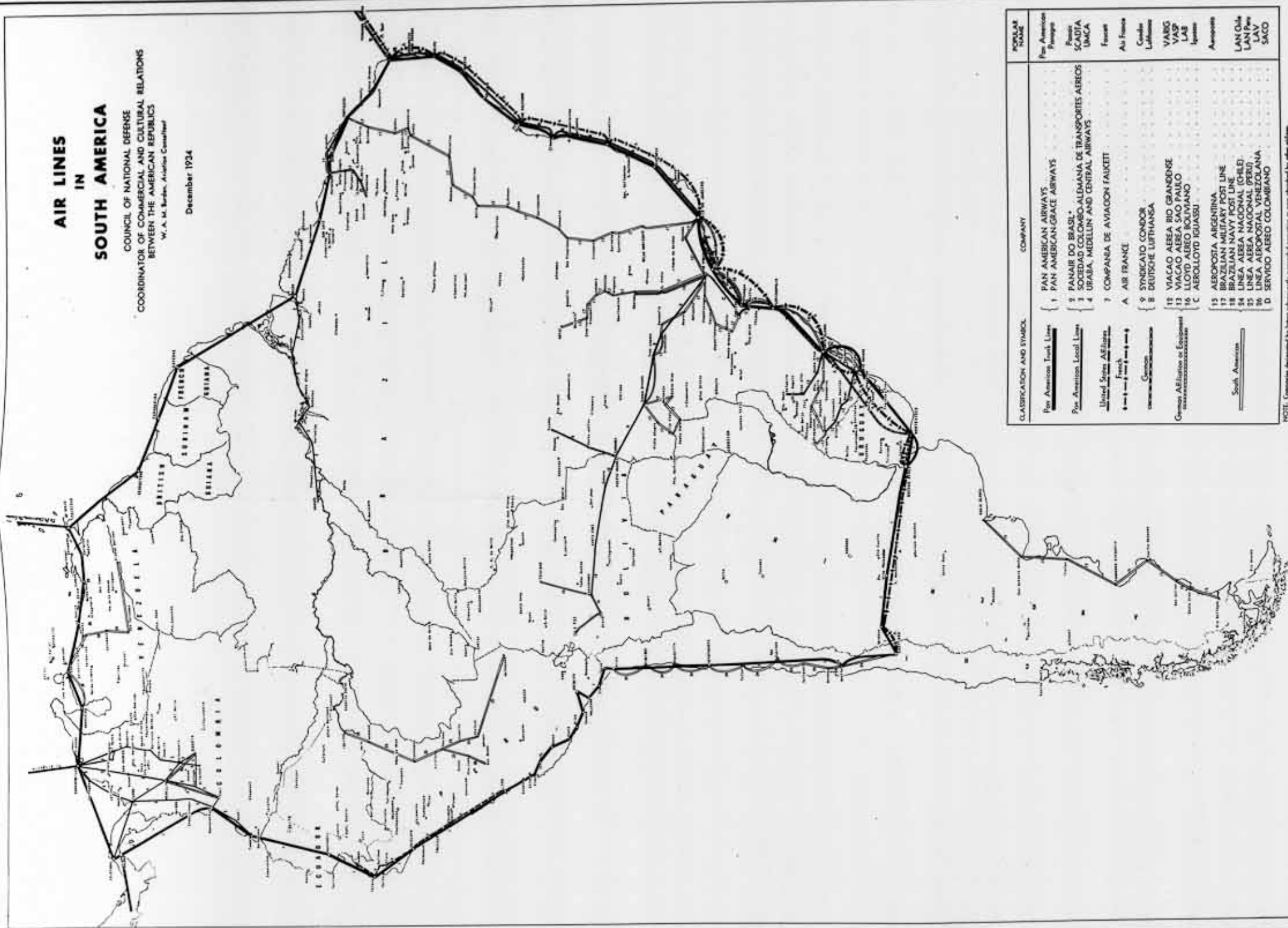
Latin American governments were naturally desirous of operating their own lines and their early projects were carried out by the military air forces which were at that time almost the only source of trained personnel. Such operations served the dual purpose of providing air transportation and giving military pilots additional flying experience. They are significant as the beginning of a growing nationalism which was later to become an important factor.

Faucett (Compania de Aviacion Faucett), a different type of local operation, started service between Lima and Arequipa, Peru (400 miles) early in 1928. This company, started by Elmer Faucett, a U. S. citizen who had come to Peru with a Curtiss sales expedition in 1920, owes its success, like others of its type, principally to its founder's ability and personal popularity. It cut costs by offering a much lower standard of service than the trunk lines (single-engined equipment is still used) but was able to maintain an excellent safety record. The company was started with Peruvian capital but has had occasional financial help from the United States. It has shown modest profits despite the fact that it has received only a negligible subsidy from the Peruvian government and now enjoys a practical monopoly of local air transporta-

AIR LINES IN SOUTH AMERICA

COUNCIL OF NATIONAL DEFENSE
COORDINATOR OF COMMERCIAL AND CULTURAL RELATIONS
BETWEEN THE AMERICAN REPUBLICS
W. A. M. Burden, Aviation Counselor

December 1924



CLASSIFICATION AND SYMBOL	COMPANY	AIRLINE NAME
Pan American Trunk Lines	PAN AMERICAN AIRWAYS	Pan American
Pan American Local Lines	1 PAN AMERICAN-GRACE AIRWAYS	Grace
United States Airlines	9 PANAM DO BRASIL	Brasil
French	3 SOCIEDAD COLOMBIO-ALMANA DE TRANSPORTES AEREOS	Colombia
German	4 URUBA, MEDLIN AND CENTRAL AIRWAYS	Uruba
German Affiliation or Equipment	7 COMPANIA DE AVIACION TAIKETT	Taikett
	A AIR FRANCE	Air France
	9 SYNDICATO CONDOR	Condor
	8 DEUTSCHE LUFTHANSA	Lufthansa
	15 VACAO AEREA RIO GRANDE	VARG
	13 VACAO AEREA SAO PAULO	VASP
	12 LEON AEREA MARIANO	LAS
	C AEROLLOYD IGUAZU	Iguazu
	15 AEROPOSTA ARGENTINA	Aeroposta
	17 BRAZILIAN MILITARY POST LINE	LAN Gde
	18 BRAZILIAN NAVY POST LINE	LAN Nav
	34 LINEA AEREA NACIONAL (CHILE)	LAN Chil
	35 LINEA AEREA NACIONAL (PERU)	LAN Per
	36 LINEA AEROPOSTAL VENEZOLANA	LAV
	D SERVIDO AEREO COLOMBIANO	SACO

NOTE: Companies designated by letters subsequently suspended operations or were absorbed by other airlines.
*Pan American Air Lines operated the Pacific Route from Lima to San Francisco, August 1924.

MAP V

tion in Peru.*

TACA (Transportes Aereos Centro-Americanos), another new operation of importance, was established as a local service in Honduras in 1932 by Lowell Yerex. This company, which was an individually financed, low cost operation of the Faucett type, later developed into the largest individually owned airline in Latin America with a network of some 5,000 miles throughout Central America. Over one-half its revenues has been received from the transportation of chicle, mine products, and general merchandise between the coast and the interior. The company receives no subsidy from the Central American countries in which it operates but has nevertheless been profitable.

Summary of Operations in Trunk
Route Development Period 1928-1934

The seven years from 1928 through 1934 may be considered somewhat arbitrarily as the period of trunk route development. During the initial four years (1928-1931) the basic Latin American network was established; during the next three (1932-1934) energies were devoted to developing traffic and refining existing operations.

Maps V and VI show the network at the end of 1934 and pertinent operating statistics for 1927 and 1934 are compared below. The statistical comparison shows clearly how phenomenal the growth was both in route mileage and volume of operations. The system which covered only two-thirds as many route miles as the U. S. domestic system in 1927 was 75% larger than the domestic system in 1934. It will be noted, however, that

* Captain Harold Harris, who came to Peru with the Huff-Daland Dusters in 1926, started a similar operation at the same time under the name of Peruvian Airways. This became a part of Pan American-Grace Airways, of which Captain Harris is now chief executive. In 1938 this company bought a 20% interest in Faucett.

passenger volume was about one-quarter that in the U. S.; it is even less at the present time.

Growth of Latin American Air Transport System in 1927-1934

	<u>Latin America</u>		<u>U. S. Domestic Air-</u>
	<u>1927</u>	<u>1934</u>	<u>line System 1934</u>
<u>Airline Network</u>			
Route Miles	5,800	48,900	28,100
<u>Traffic Volume</u>			
Miles Flown	472,000	11,789,000	14,955,000
Passenger Miles	1,490,000	47,996,000	187,859,000
<u>Fares</u>			
Cents per Mile	30-40	8-14	5.9

Safety (Average 1930-1934 Inclusive)
Miles Flown per Fatal Accident Involving Passengers

Pan American System	6,105,000
SCADTA	3,423,000
U. S. Domestic	7,718,000

Most of the expansion in new routes was carried out during the years 1929-1932, during which the essentials of the Latin American air transport system as we know it today were laid down.*

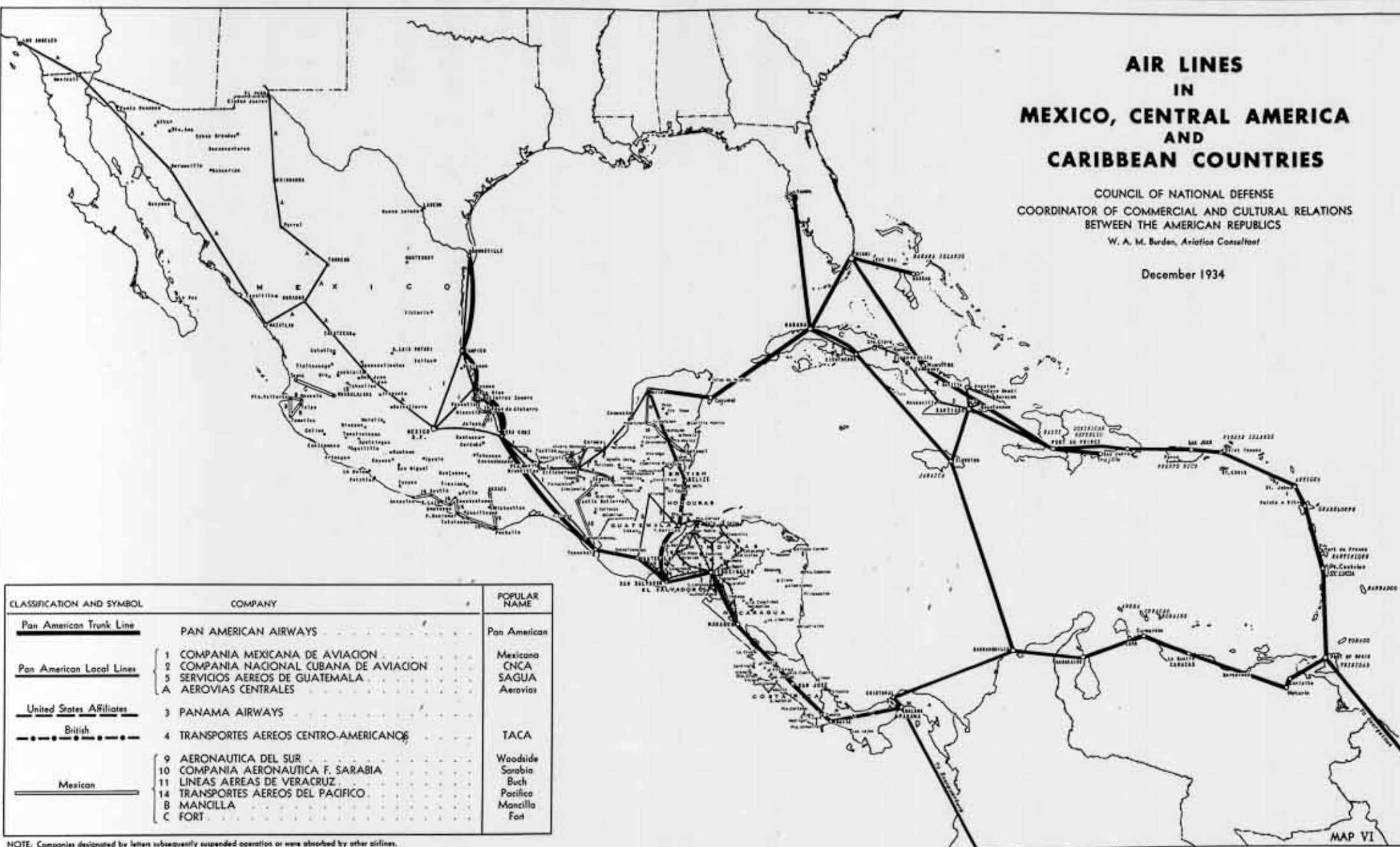
The most dramatic routes were those linking the continent to the United States and Europe. Mail service to Europe was opened in 1928 and passenger and mail service was in operation between the United States and all the principal Latin American capitals by 1931. The New York-Buenos Aires time of seven days was one day faster than the Aeropostale mail schedule from Paris to Buenos Aires. The United States lost its advantage in 1934, however, when the German all-air mail service to Europe was opened, giving a 3 1/2 day schedule from Rio de Janeiro to Berlin.

* 18,500 route miles were put in operation as compared to the 5,200 route miles inaugurated between 1921 and 1927 inclusive. From 1932 through 1934 only 5,400 additional route miles were put in service.

AIR LINES IN MEXICO, CENTRAL AMERICA AND CARIBBEAN COUNTRIES

COUNCIL OF NATIONAL DEFENSE
COORDINATOR OF COMMERCIAL AND CULTURAL RELATIONS
BETWEEN THE AMERICAN REPUBLICS
W. A. M. Burden, Aviation Consultant

December 1934



The achievement within Latin America itself was perhaps more important than this linking of continents. In 1927 no passenger service existed between any Latin American republics although mail service was available between Rio de Janeiro and Buenos Aires via Montevideo. In 1931 eighteen of their capitals had airline service for both passengers and mail.

Local service in Latin America was expanded but far less than in the case of trunk lines. Local lines were extended considerably in Mexico, Peru, and Colombia and beginning in 1933 in Brazil, but at the end of the period only those countries and Colombia had local networks extensive enough to be worthy of the name of systems.

The vast majority of the great increase in route mileage during the period under review was due to the expansion of Pan American Airways. The United States, which was an insignificant factor in 1927, held the leading position in the Latin American field in 1931 and increased that lead somewhat by 1934. The striking change in its position between 1927 and 1934 is summarized below.

Position of Leading Nations in Latin American Air Transportation 1927-1934

Country	Route Miles		Miles Flown		Passenger Miles	
	1927	1934	1927	1934	1927	1934
United States	600	26,300	33,000	7,374,000	1,045,000	39,038,000
Germany	2,300	6,200	396,000	1,530,000	445,000	5,926,000
France	2,900	2,900	43,000	327,000	-	-
Other	-	13,500	-	2,558,000	-	3,032,000
Total	5,800	48,900	472,000	11,789,000	1,490,000	47,996,000

The value of air transportation to Latin America was clearly shown in the sharp increase in the volume of traffic in the period. Pan American's passenger miles in 1934 were 175% greater than in 1931 al-

though miles flown were up only 38%.

The standard of airline operations was immensely improved over that of the pioneering period. When Pan American inaugurated its system in 1929-1930, it introduced a standard of equipment and operating technique which was far in advance of anything existing in Latin America and in many respects more modern than the service then being offered by the U. S. domestic lines.*

The Pan American System was operated almost entirely with two- or three-engined passenger airplanes equipped with radio. Tri-motored Fords and Fokkers (12-14 passengers) cruising at 110 miles per hour were used in Central America and down the west coast of South America. On the east coast the existing land airports were controlled by French or German interests and the company did not wish to go to the expense of establishing its own airports. Partly on this account and partly because of its technicians' belief that water operation was safer in the then state of the art, the Caribbean services and those along the north and east coasts of South America were operated with multi-engined amphibians and flying boats. Twin-engined 6-passenger Sikorsky S-38 amphibians and 18-passenger Consolidated Commodore twin-engined flying boats were the standard types. Elaborate ground radio equipment with particularly advanced direction finding apparatus was installed. In this respect Pan American was also far ahead of other companies operating in South America.

The German lines, except for Condor which operated one Dornier Wal twin-engined flying boat, continued to use single-engined planes and

* Only a few U. S. domestic lines were offering multi-engined passenger service in 1930.

relatively meager ground facilities. The French had elaborate ground facilities but used single-engined equipment. All operations in Latin America (except for Aeropostale's night mail service) were confined to daylight flying and because of the meagerness of surface competition schedules could be delayed when weather was questionable to a degree which would not have been tolerated in U. S. domestic operations. Thanks in part to these factors but principally to efficient operation, the Pan American System established a very satisfactory safety record. From 1930 through 1934 it averaged 6,105,000 miles per fatal accident. SCADTA, which was only partly under Pan American control, averaged only 3,423,000 miles per fatal accident in the same period and though no accurate records are available for other lines operating in Latin America, it is almost certain that they did not do as well. In the same period the U. S. domestic airlines averaged 7,718,000 miles per fatal accident, operating under what were in many ways more favorable conditions.

Pan American's fares averaged 15-20 cents per passenger mile at the beginning of its operation.* This was well below the 30-40 cents charged by the German lines in 1928-1929 and they were forced to reduce their fares to meet U. S. competition. In 1934 Pan American's fares averaged about 10 cents per mile and local fares on the smaller lines about 8-14 cents per mile, as compared to U. S. domestic fares of 5.9 cents.

* In 1928 the rate from Miami to Havana was 33 cents per passenger mile but the earliest fares on the long distance services were between 15-20 cents per mile.

III PERIOD OF EXPANSION AND POLITICAL RIVALRY 1935-1941

The development of Latin American air transportation from 1935 to the present has been characterized by two main trends, both of which have resulted in a great expansion of local services. First there has been a marked expansion of German owned and sponsored services which has been motivated by political as well as economic aims. This expansion has proceeded so far that the United States is being forced to meet it by basically similar activities.

Second, there has been a considerable increase in the nationalistic sentiment of Latin American nations which has been reflected in their air transport policy. Restrictions have been placed on local operations of foreign incorporated companies and the operations of national companies encouraged.

GERMAN EXPANSION 1935-1940

The early German airline operations in South America (1920-1927) were primarily commercial, more so in fact than the French and U. S. trunk line services which had been inaugurated in 1928-1929 as a part of the national policy of these countries. However, when the German government took over German commercial air transport activities through Luft Hansa,

the propaganda element became more important*. It was definitely present in the early German operations across the South Atlantic (Zeppelin service inaugurated in 1931, airplane service in 1934) but as these activities touched only the large cities on the Brazilian coast, the impact was limited.

With the accession of the National Socialist regime in 1933, political and economic forces were set in motion which resulted in an active German trade promotion drive in Latin America with heavy political overtones. Germany's foreign exchange problems had been serious since 1931 when her exports to western Europe began to be cut off because of her unwillingness to import the manufactured goods produced by those countries in return. When the Nazi armament program began to get under way, raw material requirements increased and the foreign exchange stringency was intensified. Latin America was a logical source of raw materials**. The area had a large surplus of mineral and agricultural products which it found difficult to sell in world markets. It needed manufactured goods of the type Germany produced but found it difficult to buy them from countries requiring payment in free foreign exchange. In 1934 Germany started an intensive drive for exports which took full advantage of Latin America's difficulties by making use of ingenious methods of barter to a steadily increasing extent. These methods were extremely effective and between 1934 and 1939 many leading Latin American countries (with the notable exceptions of Argentina and Mexico) more than doubled the proportion of their total imports purchased from Germany.

*Luft Hansa was organized in 1926 but its first few years were devoted to coordinating the German domestic lines.

**Germany carried on a similar drive on the raw material producing countries of southeastern Europe.

Under the Nazi regime foreign trade eventually became so thoroughly regimented as to constitute for all practical purposes a part of government activity. The full force of the German government was thrown behind propaganda efforts designed to help the campaign and increase the prestige of the Reich.

The expansion of German airline activities in South America must be considered a part of this major trade and propaganda drive. The expansion was a logical step because Germany was a leading aeronautical power and was interested in airline activities in the area. Furthermore, South America needed additional airline service and technical aid for her own airline ventures. The purpose was not to make a profit but to enhance German prestige in the eyes of South Americans. Financial sacrifices could be made on the sale of equipment or the operation of unprofitable services which would be impossible for a private company. Totalitarian methods of organization also simplified the task. No Congress or stockholders had to be satisfied at every step and no publicity as to methods was required.

The program has been carried out aggressively and consistently. It owes a large part of its success to the provision of ample funds by the German government and to a sound technical organization. Equipment, flying personnel, and operating methods, though somewhat inferior to those of the U. S. lines, were vastly superior to those of other European countries operating in South America or South American operations themselves.

Broad Scope of German Program

Geographically the program embraced the entire continent except for Chile, Colombia (which was served by a company in which Germany had a

minority interest), Venezuela, and the Guianas.* Both trunk and local services were included. Existing local German companies established new trunk lines which interconnected with German local systems already existing in other countries. In the case of Peru and Ecuador, new German companies were formed to operate in areas hitherto neglected. The network of trunk routes thus created served the principal South American capitals and was basically competitive with the Pan American Airways System. In addition, the Germans expanded their purely local services considerably, particularly in Brazil.

A variety of methods was used in the course of German expansion. In the beginning they operated principally through nationally incorporated companies, managed in many cases by second generation Germans or nationals with German leanings, but in reality German owned and supplied with German funds. Later, in the immediately prewar period (1938-1939), they operated more openly through Luft Hansa or in the case of Peru its locally incorporated subsidiary, Lufthansa Peru.

In addition, they acquired considerable influence over a few local nationally owned companies by means of contracts for the sale of equipment. These local companies often got into financial difficulties due to lack of adequate capital to begin with or because of operating losses and found themselves with worn out equipment and a depleted treasury. They were unable to meet the strict payment terms required by U. S. or British manufacturers and French equipment, though available at low prices, was usually ruled out because of inferior quality. The Germans

* Condor operated from Buenos Aires to Santiago but there was no extensive operation in Chile.

took advantage of these situations and provided a very useful service to the South American interests involved by offering equipment on liberal long term credit (five to seven years). It was provided, however, that the companies must employ German pilots and technicians as long as the credits were outstanding. Technicians were often as badly needed as airplanes and these requirements were therefore not usually a deterrent.

Expansion of German Owned Companies in Argentina and Chile

Syndicato Condor (founded in 1924 as Kondor Syndikat) was the principal medium through which the German expansion was carried out. Although incorporated in Brazil, the capital of the company is beyond doubt German and Condor has certainly received regular financial aid from Germany. Its management consists of Germans or Brazilian nationals with German leanings. The company's lavish offices in Rio de Janeiro and extensive advertising campaigns far exceed anything that can be justified by the scope of its commercial operations.

Condor made the first move of the German expansion program in 1935 when it extended its Natal-Rio de Janeiro route to Buenos Aires and then (1936) across the continent to Santiago. In 1936 the company's Rio de Janeiro-Corumba route established connections with LAB at Corumba on the Bolivian border. The two German sponsored companies thus offered joint service from Rio de Janeiro to Arica on the Pacific coast via Corumba and La Paz.

Condor's fundamentally German character was openly acknowledged in 1938 when Deutsche Luft Hansa inaugurated the first German national service in South America from Natal to Buenos Aires as a supplement to Condor's

service. Argentina had objected to Condor's operating from Buenos Aires to Santiago and Luft Hansa took over this route entirely*. In addition to this trunk line expansion Condor substantially extended its local operation in Brazil, obtaining Brazilian government subsidy contracts on a number of routes. Among them was a route almost completely lacking commercial possibilities which branched off from its transcontinental line at Corumba to Porto Velho in the depths of the Brazilian interior. It has been suggested that Condor was anxious to obtain this route as an excuse to operate unobserved in a locality not too far from the Panama Canal. In these days of long range aircraft the suggestion does not appear entirely fanciful.

Condor has been of assistance to almost all the German and German affiliated operations in South America. It lends them airplanes in case of necessity and it is not unusual to see JU-52's belonging to such German controlled companies of Peruvian, Ecuadorean, Argentine and Chilean registry in Condor's Rio de Janeiro shops for overhaul.

German operations in Brazil were further expanded by VARIO (Viacao Aerea Rio Grandense), a small German controlled local company operating in the State of Rio Grande do Sul. VARIO extended its Porto Alegre - Pelotas route until it connected with PLUNA (Primeras Lineas Uruguayas de Navegacion Aerea), a newly formed Uruguayan company which operated from Montevideo to the Brazilian border.

In 1937 the Germans began operations in Ecuador (Guayaquil-Quito,

* Condor's equipment was Brazilian registered and Argentina had no legal control over it. It did have, however, legal control over Luft Hansa's German registered aircraft.

160 miles) with SEDTA (Sociedad Ecuatoriana de Transportes Aereos), a national company of indubitable German ownership managed by Fritz Hammer*. Early in 1940 there were announcements in the Ecuadorean press that SEDTA expected to begin operations to the Ecuadorean owned Galapagos Islands. These islands command the Pacific entrance to the Panama Canal.

German operations on the west coast were further extended in 1938 when Lufthansa Peru began service between La Paz and Lima (720 miles via Puno) thus extending the German transcontinental line from Rio de Janeiro as far as the Peruvian capital. Lufthansa Peru undoubtedly hoped to establish a connection with the Ecuadorean SEDTA, but its career came to an untimely end in April, 1941 when its equipment was expropriated by the Peruvian Government.

Sales of German Equipment to Local Companies

In addition to their new directly owned or completely controlled operations, the Germans obtained a certain amount of control over important local companies in Brazil and the Argentine through equipment contracts of the type previously discussed.

In 1935 they sold Junkers JU-52 airplanes to the Brazilian VASP (Viacao Aerea Sao Paulo), a local company which had been established in 1934 in the heavily Germanic State of Sao Paulo. This company now operates an extensive network of about 1,200 miles, principally in Sao Paulo, and has been successful financially because of its heavily travelled Rio de Janeiro - Sao Paulo route which has the highest schedule frequency (three times daily) of any line in South America. The Junkers are still in service

*Hammer, who was killed in a flying accident in Ecuador in 1940, was one of the original SCADTA pioneers.

and German influence remains despite the primarily Brazilian character of the company.

In 1937 a similar but more comprehensive equipment contract was made with Aeroposta Argentina, the most important local company in the Argentine (Buenos Aires - Rio Grande, 1600 miles). The company's operating personnel was thoroughly Germanized at that time but in 1939 German pilots were replaced by Argentine pilots.

In 1938 Junkers JU-52's were sold to CAUSA (Compania Aeronautica Uruguay), the Uruguayan line between Montevideo and Buenos Aires, but the personnel of this operation remained entirely Uruguayan. A few JU-86's were sold to LAN (Linea Aerea Nacional), the Chilean national company, in the same year but there was no management contract and this company was never dominated by German influence.

Improvement of German Position in South American Air Transportation

As a result of the expansion described, German route miles in South America* in 1938 were more than double the 1934 total. This gain was obviously at the expense of the Pan American System and other South American operators for their proportion of total route miles decreased from 43.6% to 38.5% and from 38.5% to 37.1% respectively. At the same time the German proportion increased from 17.9% to 24.4%. From the standpoint of miles flown during this period Pan American also lagged, its share declining from 50.5% to 47.6% while the proportion flown by both German and local operators increased moderately.

* The Germans did not operate at all in the Caribbean, Central America, or Mexico. Their operations have therefore been compared with those of Pan American (approximate figures only) for South America alone.

Position of Leading Nationalities in
South American Air Transportation
1934 - 1938

	Route Miles				Miles Flown			
	1934	Tot.	1938	Tot.	1934	Tot.	1938	Tot.
German & Affil.	6,200	17.9	14,600	24.4	1,530,000	22.8	3,118,000	23.2
Pan American#	15,200	43.6	23,200	38.5	3,385,000	50.5	6,419,000	47.6
All Others	13,400	38.5	22,300	37.1	1,786,000	26.7	3,936,000	29.2
Total	34,800	100.0	60,100	100.0	6,701,000	100.0	13,473,000	100.0

No accurate figures are available as to the cost of the German program but an informed guess is possible. In 1938 strictly German lines flew about 1,500,000 miles. Their operations were for the most part simple and economical and received considerable revenue from passengers and mail. An average subsidy of 50¢ per mile, or \$750,000 should have been sufficient to support them. Even assuming a considerable amount of propaganda expense and subsidy to the German influenced lines which flew another 1,500,000 miles, it is doubtful if the total amount expended by the German government on Latin American aviation exceeded \$2,000,000 - \$3,000,000 per annum during the 1935-1939 period. Net payments by the United States to Pan American and Pan American-Grace averaged some \$3,600,000 per annum in these years and these companies flew more than twice as many miles per year as the German operators.

THE RISE OF NATIONALISM 1935-1941

A trend which was potentially more important than the German expansion became evident in the late 1930's when Latin American nations began forsaking their hitherto rather passive role in air transport development. Latin American aviation had been developing technically with considerable

For South America only.

rapidity. The number of licensed pilots increased and military air forces, though still small, grew substantially in size. Small factories for the manufacture of air frames for simple military and training types were established in Argentina* and Brazil after several unsuccessful attempts.

This spirit of nationalism, combined with increasing technical competence, resulted in Latin American nations taking a more active part in the development of their own airlines. All the countries participated in this movement to some degree but the lead was naturally taken by the larger and more technically advanced nations, notably Brazil and Mexico. It manifested itself in both countries in restrictions on foreign companies' activities and the encouragement of national lines.

Cabotage Privileges Reserved for National Companies

The foundation of national airline development has been the reserving of cabotage** monopolies or special cabotage privileges to national companies. The basic aviation law of most countries reserves such rights to national lines but in Latin America in the early days foreign companies were often given permission freely to engage in cabotage because national companies either did not exist or were unable to provide sufficient service.

One of the first signs of nationalism was the withdrawal or reduction of these privileges and the granting of them to government owned

* Argentina is now developing a factory to build Wright engines under license. Chile made unsuccessful attempts to establish an airplane factory in 1929 with the aid of the Curtiss-Wright Corporation.

**The carrying of passengers, mail and express within the boundaries of a country as distinct from international traffic is referred to as cabotage, a term taken over from the shipping industry in which it is used to refer to coastwise traffic. The word is derived from the French "caboter" - to coast.

lines or at the very least the establishment of a requirement that companies receiving them be nationally incorporated.

Chile in 1929 gave the government owned LAN a monopoly of cabotage. Mexico in 1932 passed a general communications law limiting cabotage rights to nationally incorporated but not necessarily nationally owned companies. Venezuela gave a cabotage monopoly to LAV (Linea Aeropostal Venezolana) when it formed that government owned company in 1933 to take over Aeropostale's operations in Venezuela. Colombia has also restricted cabotage operations to national companies and in 1938 enacted a law requiring that by 1942 such companies must be at least 51% owned by Colombians*. No other Latin American nations have established this requirement of national ownership but it is significant as indicative of a possible future trend.

In other Latin American countries foreign lines still have more or less complete cabotage rights as indicated in the following summary of the cabotage situation as at January, 1941.

Cabotage Rights Permitted to Foreign Incorporated Companies
(January, 1941)

<u>Country</u>	<u>Cabotage Rights Permitted</u>
Argentina	No restrictions
Bolivia	No restrictions
Brazil	Limited rights to Pan American Airways; none to Luft Hansa or Air France
Chile	Cabotage is monopoly of government owned company
Colombia	Companies engaged in cabotage must be 51% Colombian owned
Ecuador	No restrictions
Paraguay	No restrictions
Peru	No restrictions
Venezuela	Cabotage is monopoly of government owned company
Mexico	Companies engaged in cabotage must be nationally incorporated

* This requirement was established as part of the nationalization of the existing Colombian incorporated companies, SCADTA and SACO which grew out of the Colombian--U. S. effort to eliminate the German interest in SCADTA.

Restrictions on Employment of Foreign Personnel

In addition to requiring that companies engaged in local traffic be nationally incorporated, there has been a growing tendency to force them to employ a high proportion of nationals. This in effect requires foreign operators to train large numbers of Latin Americans in air transport operation in exchange for the privilege of operating local services.

Like cabotage limitations, these provisions have usually been loosely enforced until a reasonable number of trained national personnel was available or a particularly nationalistic government assumed office, when they would be strictly applied. Mexico and Brazil have again been the leaders in this type of restriction. Mexico passed legislation in 1931 requiring that 90% of total personnel regardless of category be Mexican citizens. In 1932 the same communications law which restricted cabotage traffic to nationally incorporated companies required that these companies employ 100% national personnel. Exceptions to this law were granted in the early years but it has been strictly enforced since 1935.

Brazil established restrictions of this type as early as 1931 when a Decree Law was issued requiring that two-thirds of each category of the personnel of national companies be Brazilian citizens. In view of the limited number of Brazilian aeronautical technicians at this time the process of replacing foreign with Brazilian personnel was a slow one. In 1936 a further decree was issued which provided that ALL foreign personnel, including pilots, should be eliminated by September, 1938 and further stated that while naturalized Brazilians could be employed they could not exceed more than one-third of each category. This latter provision was aimed primarily at the German companies, large numbers of whose personnel were natu-

ralized or had become naturalized in order to escape the provisions of the law. Panair do Brasil established its own training courses for Brazilian pilots and technicians and in recent years all its pilots have been Brazilians. The German companies have not yet fully complied with the law but are finding it increasingly difficult to obtain exemptions and extensions.

The Mexican and Brazilian laws have achieved their purpose in that, except for top executives, the local airline network of those countries is almost completely staffed by their own nationals. None of the other Latin American countries require the employment of national flight crews although they all require (usually under laws applicable to all industries) that a high percentage of non-technical personnel be nationals*.

Proportion of National Employees Required of
Nationally Incorporated Airlines - January, 1941

<u>Country</u>	<u>Per Cent of Nationals Required</u>
Argentina	50% of administrative, technical, and subordinate personnel
Bolivia	80% of total number of commercial and traffic personnel
Brazil	100%
Chile	85% local service government monopoly. Requirements for international lines are that flight crews must be national or of nationality of aircraft.
Ecuador	50% of airport and commercial personnel
Peru	80% of total number and of amount of payroll
Venezuela	Local services are government monopoly
Mexico	100%

Establishment of Nationally Owned Companies

In addition to requiring that local operations carried out by foreign companies be as completely national in character as possible, Latin

*Some countries require that a fixed percentage of each category of employees be nationals. This is a much more severe restriction than one based on a percentage of total personnel. Flight crews, for example, seldom exceed 10% of total personnel and it would thus be possible for a company to employ 90% of nationals and still have 100% foreign flight crews.

America has taken positive steps to establish its own purely national airlines. To date these have been largely government financed as private capital, which is accustomed to a high rate of return, is rather reluctant to enter the airline field.

The first air transport services to be completely financed and operated by Latin Americans were the mail lines operated by military air forces. Most of these have been intended more for the training of military pilots than for commercial purposes; few of them have carried passengers, and all have operated on a somewhat irregular basis. Nevertheless, they have performed a most useful service in making air transportation available to small isolated communities. The earliest were the Peruvian air force service begun in 1928 which still carries mail and occasional passengers into the interior and the Chilean military mail service started in 1928 which later developed into a government owned commercial airline. By far the largest is the Brazilian military and naval mail service inaugurated in 1931 which has expanded to the point where it is now operating more or less regularly some 10,500 miles of line under the name (adopted in February, 1941) Correio Aereo Nacional.

The Brazilian system has conscientiously pioneered future routes, some of which have already been taken over by commercial companies and some of which are destined to become regular transport services.

In addition to supporting such operations, Latin American governments have often taken a substantial financial interest in commercial airlines. LAN of Chile, originally begun as a military line, has been completely owned by the Chilean government since 1929. LAV of Venezuela which was formed to take over the Venezuelan operations of the French Aeropostale

in 1933 is also government owned. The Bolivian government has owned a minimum of 46% of Lloyd Aereo Boliviano since its foundation in 1925* and the Colombian government has a 15% interest in the newly formed AVIANCA (Aerovias Nacionales de Colombia, organized in 1939) which may be increased to 40% by 1949. In Brazil the State of Sao Paulo is a substantial stockholder in VASP and the State of Rio Grande do Sul is reported to own an interest in VARIG.

Local private capital has also taken a limited participation in commercial airlines. Private owners have a substantial interest in VASP and some small interest in Lloyd Aereo Boliviano. There are also a few cases where small local airlines have been entirely financed by Latin American private capital. In 1936 the Pueyrredon interests purchased Aeroposta Argentina from the Argentine government and in the same year Uruguayan interests established PLUNA (operating from Montevideo to the Brazilian border) with some help from English capital. In 1938 the Supervielle interests in Uruguay started CAUSA, which operates from Montevideo to Buenos Aires. None of these lines have been successful financially and both Aeroposta and CAUSA would have found it difficult to exist without German aid in the form of very favorable equipment contracts.

In the future it seems quite probable that local services in Latin America will be increasingly operated by companies manned with Latin American personnel and ultimately financed by Latin American capital.

Such an expansion might eventually lead to a widespread coordination of schedules between local lines which would permit them to provide

* In May, 1941 the Bolivian government acted to force the sale to the government of the private interest in LAB.

through service in competition with the U. S. trunk lines presumably at lower passenger rates because of their less elaborate service. Such a coordination of schedules was arranged in 1937 between LAN of Chile, Faucett of Peru, and SCADTA of Colombia, which permitted a passenger to travel along most of the west coast of South America on purely national lines. Schedules and connections were so irregular that the operation was not successful but there is no reason why a more successful arrangement might not be worked out in the future.

Government Financial Assistance to Local Lines

These local airlines have required financial support from the governments of the countries in which they operate.

Latin American governments have followed the European practice of making mail payments on a commercial basis and paying any additional sums as an outright subsidy. Mail rates in the majority of cases are so low that the Post Office Departments concerned make a large profit on their transactions with the airlines. Mail is not usually carried under contract but at fixed rates per kilo. The Brazilian rate of 180\$000 per kilo (\$3.60 U. S. Cy. per pound) for interstate mail is only two-thirds of the per kilo stamp revenue to the Post Office. The Mexican rate of 15 pesos per kilo (\$1.50 U. S. Cy. per pound), however, is one-third greater than state stamp revenue.

Accurate figures as to mail revenues are not available for most companies but mail loads are fairly heavy in some cases and Panair do Brasil, Pan American's Brazilian subsidiary, in 1940 received mail pay and subsidy amounting to some 35¢ per mile.

In the early days only government owned companies (LAN of Chile

1929, LAV of Venezuela 1935) were subsidized but in recent years some of the wealthier countries have begun to pay moderate subsidies to privately owned operations.

Brazil has by far the most complete and liberal subsidy scheme. Subsidy contracts on routes considered desirable in the national interest* (many of which have been pioneered by the military air service) are let by competitive bidding. They usually run from two to five years and the rates in recent years have averaged 40¢ per mile. Contracts are granted only to nationally incorporated companies but there is no restriction as to ownership and most of the contracts have been let either to Panair do Brasil or Sindicato Condor, which have competed keenly for potentially attractive runs.

The Department of Civil Aviation reserves the right to examine the accounts at the end of each year and reduce the rate if the contract has been unreasonably profitable. The total federal subsidy payments in 1940 are estimated to have been \$435,000. The Brazilian States, notably Sao Paulo and Rio Grande do Sul, also pay fairly substantial subsidies, usually on a per mile basis. Uruguay recently granted a five year subsidy to the local Uruguayan owned PLUNA at a rate of approximately 25 cents per mile. Argentina has subsidized its local nationally incorporated lines for many years at a somewhat higher rate (about 55¢ per mile) than Brazil. Bolivia has until several months ago paid some \$16,000 U. S. Cy. (about 47¢ per mile) per month to Lloyd Aereo Boliviano. In Mexico the federal government pays no subsidy to the larger lines, Cia. Mexicana and LAMSA (Lineas

*Subsidies are not granted on the coastal route because international operations running over this route provide local service without financial assistance.

Aereas Mineras), but some of the smaller lines receive either federal or local state subsidies of from 25 to 75 cents (Mex.) per kilometer (8¢ to 24¢ per mile U. S. Cy.) depending upon the importance of the route.

There is not sufficient information on which to base an intelligent generalization. The few cases where figures are available indicate that subsidies and mail payments combined have been much more liberal than has been generally realized in the United States. In individual instances they amount to some 30%-40% of the revenues of privately owned lines as compared to 60%-70% in the case of the smaller lines in the United States.

Direct Air Transportation Subsidies
of Latin American Countries
in 1940

	Total	Typical per Mile Rate	Method of Payment
<u>Argentina:-</u>			
Local Currency \$	635,000	2.41	
U. S. Currency \$	150,000	0.57	Per Kilometer
<u>Bolivia:-</u>			
Local Currency Bs.	5,560,000	13.60	
U. S. Currency \$	172,000*	0.42*	Lump Sum
<u>Brazil:-</u>			
Local Currency	8,615,615\$	8\$047	Lump Sum and
U. S. Currency \$	435,000	\$0.40	per Kilometer
<u>Uruguay:-</u>			
Local Currency \$	250,000	.68	
U. S. Currency \$	87,000	.25	Lump Sum

EQUIPMENT MODERNIZATION AND EXPANSION
OF THE PAN AMERICAN SYSTEM 1935-1940

Pan American was far from inactive during the period of German expansion (1935-1938) but it did not push the development of new services as

* Ten months at \$16,000 and two months at \$8,000. The per mile rate is the resulting average for the year.

actively as did the Germans and its domination of Latin American air transportation was somewhat diminished.

In 1935-1937 the company carried out a major re-equipment program, including the addition of forty-nine new multi-engined aircraft to its Latin American fleet*. Pan American's original equipment, purchased in 1929-1930, consisted primarily of standard commercial types**. However, the company was now planning overwater operations over increasing ranges and was committed to the use of flying boats on the entire east coast route. The domestic airlines had no need for flying boat equipment and Pan American, as the only customer for such airplanes, had to take an active part in their development. The fact that the company needed relatively few units (only 12 S-42 flying boats were built in all, for example, as compared to 150 Fords and 350 DC-3s) further increased the cost.

New Airplanes Placed in Service by Pan American
1934-1937

Specifications

	Number Engines	Number Passgrs.	Cruising Speed mph	1934	1935	1936	1937	Total
<u>Flying Boats</u>								
Sikorsky S-42	4	33	140-150	2	2	5	1	10
<u>Amphibians</u>								
Sikorsky S-43	2	15	150	-	-	9	-	9
<u>Land Planes</u>								
Lockheed Electra	2	10	170	4	1	1	-	6
Douglas DC-2	2	14	170	6	6	-	3	15
Douglas DC-3	2	21	180	-	-	-	9	9
Total				12	9	15	13	49

* Between 1930-1934 the company purchased no new types except for three Sikorsky S-40 flying boats which were placed in Caribbean service in 1931-1932. These were the first four-engined transport planes to be placed in operation in Latin America by any airline.

** Manufacturers developing new types for Pan American have borne a large part of the developmental cost and lost heavily on the projects.

As can be seen from the table on the preceding page, S-42 four-engined flying boats developed by Sikorsky for Pan American formed the backbone of the new equipment program. The new equipment was well in advance of anything being flown by Pan American's competitors in South America (though slower than the mail planes used by the Germans on their Europe - South America routes) and as far as the passenger comfort and safety were concerned, the four-engined flying boats were far in advance of anything operated by the U. S. domestic lines. The Germans did not put four-engined planes in service in South America until 1939 (and then only two) and the domestic carriers did not begin to operate four-engined equipment until 1940. Pan American's land plane equipment policy has also been consistently progressive in that it has put types developed by the domestic carriers into service reasonably soon after they came into production.

Pan American's new planes cruised at 140-180 miles per hour, as compared to the 100-115 miles per hour of those previously in service. The faster airplanes reduced the transit time to Latin America by more than one-third. The schedule from Miami to Rio de Janeiro was reduced by two days to four and one-half days (59 m.p.h. overall) and that to Buenos Aires was cut by nearly three to about five and one-half days (58 m.p.h. overall). However, the New York - Rio de Janeiro time was still a day and one-half slower than the Deutsche Luft Hansa and Air France all-air services from Europe to Rio de Janeiro, which had been inaugurated in 1934 and 1936 respectively.

With the installation of this new equipment, schedule frequencies were stepped up slightly, notably from San Juan to Rio de Janeiro (increased from once to twice weekly), Guatemala to the Canal Zone (from three to five times weekly), and Santiago to Buenos Aires (from three to four times weekly).

The average over the entire system increased very little, however, as is indicated by the following table. It will be noted that the frequencies on the local operations (Mexicana and CNCA) were considerably higher than in the trunk services.

Pan American Airways System - Frequency per Week

	1934	1935	1936	1937	1938	1939	1940
Pan American Airways, Inc.	2.5	2.6	2.3	2.5	2.5	2.7	3.1
Cia. Mexicana de Aviacion	4.1	5.1	4.9	4.9	4.8	4.7	5.3
Panair do Brasil	1.4	1.5	1.5	1.8	2.1	1.8	2.1
Cia. Nacional Cubana	5.7	5.8	7.7	7.3	8.8	8.5	7.9
Pan American-Grace	2.8	2.9	2.2	3.0	2.6	2.2	2.6
U. S. Domestic System	14.0	18.9	21.3	20.5	18.9	21.8	26.3

Pan American also established two important new routes during this period. In July, 1937 Pan American-Grace opened a west coast diagonal service from La Paz (to which service was inaugurated in 1935) to Buenos Aires via Tucuman (1,500 miles). Late in the year Pan American opened an east coast diagonal route from Sao Paulo via Asuncion to Buenos Aires (1,600 miles). These routes completed the extension of U. S. airline service to all the twenty Latin American republics.

In addition, Pan American added some 1,700 route miles of local service in Brazil during the 1936-1940 period, an increase of 40%. Subsidies from the Brazilian government were obtained on most of these additions, of which the most important were those from Rio de Janeiro to the important mining and agricultural center of Bello Horizonte (210 miles) and an extension farther up the Amazon from Manaus to Porto Velho (620 miles).

Pacific and Atlantic Service Inaugurated 1936-1939

Pan American's full energies were not concentrated on Latin America during these years. The company, as the sole U. S. airline in the for-

sign field, adopted a progressive policy in inaugurating service on the other major trade routes of the world. The advancing state of the art, to which Pan American contributed very substantially, was now making trans-oceanic operation possible. The company let contracts for the development of special long range flying boats in 1932-1934 and service was opened across the Pacific to China in December, 1935, across the North Atlantic in May, 1939, and to New Zealand in September, 1940. Operations in China and Alaska were also expanded. These activities were certainly in the national interest but were nevertheless a considerable strain on the organization both technically and financially.

Pan American's Traffic and Profits in Latin America Increase

Latin American operations of the Pan American System showed substantial and increasing profits during the 1935-1940 period. Passenger traffic in 1940 was 210% greater than in 1934 and costs were reduced substantially by the introduction of improved equipment and more efficient operating technique. This increased passenger revenue was superimposed on very liberal mail payments. The rates specified in Pan American's ten-year contracts were near the maximum permitted in the Foreign Air Mail Act which was drawn in 1928. They were presumably intended to be high enough to permit profitable operation with the inefficient equipment and low volume of traffic existing at that time; obviously they provided very satisfactory profits with the more efficient equipment and much higher traffic levels of 1940.

Losses on the Pacific division (inaugurated 1935) have been heavy while the Atlantic division (inaugurated 1939) showed a profit in 1940 due to heavy war traffic. Consequently, the combined results of these showed a

drastic reduction in loss in 1940. A comparison between the Latin American System and the combined results of the other two divisions is shown in the following table:-

Comparative Profit of Pan American System Operations
(Operating Profit Before Taxes)

Year	Latin America	Pacific & Atlantic
1939	\$ 2,591,000	\$ 234,000 (Loss)
1940	2,431,000	87,000 (Loss)

Passage of Civil Aeronautics Act 1938

Pan American's mail contracts were due to expire in 1938-1940 and its routes might then have been opened to competitive bidding. Fortunately for the company, this did not take place.

In July, 1938 new legislation was enacted which fundamentally changed the relation of the U. S. government to domestic and foreign air transportation. This new law, the Civil Aeronautics Act, provided for a five-man Civil Aeronautics Authority (now the Civil Aeronautics Board) which with an Administrator was to regulate the economic and technical aspects of the air transport industry. It established the first comprehensive system of economic regulation for our airlines and was the first U. S. aviation legislation to set forth government policy toward air transportation. This policy was broad and constructive. The Authority was instructed to consider in the performance of its duties that the following, among other things, were in the public interest and in accord with the public convenience and necessity:

- "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, the postal service and the national

defense.

- "Competition to the extent necessary to assure the sound development of such a system."

The airlines had hitherto held no more tangible franchise to their routes than the mail contracts assigned to them. The new Act provided for the issuing of certificates of public convenience and necessity modelled on utility practice which gave them a definite franchise. The practice of letting mail contracts by competitive bidding was also abandoned and instead the Authority was empowered to set rates taking into consideration the aims set forth in the policy clauses of the Act.

Pan American and Pan American-Grace received certificates of convenience and necessity on their routes in August, 1940. They have so far continued to operate under the mail rates set in their contracts with the Post Office Department (which were extended by the Act until new mail rates could be set by the Authority) but a hearing was opened March 17, 1941, to set new rates.

ACTIVITIES OF OTHER EUROPEAN NATIONS -
HOLLAND AND ITALY ENTER THE LATIN AMERICAN FIELD

Until 1935 the United States, Germany, and France were the only foreign powers operating in Latin America. In the next few years, however, other European nations began to extend their air transport activities to that area. The Dutch air transport company, KLM (Koninklijke Luchtvaart Maatschappij), having extended its Amsterdam-East Indies operations as far as Australia, now turned its eyes toward the Atlantic. KLM opened service between Curacao and Aruba (50 miles) in 1935 and along the coast of Venezuela

and Colombia in 1937-1938. In 1939 a line was opened to Trinidad and Barbados and to Paramaribo, by which year KLM was operating a network of about 2,700 miles. This operation was intended as a stepping stone for an Amsterdam - New York line and in February, 1937 the company applied for landing rights in Miami. The application was refused on the ground that adequate service was already being provided by Pan American Airways but it was obvious that the United States did not want to encourage European trans-Atlantic lines at that time*.

Italy also began active plans for a South Atlantic service. There are six million people of Italian descent in Brazil and Argentina and with Italy's dynamic foreign policy stressing the country's aviation achievements (Balbo made a mass flight from Rome to Rio de Janeiro in 1932) there were obvious motives for the installation of a regular service.

Preliminary steps were taken in 1938 when an Argentine capitalist friendly to Italy organized Corporacion (Corporacion Sudamericana de Servicios Aereos) as an Argentine national company. Corporacion acted in close concert with the Italian efforts and in July, 1940 established service between Buenos Aires and Montevideo with Italian Savoia Marchetti flying boats and Italian pilots.

The British revived their dormant plans for a South Atlantic service in 1937. Preparation for this service was entrusted to British Airways rather than Imperial Airways, the government controlled company which had previously enjoyed a monopoly of British foreign air transport; this decision was endorsed by the Cadman report in 1938**. Missions were sent to

* German attempts to obtain permits for a Berlin-New York operation were turned down in 1937.

** A study of British air transport policy prepared at the direction of Parliament by a committee headed by Lord Cadman.

Brazil and Argentina in 1938 and although actual preparation proceeded slowly, the route would probably have been opened by 1940 if it had not been for the outbreak of the war. Poland also had ambitious plans for service to South America.

Air France opened all-air mail service across the South Atlantic in 1936 but showed no signs of extending its network. Twin-engined equipment was installed on the South American part of the system in 1936 and passenger service was opened early in 1939.

IV LATIN AMERICAN AIR TRANSPORTATION SINCE THE WAR

The war has markedly affected air transportation in Latin America, in a manner which may prove greatly to the advantage of the United States. Many European sponsored services have been abandoned because of the war and the efficiency of others has been decreased due to a reduction in financial aid from home and some difficulty in obtaining supplies. South American owned airlines using European equipment have been threatened by similar materiel shortages.

On the other hand, trade and travel with the United States have increased so much as a result of the reduction of transportation to Europe that a severe strain has been placed on the facilities of Pan American Airways.

The first service to be affected by the war was naturally the international route to Europe. The Luft Hansa mail operations, which were increased in frequency from once to twice a week in July, 1939 and which it was planned to supplement shortly with passenger service using four-engined DO-26 flying boats, were summarily discontinued immediately after the outbreak of war.

The Air France mail service was interrupted for two weeks in September, 1939 but ran fairly regularly after that until the collapse of

France in June, 1940, when the trans-Atlantic run and all French services in South America were discontinued. The Air France equipment (including one Douglas DC-3) remained in South America, however, and an attempt has recently been made to resume the company's Rio de Janeiro-Buenos Aires-Santiago run under the name of Air France but presumably under indirect German auspices.*

The English were forced to abandon completely their plans for a trans-Atlantic airline from London to Rio de Janeiro and Buenos Aires via Lisbon and British West Africa. The Dutch pushed their expansion in the West Indies aggressively until early 1940 and their services are still operating on a reduced scale, but their plans for trans-Atlantic service came to an end with the fall of Holland in May, 1940.

ITALY ESTABLISHES ROME-RIO DE JANEIRO SERVICE DECEMBER 1939

South America was not completely cut off from Europe by air despite these abandonments, thanks to the establishment of trans-Atlantic service by Italy. Italy's plans for such service became much more active in the immediate prewar period apparently as part of a campaign to achieve a general rapprochement with South American nations. As she did not enter the war until June, 1940, she was relatively free to carry these out. A Brazilian operating permit had been obtained in June, 1939 and in December, 1939 passenger and mail service was opened from Rome to Rio de Janeiro (5,600 miles) with three-engined S-79 land planes by LATI (Linee Aeree Transcontinentali Italiane), a subsidiary organized for the purpose by Ala

* The Brazilian government refused to grant a permit for this service in May, 1941.

Littoria, the Italian government owned national airline. Despite a crash on the opening flight and another fatal accident in January, 1941, the service has operated fairly regularly on a weekly basis. LATI, besides providing a medium for passenger and mail transportation from South America free of British censorship, also carries diamonds, gold, and similar valuable light weight commodities. From the standpoint of policy and concessions, the Italians, far from helping German interests, appear to be taking full advantage of Luft Hansa's suspension to entrench themselves in South American territory. In February, 1941 the Argentine Government granted LATI a permit to extend its operations from Rio de Janeiro to Buenos Aires and subject to Chilean consent across the continent to Santiago. The announcement emphasized the traditional friendship between Italy and Argentina.

GERMAN SERVICES IN SOUTH AMERICA HAMPERED

German airline activities within South America continued undisturbed until late in 1940. Condor received two 26-passenger four-engined Focke-Wulf Condors from Germany in June 1939 (the first four-engined landplanes to be operated in South America) and took over Luft Hansa's schedules from Natal to Santiago via Buenos Aires in October. Early in 1940 it expanded its Brazilian network by operating for a few weeks (until the permit was revoked by the Brazilian government) a line from Belem to Oyapok (440 miles) near the border of French Guiana. Shortly after this setback a route from Fortaleza to Florianopolis was opened.

SEDTA, the German company operating in Ecuador, also substantially increased its local service in May, 1940. The other German

companies continued their operations relatively unchanged.

Though the German companies have been able to continue their services reasonably well, they are potentially in a serious position because of the difficulty of obtaining spare parts and funds from Germany. The danger of parts shortage, however, has been greatly reduced by the success of three German freighters in running the blockade between March and May, 1941. Their cargoes included two Junkers JU-52's, a substantial number of spare engines, and at least 20 tons of parts. There also appears no likelihood of a shortage of airplanes. The German airplanes are flown relatively few hours a year and the present amount of service could be carried out with fewer ships than they now own.*

It has, however, become very difficult to transfer funds from Germany and the German airlines are no longer well supplied with money. There were rumors of drastic reductions in personnel in the months just after the outbreak of war but these proved to be unfounded. Salaries of pilots and ground crews, however, are known to have been sharply reduced and this problem will probably become more acute in the future. This may ultimately be a more effective factor in restricting service than either

* In December, 1940 the German and German affiliated companies were operating about 16,000 route miles of line with 31 multi-engined airplanes. The airplanes flew only about 3,000,000 miles in 1940, or an average of only 97,000 miles, or 690 hours per airplane. Panair do Brasil averages over 1,000 hours per year on its equipment so it is obvious that the Germans could fly their present mileage with far fewer machines. In view of the close relationship between the various German and German affiliated companies, it would be quite simple to transfer equipment from one to the other in case a company owning only one or two airplanes should lose one of its ships in a crash. Only one Junkers JU-52 (belonging to the Brazilian controlled VASP) has been destroyed by accident since the war but Condor has lost the use of its two four-engined Focke-Wulfs by the strict enforcement of the rule against foreign pilots by Brazil in October, 1940. There are no Brazilian pilots available capable of flying this airplane.

equipment or parts shortages.

Even usually well informed circles in the United States have until recently been ignorant of the scope of the German sponsored airline system in South America. With the intensification of the war, however, and the increased probability of our involvement, we have begun to realize the importance of a sympathetic South America to our national defense. We have become correspondingly worried by potential military aviation activities by Germans in South America, and particularly in regions adjacent to the Panama Canal or to the shoulder of Brazil which would be the logical goal of a German military force attacking from Africa.

This fear has led the United States to take active steps to restrict German airline operations. South American governments in general have not shown the same alarm at German activities but they have been cooperative in cases where the United States has offered to replace German services or equipment.

Our South American program has aimed at the removal of German personnel, equipment, and ownership from nationally incorporated local lines. In cases where this has not succeeded, an attempt has been made to drive German lines out of business by direct competition.

The policy has already begun to bear concrete results and has contributed substantially to the difficulties of German companies in Colombia, Ecuador, Bolivia, Peru, and Brazil.

Moves against SCADTA, SEDTA, and Lufthansa Peru

The German operations which disturbed the United States most were those in proximity to the Panama Canal. Chief among these was the Colombian incorporated SCADTA, which operated within 300 miles of Cristobal. The

company was over 80% owned by Pan American but employed a large number of German pilots and ground personnel. This was entirely natural as the operation had been built up by Germans who were doing a competent job. Moreover, pilots and executive employees were guaranteed their positions until 1939 by the terms of the contract by which Pan American purchased control of the company. Their numbers were being slowly reduced, but the international crisis had arisen gradually enough so that there had been no one point at which it seemed necessary to dispose of all the German personnel at the cost of temporarily disrupting operations.

The point came finally, however, and in July, 1940, after prolonged negotiations between the United States, the Colombian government, and Pan American, all the important German personnel were discharged. The cost of this operation was substantial, due in part to severance of employment payments which had to be made under the Colombian law. At the same time, pursuant to negotiations which had been in progress for some time, SCADTA and the Colombian national company SACO (Servicios Aereos Colombianos) were merged to form a new national company, AVIANCA (Aerovias Nacionales de Colombia), in which Pan American obtained an 80.28% interest and the Colombian government 15%. The Colombian government planned to increase its interest so that by 1942 Pan American's equity would be less than 50%. Pan American agreed to provide the company with technical management as long as its ownership exceeded 25%. ARCO (Aerovias Ranales Colombianas), another small Colombian company employing German personnel, was absorbed by AVIANCA in May, 1941.

The activities of the German controlled SEDTA in Ecuador next required Washington's careful attention. Ecuador owns the Galapagos Islands

which are in a strategic position in relation to the Pacific entrance to the Panama Canal. When SEDTA in 1940 actually proposed opening services to those islands (total population about 2,000), there was good reason for skepticism on our part. However, SEDTA's local services were of great utility to Ecuador where surface transportation is notoriously bad and the country naturally did not want to give them up. Neither did the Ecuadorean government have sufficient financial resources to establish its own services.

Panagra had never provided local service in Ecuador because of the poor commercial possibilities and the U. S. Post Office Department had never granted mail contracts for local service anywhere in South America. This precedent was broken in August, 1940 when the Civil Aeronautics Board granted Panagra permission to operate routes roughly paralleling SEDTA's services. The company is operating DC-2s and DC-3s (170-180 m.p.h.) in competition with older and less comfortable Junkers JU-52s (140 m.p.h.) and at fares which are competitive with SEDTA's. The effect on SEDTA's revenues is bound to be serious.

Brazil is of great strategical importance to the United States as the point on the South American continent nearest to Africa and Europe. It is also the fountainhead of all German aviation efforts in South America - a combination of events and geographic situation which, to say the least, has been disturbing to our government. It was probably not against the wishes of the United States that the Brazilian government revoked Condor's permit for its operation to Oyapok on the border of French Guiana, thus preventing a German company from operating close to the sphere of U. S. influence. Similarly, the strict enforcement of Brazilian

regulations against foreign pilots must have been pleasing to our Government.

The only company to cease operations since the war is Luft-hansa Peru whose operations were suspended and equipment seized at the order of the Peruvian Government on April 1, 1941. The company's operating permit was withdrawn in February, 1941 because of flights over forbidden territory, but it was given ninety days to comply. In the meantime, however, operations were forcibly suspended to prevent possible sabotage of its equipment following the destruction by their crews of three German merchantmen which the Peruvian Government was about to take over.

INCREASED TRAFFIC STRAINS PAN AMERICAN'S FACILITIES

The dislocation of trade and travel between Latin America and Europe has resulted in great increases in the movement of goods and some increase in regular travel* between Latin America and the United States. Latin American imports from the United States in 1940 were some 50% above 1939.

The demand for air travel has increased much more sharply than that for steamship travel and a considerable strain has been placed on the facilities of Pan American Airways. Schedules have been greatly increased, but due to the shortage of equipment, it has been impossible to increase them to a degree commensurate with the demand. Useful ton miles flown by the Pan American system in 1940 were 23% greater than in 1939. Passenger miles increased 27%.

* Regular steamship travel (excluding cruises) increased 6.2% over 1939.

Pan American has added three important express routes since the war: the Belem-Rio de Janeiro "cut-off" across the shoulder of Brazil (saving 1,000 miles), the Miami-Balboa "cut-off" (saving 400 miles), and the Miami-San Juan "cut-off" (saving 100 miles). The introduction of the new schedules, the latter two of which are flown with Boeing "Strato-Clippers", has resulted in the following time savings:

From	To	Elapsed Time		Saving
		1939	1940	
New York	Rio de Janeiro	112:30	64:35	47:55
New York	Santiago	107:30	67:40	39:50

The Pan American System has placed orders for 18 Douglas DC-3s for Latin American service. The purchase of these airplanes has been approved by the Priorities Board of the Office of Production Management and the company has filed schedules with the Civil Aeronautics Board providing for an increase of some 57% in seat miles flown starting in July, 1941.

Pan American has also requested government approval for the purchase of 40 Lockheed high speed four-engined land transports of 40-50 passenger capacity which are under development. It is hoped to install these planes on the Latin American system in 1942-1943, giving a daily service on all the principal routes as compared to the present average of 3 schedules weekly. Schedules would be reduced to less than one-third of the present figure; the new Miami-Buenos Aires time, for example, would be about 20 hours as compared to about 88 hours at present.

POSSIBLE COMPETITION - AMERICAN EXPORT AIRLINES

The Civil Aeronautics Act recognizes "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", as a basic element of government policy toward the foreign and domestic air transportation systems.

The Civil Aeronautics Board was undoubtedly governed by this clause in the Act when in July, 1940 it granted a certificate of convenience and necessity to American Export Airlines to operate a New York - Europe service in competition with Pan American's trans-Atlantic service.

This was the first official approval ever given by a U. S. government agency to a new airline attempting to enter the foreign field. Congress, however, has refused to appropriate the necessary funds for the service and there is grave doubt as to whether it will be inaugurated.

American Export is also anxious to enter the Latin American field. In November, 1940 subject to the approval of the Civil Aeronautics Board, it purchased TACA, the extensive local airline system (5000 route miles) operated by Lowell Yerex in Central America. The company has also negotiated with certain local South American systems with a view to possible purchase and has completed several survey flights in the Caribbean area. Another U. S. company, American Airlines, filed application (March, 1940) for an El Paso - Mexico City service, thus being the first domestic line requesting permission to enter the foreign field.

The Board will give a decision on the TACA purchase before long and on the American application shortly thereafter. Important precedents will be set by these decisions which may have a far reaching effect on Pan American's position.

PART TWO

THE PRESENT LATIN AMERICAN AIR TRANSPORTATION SYSTEM

I THE BASIC POSITION OF THE SYSTEM

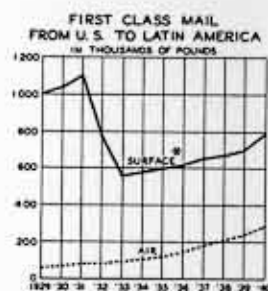
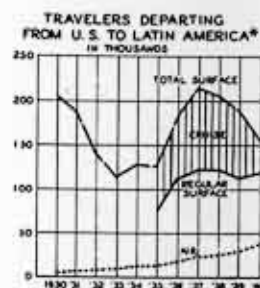
INTRODUCTION

Efficient air transportation creates new traffic, particularly in undeveloped regions where surface travel is so difficult as to discourage the movement of passengers and goods, but the sound growth of commercial airlines depends primarily upon the existence of a sufficient volume of surface traffic in mail, passengers, and high value commodities suitable for transportation by air. It is therefore pertinent to preface our analysis of the present Latin American air transport system with a brief examination of the volume and trend of surface passenger and mail traffic to and within this area.* This traffic falls into two divisions - international traffic between Latin America and the United States and traffic confined to Latin America itself. The former provides a market for the international trunk lines while the latter furnishes traffic for both the international and local companies.

Traffic between the United States and Latin America

That there is a basic general relationship between trade and the volume of mail and non-pleasure passenger traffic is suggested by the ac-

* There are no adequate statistics as to traffic in merchandise suitable for air transportation within the Latin American area.



*EXCLUDING MEXICO



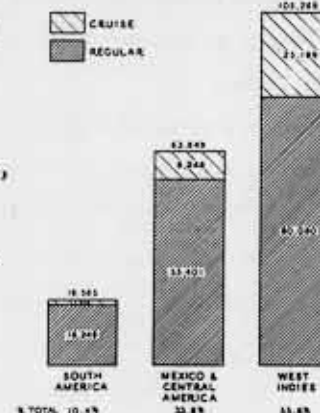
comparing graphs the trends of the three types of interchange between the United States and Latin America from 1930 through 1940.* All three reached their low point for the period in 1933 due to the depression influences. By 1940 trade had recovered to the 1930 level (27% below the 1929 peak) and first class mail to the 1932 level. Regular passenger traffic (excluding cruises) from the United States, having reached an all time high in 1937, declined slightly in 1938-1939 and turned up again in 1940. Total passenger traffic showed a 28% decline between 1937 and 1940, however, because of a very sharp decline in cruise traffic which fell from 92,109 in 1937 to 34,459 in 1940 due principally to the retarding influence of the war on all types of pleasure travel. It is significant that with the shutting off of regular traffic to other parts of the world a higher proportion of total travel from the United States has been going to Latin America, the proportion having risen from 38.3% in 1937 to 85.2% in 1940.

* It will be noted that the graphs cover only passengers and mail leaving the United States for Latin America. There are no adequate statistics on northbound traffic but its relation to southbound traffic is believed to have remained more or less constant during the period. Northbound passenger traffic is believed to be about the same as southbound, and northbound mail traffic 60% of southbound.

It will be noted that despite fluctuations in trade and in surface travel air passenger and air mail traffic increased steadily throughout the period, as a result of which the proportion of air passengers from the United States to Latin America rose from 3% in 1930 to 20% in 1940 and the proportion of air mail to total mail increased from 6% to 26%.

Distribution by Areas. Latin America covers an enormous area and the number of passengers going from the United States to the various sections differs widely, as is evident from the accompanying graphic analyses of 1940 traffic. As is to be expected, by far the largest number of travellers visit the nearer countries, a little more than half of regular traffic going to the West Indies, well over a third to Mexico and Central America, and only a tenth to South America. Nearly two-thirds of the travellers to South America went to Venezuela, Brazil, and Argentina. Because of the longer distances involved the traffic to South

SURFACE PASSENGERS FROM U.S. TO LATIN AMERICA IN 1940



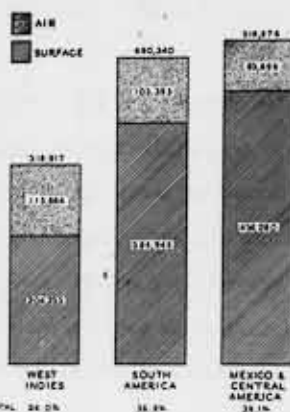
DESTINATION OF SURFACE PASSENGERS FROM U.S. TO SOUTH AMERICA IN 1940 (EXCLUDING CRUISE PASSENGERS)



America is of greater relative importance from the transportation standpoint than these figures would indicate, accounting, it is estimated, for nearly one-half of the total passenger miles of travel to Latin America. Any increase in travel to South America is therefore far more important to the air and steamship carriers from a revenue standpoint than

are increases to other sections of Latin America. In this connection it will be noted that pleasure travel to South America is still relatively unimportant due principally to inadequate promotion, limited steamship accommodations, and the high cost of the journey. In 1940 cruises accounted for only 6.7% of total travellers to South America as compared to nearly one-quarter in the case of the West Indies.

FIRST CLASS MAIL FROM U.S. TO LATIN AMERICA IN 1940
(IN POUNDS)



Mail bears a closer relation

DESTINATION OF SURFACE FIRST CLASS MAIL FROM U.S. TO SOUTH AMERICA IN 1940
TOTAL - 888,888 POUNDS



to the volume of trade than to the factors which encourage pleasure travel and an analysis of first class mail traffic indicates that the distribution is quite different than in the case of passenger traffic, 24% going to the West Indies, 39% to Mexico and Central America, and 37% to South America.

Traffic between Europe and Latin America

While this study is primarily concerned with traffic between Latin America and the United States, it is necessary to keep in mind the relative volume of similar traffic between Latin America and Europe in order to provide a sense of perspective.

Passenger and mail traffic between Europe and Mexico, Central America, and the West Indies is relatively light - only a small fraction

of that between the United States and these areas. Traffic between Europe and South America, however, is much heavier than between the United States and South America. No exact figures are available as to passenger traffic, but at the outbreak of the present war about five times as many passenger steamers of over 8,000 tons were in service between Europe and South America as were in our own South American trade and passenger traffic was probably in the same ratio. Surface mail traffic between Europe and South America in 1937, the last year for which figures are available, was 45% greater than our own surface mail traffic with that continent.

Traffic within Latin America

There are no adequate statistics as to the volume of passenger and mail traffic between the various Latin American countries or within those countries. Passenger and mail traffic usually bears a fairly direct relationship to the volume of trade. Trade between the Latin American countries is small; in 1938 it amounted to only 6.1% and 9.4% respectively of world exports and imports of the twenty Latin American republics. Due to poor surface transportation facilities a relatively high proportion of present inter- and intra-country traffic is probably moving by air already, but any real increase in air traffic is dependent upon an upturn in trade between Latin American countries or a reduction in the cost of air transportation.

There are no statistics as to traffic in high value commodities but it should be pointed out that in certain parts of Latin America, notably Central America, the Andean mining regions, and the Amazon basin, surface transportation is so slow and costly, being principally limited

to mule trains and river boats, that even relatively low value commodities can often be carried more economically by airplane. There is a large but specialized potential air traffic available in these sections.

COVERAGE SIZE AND VOLUME OF OPERATIONS

Maps VII (South America) and VIII (Mexico, Central America, and the West Indies) show the Latin American airline system as it was in January, 1941. Over this extensive network of 92,800 miles forty-four air transport companies, operating some two hundred relatively modern multi-engined airplanes, carry mail, passengers, express, and freight on an average schedule frequency of approximately 2.3 trips per week with a safety record which, while less than one-third as good as that of United States domestic air transportation, is still reasonably satisfactory for this type of operation.

Coverage of Latin American Air Transport System

Region	No. Scheduled Stops	Population Directly Served	% Total Population
South America	370	19,435,000	21.9
Mexico, Cent. Amer., W. Indies	380	4,982,000	14.3
Total	750	24,417,000	19.7
U. S. Domestic	253	38,938,000	29.6

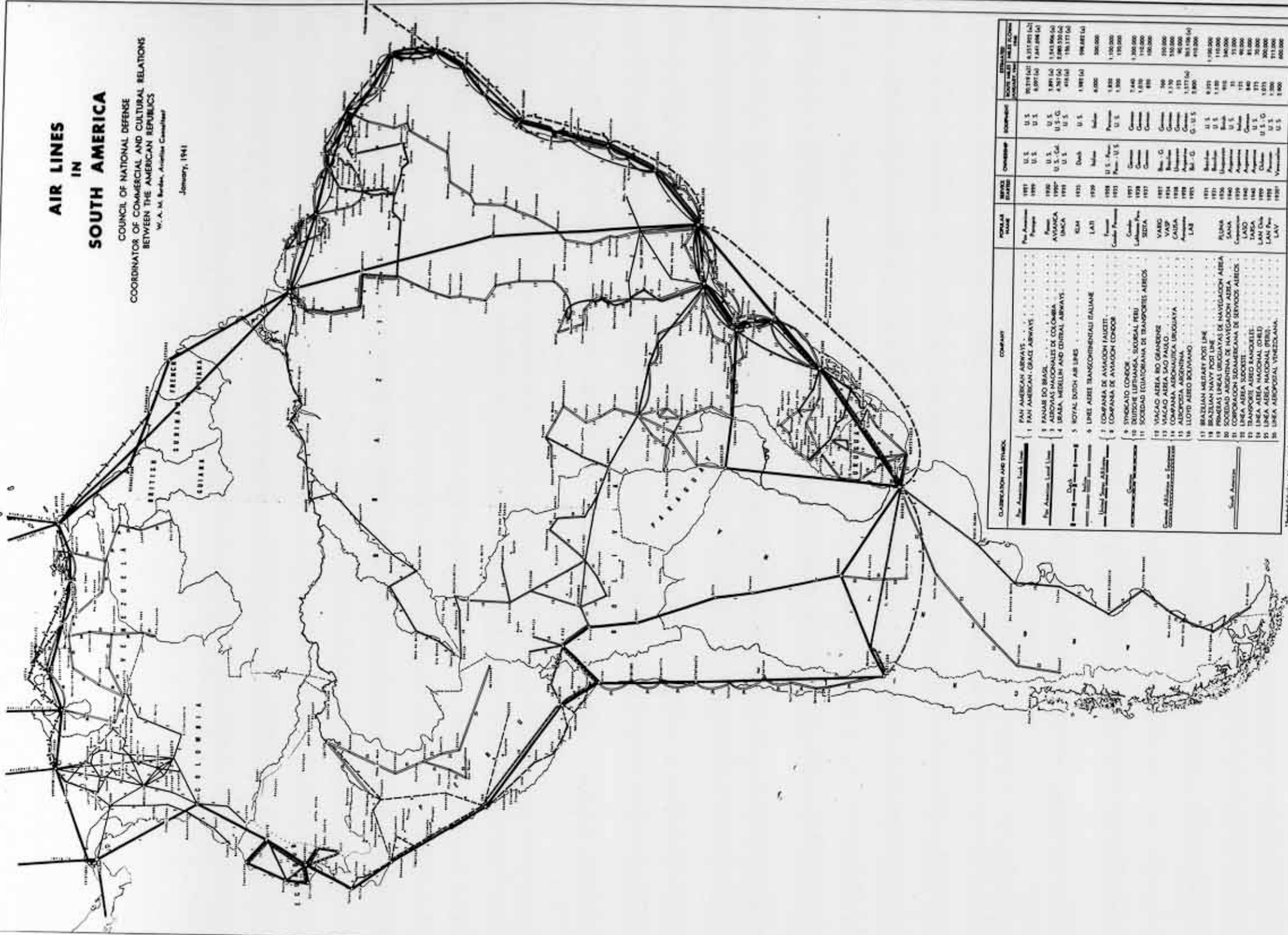
Because of the inadequate surface transportation, Latin American airlines find it economically and politically worth while to schedule stops at a number of communities so small that they would be neglected in this country. There are 750 stops on the Latin American airline system*,

* A moderate number, particularly those on the Brazilian military mail lines, the TAGA system in Central America, and the small independent services in Mexico, are mere plantations.

AIR LINES IN SOUTH AMERICA

COUNCIL OF NATIONAL DEFENSE
COORDINATOR OF COMMERCIAL AND CULTURAL RELATIONS
BETWEEN THE AMERICAN REPUBLICS
W. A. M. Burke, Assistant Coordinator

January, 1941

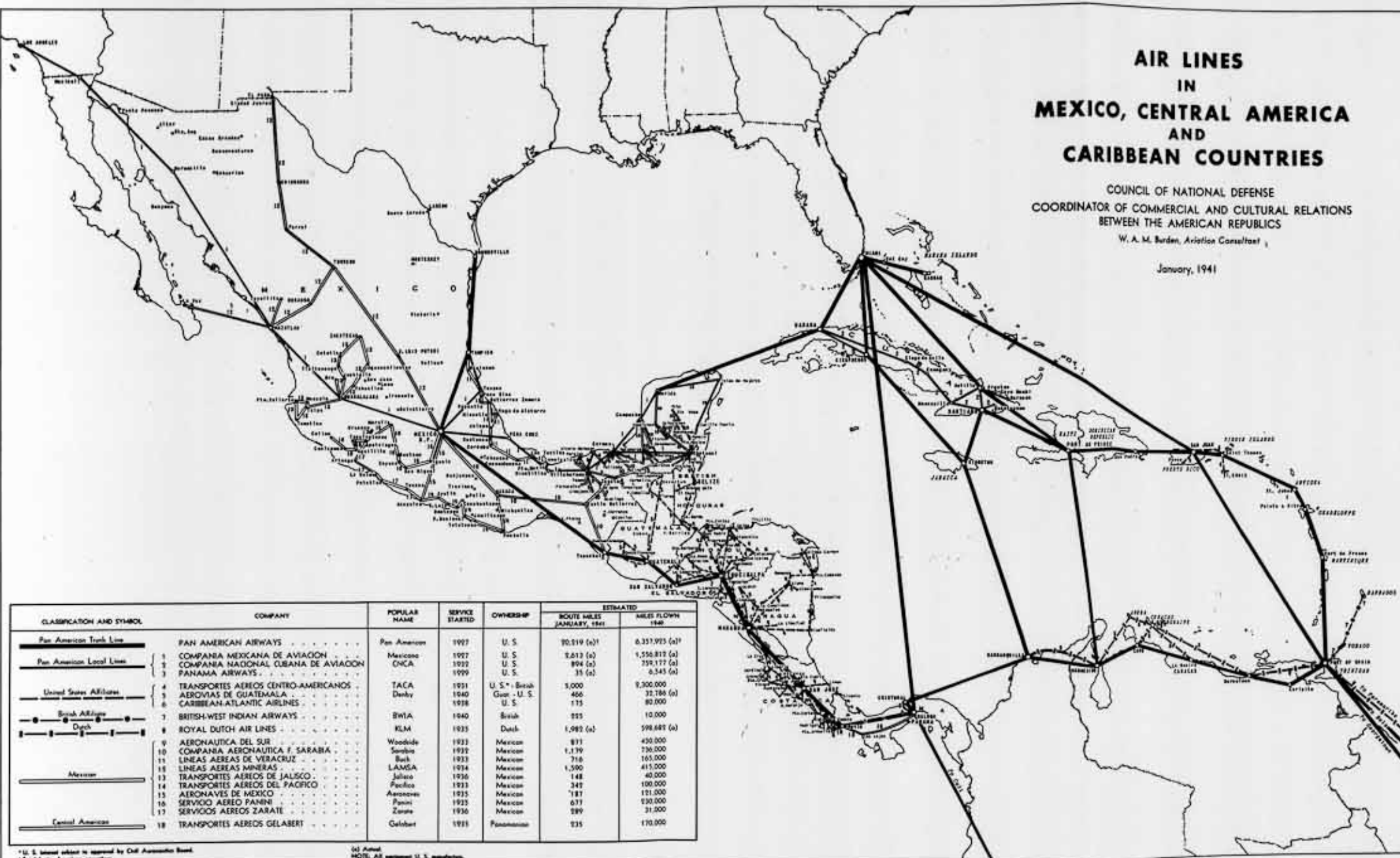


COMPANY	FOUNDED	HEADQUARTERS	STOCK	FARE	MAIL	TELEPHONE
1 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
2 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
3 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
4 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
5 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
6 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
7 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
8 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
9 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
10 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
11 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
12 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
13 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
14 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
15 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
16 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
17 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
18 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
19 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
20 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
21 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
22 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
23 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
24 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
25 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
26 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
27 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
28 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
29 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
30 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
31 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
32 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
33 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
34 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
35 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
36 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
37 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
38 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
39 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
40 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
41 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
42 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
43 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
44 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
45 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
46 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
47 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
48 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
49 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000
50 PAN AMERICAN AIRWAYS	1919	New York	U.S.	10,000,000	10,000,000	10,000,000

AIR LINES IN MEXICO, CENTRAL AMERICA AND CARIBBEAN COUNTRIES

COUNCIL OF NATIONAL DEFENSE
COORDINATOR OF COMMERCIAL AND CULTURAL RELATIONS
BETWEEN THE AMERICAN REPUBLICS
W. A. M. Burden, Aviation Consultant

January, 1941



CLASSIFICATION AND SYMBOL	COMPANY	POPULAR NAME	SERVICE STARTED	OWNERSHIP	ESTIMATED ROUTE MILES JANUARY, 1941	ESTIMATED MILES FLOWN 1940
Pan American Trunk Line	PAN AMERICAN AIRWAYS	Pan American	1927	U. S.	70,519 (a)	8,357,903 (a)
Pan American Local Lines	1. COMPANIA MEXICANA DE AVIACION	Mexicana	1927	U. S.	8,613 (a)	1,556,812 (a)
	2. COMPANIA NACIONAL CUBANA DE AVIACION	ONCA	1932	U. S.	894 (a)	739,177 (a)
	3. PANAMA AIRWAYS		1939	U. S.	35 (a)	6,545 (a)
United States Airlines	4. TRANSPORTES AEROS CENTRO-AMERICANOS	TACA	1931	U. S. - British	1,000	9,300,000
	5. AEROLIAS DE GUATEMALA	Dorby	1940	Guat. - U. S.	400	37,788 (a)
	6. CARIBBEAN ATLANTIC AIRLINES		1938	U. S.	175	80,000
British Airways	7. BRITISH-WEST INDIAN AIRWAYS	BWIA	1940	British	225	10,000
Dutch	8. ROYAL DUTCH AIR LINES	KLM	1935	Dutch	1,982 (a)	598,647 (a)
Mexican	9. AERONAUTICA DEL SUR	Woodside	1932	Mexican	871	430,000
	10. COMPANIA AERONAUTICA F. SARABIA	Sarabia	1932	Mexican	1,139	730,000
	11. LINEAS AEREAS DE VERACRUZ	Bush	1933	Mexican	716	165,000
	12. LINEAS AEREAS MINERAS	LAMSA	1934	Mexican	1,500	415,000
	13. TRANSPORTES AEROS DE JALISCO	Julisco	1936	Mexican	148	40,000
	14. TRANSPORTES AEROS DEL PACIFICO	Pacifico	1933	Mexican	347	100,000
	15. AERONAVES DE MEXICO	Aeronaves	1935	Mexican	787	121,000
	16. SERVICIO AEREO PANINI	Panini	1935	Mexican	671	120,000
	17. SERVICIOS AEROS ZARATE	Zarate	1936	Mexican	289	31,000
Central American	18. TRANSPORTES AEROS DELABERT	Delabert	1935	Panamaian	235	170,000

(a) U. S. interest subject to approval by Civil Aeronautics Board.

NOTE: All companies U. S. owned.

or three times as many as there are in the United States. However, only 19.7% of the total Latin American population has direct service as compared to 29.6% of the United States population.* Actually, there is greater need for air transportation in Latin America than there is in this country with its well developed surface transportation system, and it is clear that there is room for considerable expansion in the Latin American area before it will be adequately served.

Distribution of Lines and Competitive Situation

South America. Except for the sparsely inhabited central and southernmost areas most sections of the continent have at least some airline service. The network is densest in the heavily populated region between Rio de Janeiro and Buenos Aires, on the shoulder of Brazil where strategic considerations and inadequate surface transportation have encouraged development, and in Colombia and Venezuela where the population is relatively dense and railroad and surface transportation very sketchy indeed.

Twenty-seven companies** operate the South American network but the majority of them are very small, the five# largest lines accounting for 64% of the total route mileage. United States, German, South American, Italian, and Dutch companies are engaged in the industry, the relative importance of their interests being tabulated below.

* Surface transportation is so good in the United States that it is estimated by the Civil Aeronautics Board that all persons living within fifty miles of an airport have the equivalent of direct air service. Upon this assumption 59.2% of the population of the United States can be considered as having direct service.

** See Map VII for names and basic operating statistics.

Considering the Pan American System as one unit.

Airline Operations in South America 1940

Nationality of Company	Route Miles	% Total	Miles Flown	% Total
U. S. & U. S. Affiliated*	30,700	46.2	8,737,000	57.2
German & German Affiliated**	15,800	23.7	3,173,000	20.8
South American	7,400	11.1	1,755,000	11.5
South American - Mail Only#	10,400	15.8	1,210,000	8.0
Other	2,000	3.2	380,000	2.5
Total	66,300	100.0	15,255,000	100.0

U. S. controlled companies dominate the network. The Pan American trunk system encircles the continent with important interior diagonals or cut-offs from La Paz to Buenos Aires, from Buenos Aires to Rio de Janeiro via Asuncion, and from Rio de Janeiro to Belem. The Pan American companies or their subsidiaries also operate extensive networks in Brazil and Colombia and small local systems in Ecuador. The German companies are strongest in Brazil and in addition carry out trunk line operations from Rio de Janeiro to Buenos Aires and across the continent to Santiago which compete directly with Pan American. They also operate a second transcontinental route from Rio de Janeiro to Lima and a small local operation in Ecuador.## South American owned lines have monopolies of local transportation in Venezuela and Chile, and lines which are primarily South American in ownership and management operate important portions of local networks in Argentina, Uruguay, and Brazil. There is an extensive government operated air mail system in Brazil and a smaller one in Peru; these are conducted on a somewhat irregular schedule.

* Operating within South America only.

** Includes 6,432 route miles of partly South American owned lines.

Irregular schedules.

The Peruvian and Bolivian governments have acted to remove German influence in their countries.

Mexico, Central America, and the West Indies. Airline coverage

is adequate throughout the area and is particularly complete in the southern part of Mexico and Central America where the population is relatively dense and surface transportation poor. There is, however, a paucity of local service among the West Indian Islands.

There are 19 companies operating in the area but four of these are very small Mexican owned companies flying principally single-engined equipment. Pan American dominates trunk operations, accounting for 49.5% of total route miles, but has some competition in local service in Central America where American-British owned TACA* operates an extensive network.

Airline Operations in Mexico, Central America, and the West Indies 1940

Nationality	Number of Companies	Route Miles	% Total	Miles Flown	% Total
U. S. & U. S. Affiliated	7	18,900	71.4	8,669,000	75.7
Mexican	9	6,000	22.7	2,268,000	19.8
Other	3	1,600	5.9	499,000	4.5
Total	19	26,500	100.0	11,436,000	100.0

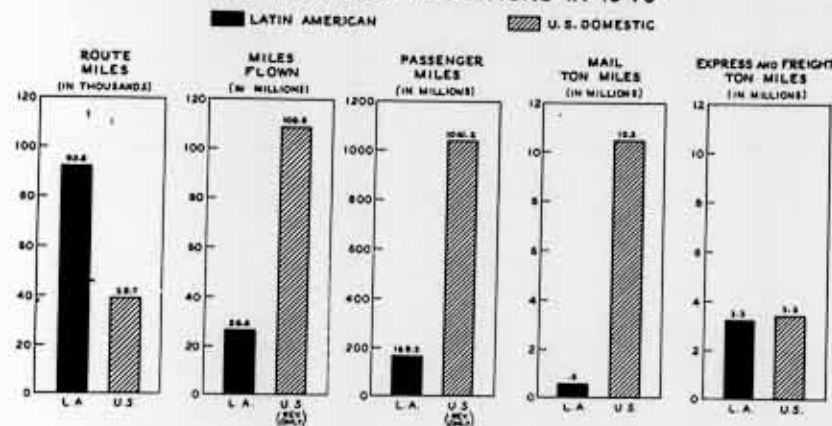
Size of System Compared with U. S. Domestic Network

The extent and volume of operations on the Latin American airline network can best be visualized by comparing it with our own U. S. domestic system. In interpreting the accompanying graphic comparison it should be remembered that while Latin America with its 8,000,000 square miles is somewhat less than three times as large as the United States, its population of 123,000,000 is slightly less than ours and has a much lower average standard of living. This explains the fact that although the Latin

*Founded by a New Zealander but recently purchased by the U. S. American Export Airlines subject to the approval of the Civil Aeronautics Board.

American system is over twice as extensive as our own, its total volume of traffic is very much less and its airlines flew only about one-quarter as many miles as the U. S. domestic system. Passenger traffic was one-sixth and mail traffic 6% of ours.* Express and freight traffic, on the other hand, was nearly as great as in the United States.**

COMPARISON OF LATIN AMERICAN AND U. S. DOMESTIC AIR TRANSPORT OPERATIONS IN 1940



Because of the great extent of the Latin American network, the large number of companies operating the system, and the low schedule frequency, a relatively large number of airplanes are in service. Nearly two-thirds as many multi-engined transports are in use as in the United States despite the fact that only one quarter as many miles were flown in 1940, and Latin American transports averaged only 84,000 miles *** per

* Measured in passenger miles and ton miles, the only really accurate standard of comparison.

** One-third of this total is accounted for by TACA in Central America which carries large amounts of mining supplies and general commodities over short distances.

***Based on the total of multi- and single-engined airplanes.

year, as compared to 305,000 miles for those in the United States. This inefficient utilization of equipment, unavoidable with low schedule frequency, naturally increases the cost of operation.

The following table summarizes by types the equipment in service in Latin America in December, 1940 compared with that in service in the United States. It will be noted that the total of 205 multi-engined transports includes a considerable number of obsolete types, principally Fords, Stinson tri-motors, and Consolidated Commodores, and that 110 single-engined airplanes are still in operation. Most of the latter are concentrated in Mexico and Central America and are used in an irregular fashion.

Multi-Engined Equipment in Latin American and U. S. Domestic Services (December 1940)

Type	Year of Initial Service	Pan American System	German & German Affiliates	Other	Total	U. S. Domestic
<u>United States</u>						
Ford Tri-Motor	1926	12		21	33	
Curtiss Condor	1928	2		4	6	
Lockheed Electra	1932	7		6	13	26
Boeing 247	1933	12			12	31
Sikorsky S-42	1933	7			7	
Douglas DC-2	1934	11			11	36
Sikorsky S-43	1934	7			7	
Douglas DC-3	1936	21			21	242*
Lockheed 14	1936			12	12	2
Boeing 307	1940	3			3	5
Douglas DC-5	1940			2	2	
<u>German</u>						
Junkers JU-52	1931		25	4	29	
Focke-Wulf FW-200	1937		2		2	
Other (mostly prior to 1933)		9	4	34	47	13
Total		91	31	83	205	355
<u>Miscellaneous single-engined airplanes</u>						
Grand Total					110	0
					315	355

* Includes 57 Douglas DSTs.

A further indication of the size and nature of the Latin American system is given by the roster of its personnel, a very rough estimate of which is given in the following table.

Personnel of Latin American Air Transport System

	<u>Pilots and Co-pilots</u>	<u>Others</u>	<u>Total</u>
U. S. & U. S. Affiliated	278	6,103	6,381
German & German Affiliated	89	1,255	1,344
Latin American	123	793	916
Other	13	116	129
Total	503	8,267	8,770

It will be noted that only 503 pilots are employed in Latin America as compared to 1,910 on the U. S. domestic system, but the total Latin American personnel is 8,770 as compared to 15,800 in the United States. The Latin American total, however, includes a large number of unskilled ground employees. As labor is relatively cheap and foreign companies are required to have a high proportion of national personnel, there is a tendency to employ large numbers of low salaried employees.

CHARACTER DISTRIBUTION AND VOLUME OF TRAFFIC

The table on the following page summarizes the basic revenue statistics of representative trunk and local airlines operating in Latin America. In the early stages of air transport development mail and subsidy* revenue constitute a high percentage of an airline's total income but as commercial traffic develops, the proportion of such income de-

* The United States conceals its subsidy payments by including them in its payments for the carriage of mail but in South America and Europe mail payments are usually less than stamp revenue to the post office departments and may therefore be considered, in a sense, commercial revenue. Subsidy payments are made separately (See Pages 25 and 102).

creases with the enterprise coming to stand more and more on its own feet economically. The percentage of commercial revenue (passengers, express, and miscellaneous) to total revenue is one of the best indices of the economic status of an air transport system and it is instructive to examine the relative importance of the various revenue items to some typical Latin American airlines.* For the sake of comparison similar figures are given for the larger U. S. domestic transcontinental carriers.

Breakdown of Revenues 1940

	<u>% of Total Revenues</u>				
	<u>Passengers</u>	<u>Express & Freight</u>	<u>Other</u>	<u>Total Commercial</u>	<u>Mail & Subsidy</u>
<u>Trunk Lines</u>					
PAA INC.	42.9	4.5	1.8	49.2	50.8
Panagra	34.8	2.9	2.8	40.5	59.5
U. S. Domestic**	71.0	3.0	3.7	77.7	22.3
<u>Local Lines</u>					
Aeroposta	39.4	20.9	0.6	60.9	39.1
Faucett (1939)	62.2	21.2	5.6	89.0	11.0
LAV (1939)	61.5	21.1	-	82.6	17.4
Panair	56.5	5.3	1.8	63.6	36.4
PLUNA (1939)	54.9	7.8	-	62.7	37.3
TACA (1939)	31.0	60.5	3.3	94.8	5.2
VARIG (1939-1940)	#	#	#	57.6	42.4
VASP	66.9	6.5	3.8	77.2	22.8

It will be noted that the three U. S. domestic transcontinental lines which operated in densely populated territory and offered a luxurious type of service derived 77.7% of their revenue from commercial sources and at the same time two showed good profits for the period. In contrast, Pan American and Pan American-Grace, also operating high

* It is possible to obtain such figures for only a few Latin American carriers.

** Average of American, TWA, and United.

Not available.

standard services, derived only 49.2% and 40.5% respectively of their revenue from commercial sources. However, due to the heavy mail payments they showed large profits.

The local South American airlines obtained a surprisingly large proportion of their revenues from commercial sources, 60%-80% being not uncommon. Mail and subsidy in most cases did not exceed 20% of total revenues and despite this low proportion the local lines in question made small profits. Express and freight play an important role. These items are discussed in detail under the section "Express and Freight Traffic".

Passenger Traffic

Perhaps the principal reason for the rapid growth of passenger traffic on Latin American airlines is the great time saving which they offer over surface transportation at an extra cost which is not excessive. The accompanying table gives some striking typical comparisons of travel times and fares on representative routes by surface and air transportation; the accompanying chart indicates the comparative travel times by air and surface between the principal Latin American capitals.

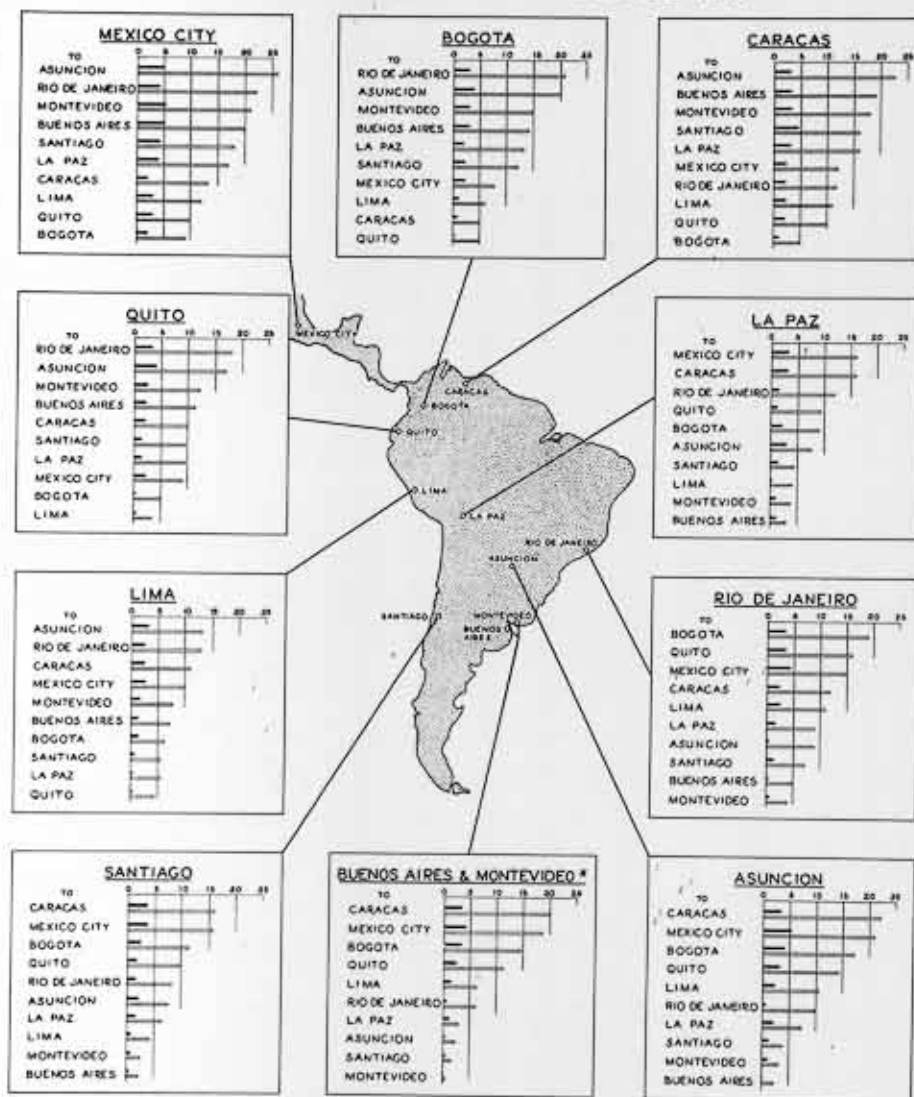
It appears that on certain typical journeys between New York and Latin America the traveller can save from three days to two weeks at an extra cost of \$15-\$20. Within Latin America itself the relative time saving is equally great. A striking example is the trip from Buenos Aires to Rio de Janeiro which takes only 7½ hours by plane as compared to 6 days by surface travel. On many other routes from 80% to 90% of the travel time can be saved by air travel and in some cases the fare is cheaper. In others the premium is relatively large but not unduly excessive in view of the time saved. It should be remembered, moreover, that

COMPARISON OF AIR AND SURFACE TIME BETWEEN PRINCIPAL LATIN AMERICAN CITIES

IN DAYS - WITH ALLOWANCES FOR TIME CHANGES BETWEEN ZONES

AIR TIME

SURFACE TIME



* AIR TIME TO MONTEVIDEO 0.5 HOURS MORE THAN TO BUENOS AIRES.
SURFACE TIME ROUGHLY 12 HOURS MORE OR LESS THAN TO BUENOS AIRES DEPENDING ON ROUTE.

Comparison of Air and Surface Transportation (Time and Cost)

Distance	Route	Time		Cost		Time Saved	Extra Cost
		Surface*	Air	Surface*	Air	By Air	By Air
		Days	Hrs.	\$	\$	Days	\$
<u>Intercontinental</u>							
	New York to						
6,492	Buenos Aires	18	87:25	330.00	621.75	14½	291.75
4,187	Lima	12	43:20	305.00	441.74	10½	136.75
2,383	Barranquilla	4	19:30	160.00	221.75	3½	61.75
<u>Within Latin America</u>							
	Buenos Aires to						
870	Santiago ^a	1½	5:00	55.00	51.00	1¼	-4.00
2,305	Lima ^b	6½	31:00	175.00	245.00	5	70.00
1,276	Rio de Janeiro	6	7:30	95.00	92.00	5½	-3.00
	Rio de Janeiro to						
213	Sao Paulo ^a	11:20 ^c	1:20	7.00	15.00	10:00 ^c	8.00
	Lima to						
1,732	Santiago	5½	11:10	121.00	170.00	4½	49.00
	Guayaquil to						
160	Quito ^a	12:00 ^c	1:15	4.63	30.00	10:45 ^c	25.37
	Brownsville to						
463	Mexico City	1½	2:45	35.00	42.00	1½	7.00
<u>Comparable U. S. Domestic Routes</u>							
	New York to						
2,613	Los Angeles ^a	2½	15:38	138.50	169.90	1¾	31.40
748	Chicago ^a	16:00 ^c	5:10	43.60	44.95	10:50 ^c	1.35
225	Washington ^a	3:35 ^c	1:30	7.95	12.20	2:05 ^c	4.25

* Boat except where otherwise indicated.

^a Train.

^b Train and boat.

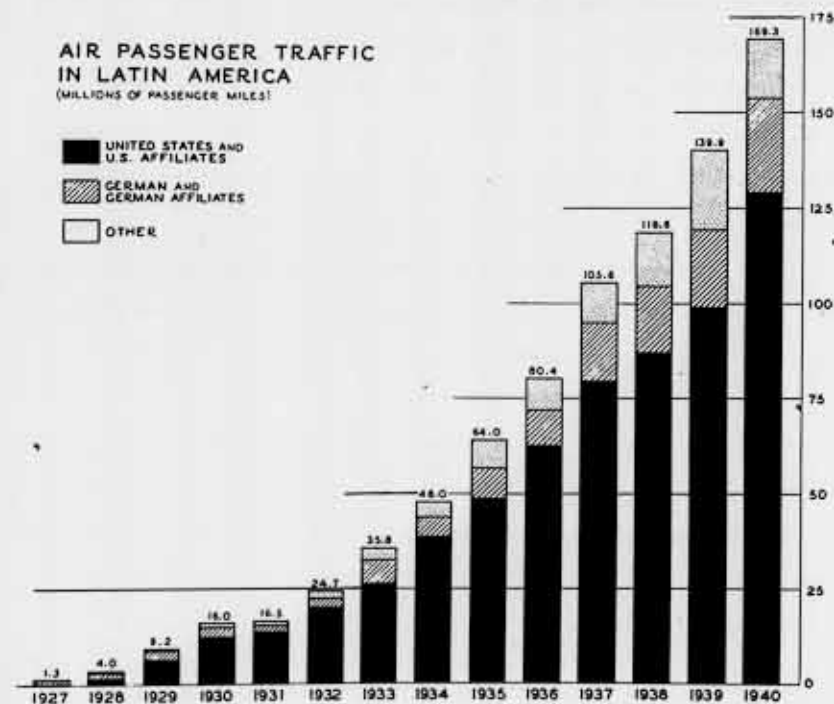
^c Surface times and time savings less than one day expressed in hours and minutes.

surface land travel in Latin America is often extremely uncomfortable and even dangerous so that the airplane has a greater advantage in this respect than in the United States where it is competing with safe and often luxurious trains. All the above comparisons are for heavily travelled routes. When the traveller strays from the beaten path, surface transportation is incredibly slow and irregular and the airplane has an enormous advantage.

Passenger Volume 1927-1940. As can be seen from the accompanying chart, air passenger traffic has grown rapidly. Between 1927 and

AIR PASSENGER TRAFFIC IN LATIN AMERICA (MILLIONS OF PASSENGER MILES)

UNITED STATES AND
U.S. AFFILIATES
GERMAN AND
GERMAN AFFILIATES
OTHER

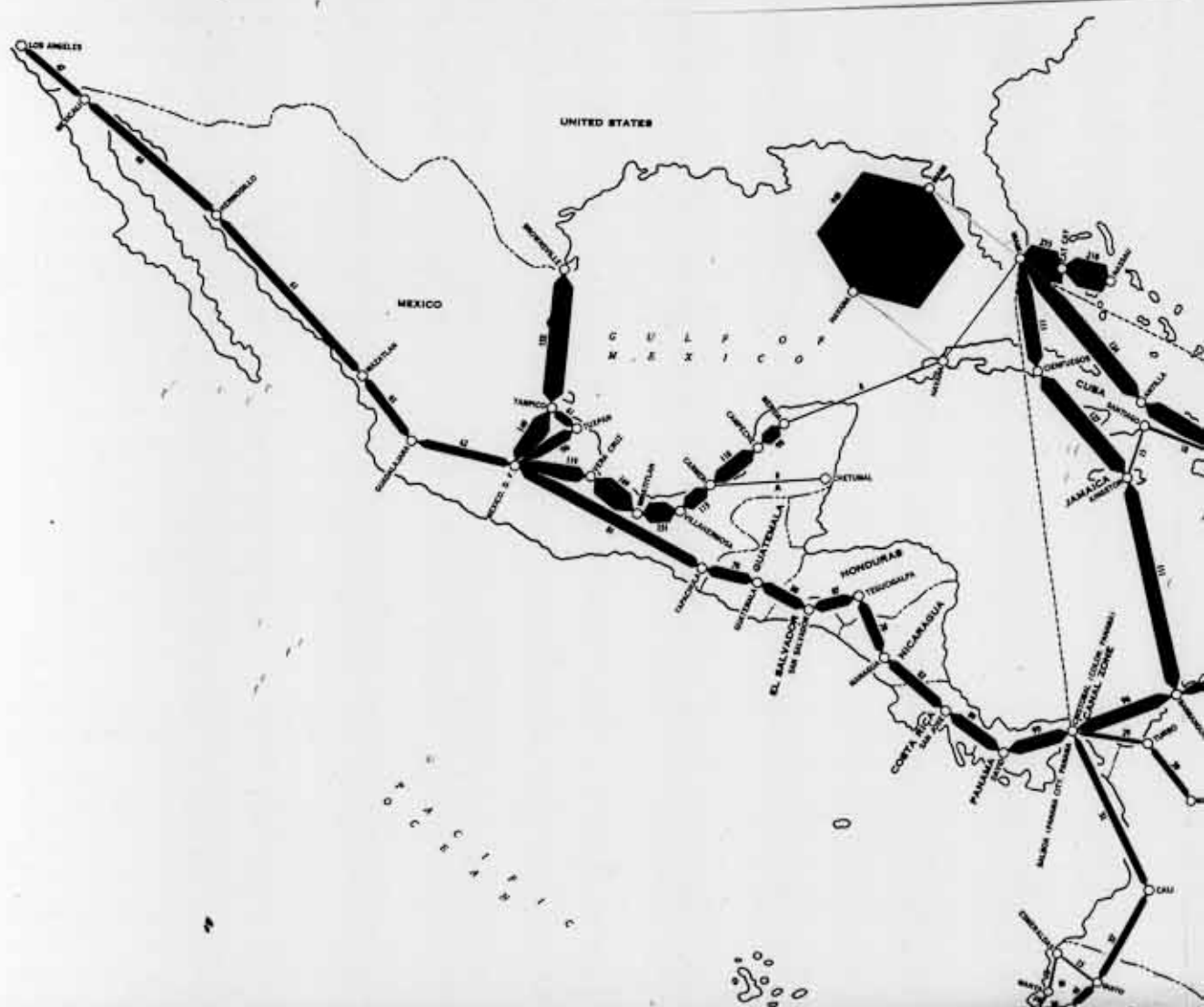


1940 passenger miles increased from 3,690,000 to 169,288,000 despite irregular fluctuations in trade and surface passenger traffic.* It is obvious that the U. S. and U. S. affiliated airlines have always carried the bulk of the traffic. In 1934, the year Germany opened the all-air airplane trans-oceanic mail service, the U. S. companies accounted for 81.5% of the total. In 1940 this proportion had dropped slightly to 76%. At the same time the Germans increased their proportion moderately from 12.4% to 14.8%. During the same period local airlines showed the greatest improvement, increasing from 6.3% to 9.4%. In the absence of adequate statistics it is impossible to determine accurately what proportion of total surface passenger travel in and to Latin America is now moving by air, but figures which are available on traffic between the United States and Latin America show that the proportion of travellers leaving the United States for Latin American countries by air has increased from 2.7% to 20.2% in 1940.

It is interesting to note that in the United States the proportion of domestic airline travel to air plus Pullman travel combined has increased in a roughly comparable degree from 0.7% in 1930 to 11.3% in 1940.

Distribution. Map IX shows the traffic density in passengers per week on the principal routes of the Pan American System in 1940. Unfortunately there are not sufficient data available to permit the inclusion of similar information for the routes of the other Latin American air transport companies.

* Between 1936 and 1940 passenger miles increased 111%, exactly the same percentage increase as was shown by the U. S. domestic system in the same period.



PAN AMERICAN AIRWAYS SYSTEM

STATION TO STATION PASSENGER TRAFFIC FLOW
AVERAGE WEEKLY VOLUME
1940



TOTAL REVENUE PASSENGERS PER WEEK IN BOTH DIRECTIONS
(INDICATED BY NUMBERS BETWEEN STATIONS)

INDICATES EXPRESS RUNS

FOR SIMPLIFICATION IN PRESENTATION, TRAFFIC ON
CERTAIN EXPRESS ROUTES HAS BEEN CONSOLIDATED
WITH CORRESPONDING LOCAL ROUTES AS FOLLOWS:

ROUTE	IN OPERATION	CONSOLIDATED WITH
MIAMI - CANAL ZONE	FROM SEPTEMBER 1	MIAMI - CLEVELAND - RINGSTON - BUENOS AIRES - CANAL ZONE
MIAMI - SAN JUAN	FROM SEPTEMBER 1	MIAMI - ARTILLA - PORT AU PRINCE - SAN PEDRO DE MACORIS - SAN JUAN - RINGSTON - BUENOS AIRES - CANAL ZONE
RINGSTON - CANAL ZONE	TO SEPTEMBER 1	
BOLEN - RIO DE JANEIRO	FROM SEPTEMBER 1	BOLEN - RECIFE - RIO DE JANEIRO AND INTERMEDIATE STATIONS
RIO DE JANEIRO - PORTO ALEGRE	FULL YEAR	RIO DE JANEIRO - SAO PAULO - CURITIBA - FLORIANOPOLIS - PORTO ALEGRE

A - SERVICE - CUSTOMER
SERVICE INaugurated APRIL 27
B - SERVICE - FORT WORTH - MIAMI - BALTIMORE -
SERVICE INaugurated SEPTEMBER 27
C - SERVICE - HONOLULU - SAN FRANCISCO -
SERVICE INaugurated SEPTEMBER 27



A glance at the map indicates that traffic in the Caribbean area is generally heavier than in South America, which is to be expected in view of the heavier surface travel in the former section. The most striking single feature in the Caribbean is the heavy traffic, largely tourist in nature, on the Miami-Havana route. The density of 985 per week on this run is four times as great as on any other route in the System* but much lower than the heavily travelled U. S. domestic routes such as New York-Boston (4,000 per week).

Next to the Miami-Havana route in density are the Miami-Nassau (226), the Brownsville-Mexico City (152), and the one along the Venezuelan coast from Maracaibo to Barcelona (153) where oil field business justifies 7 schedules per week. On the coast of Brazil from Recife to Rio de Janeiro, where Panair do Brasil offers local service in addition to Pan American's through service, traffic averaged 90 per week.

Through traffic on both the east and west coasts appeared to average about 60 per week in each case - a low figure in comparison with about 400 per week carried by one U. S. domestic airline on its New York-Los Angeles route.

Traffic on the west coast La Paz-Buenos Aires diagonal route was notably light (7 per week on the lightest portion) in comparison with the 23 per week on the Buenos Aires-Asuncion-Rio de Janeiro east coast diagonal. The latter figure was apparently limited by the space available, the load factor being 82%. Traffic on the trunk line cut-off from Belem to Rio de Janeiro (not shown on map) averaged 42 per week during the four months it was in operation in 1940 but here again space was a

* Miami-Havana produced 11.3% of total passenger miles in 1940.

limiting factor. Traffic on the Amazon route from Belem to Manaus would also probably have been higher if more service had been flown. Though it averaged only 8 per week, the load factor was 64%.

Seasonal Characteristics. Airlines

operating in Latin America are relatively unhampered by severe winter weather which produces violent fluctuations in U. S. domestic traffic and as a consequence they enjoy a very even traffic flow throughout the year except on the heavy tourist travel routes (Miami-Havana and Miami-Nassau) where fluctuations are very marked. Exact figures are not available for the smaller lines but the chart on the following page of the monthly traffic of the Pan American System illustrates this point.

This even flow indicates that a high percentage of Pan American's traffic consists of business travel because seasonal pleasure travel causes a violent fluctuation in steamship passenger traffic to Latin America with two peaks - one in the mid-winter months and one in July. The troughs in steamship traffic are 60% of the peaks.

The present lack of fluctuations in Pan American's traffic permits very efficient utilization of equipment and consequently contributes substantially to economy in operation. In the future, however, a large air tourist movement may develop as a result of the campaign to encourage inter-American pleasure travel. If it does, we can expect that air traffic will also show large peaks in the winter months. Pan American could

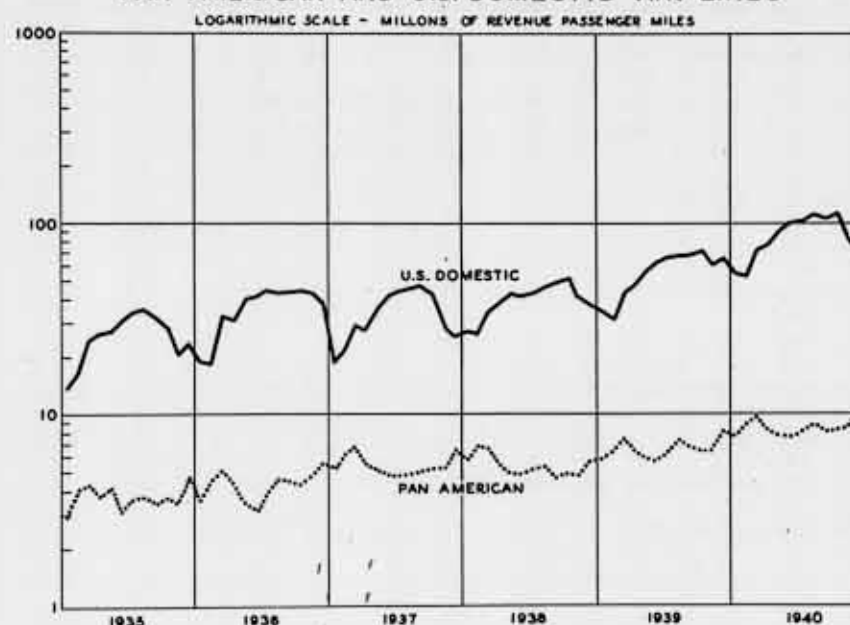
REVENUE PASSENGER MILES
MIAMI - HAVANA
(IN MILLIONS)



* HEAVY TRAFFIC IN AUGUST AND SEPTEMBER 1939 DUE TO PERIODELIC AND OCCIDENTAL STEAMSHIP COMPANY STRIKE.

meet this seasonal demand efficiently by transferring equipment from its Atlantic run which would carry its peak traffic in the summer months under normal conditions. This is one advantage which a large airline has over a number of independent smaller companies.

SEASONAL FLUCTUATIONS IN REVENUE PASSENGER MILES PAN AMERICAN AND U.S. DOMESTIC AIR LINES



Composition. There is no detailed information as to the composition of airline passenger traffic in Latin America by types of travelers but it is estimated that until 1940 over 90% of Pan American's traffic consisted of business travel, as compared to 80% on the domestic lines. In 1940 tourist travel was very much higher than in previous years and probably exceeded 20% of the total.

Fares. One way fares on the international trunk routes in Latin

America run between 7.5 and 10.5 cents per mile as compared to 5.2 cents on the large U. S. domestic lines. Local fares are lower, averaging a little over 5 cents per mile. There is no doubt that high fares have been a deterrent to air travel from Latin America to the United States. The Germans, who have been less impelled by the commercial motive than ourselves, charge somewhat lower local fares than Pan American and have been particularly liberal in making fare concessions.

Representative Published Fares on
Typical Latin American Airlines*
1940

	<u>Inter- national</u>	<u>Local</u>
Pan American	10.7	7.5
Panair do Brasil		6.9
Condor	7.6	6.8
VASP		5.2
Aeroposta Argentina		5.9
Lloyd Aereo Boliviano	9.2	7.0
Panagra	10.6	
LAN Chile		8.7
Faucett		4.4
Cia. Mexicana de Aviacion		5.3
U. S. Domestic		5.2

Safety. Accurate accident figures are available for only a few of the airlines operating in Latin America. The records of a few representative lines during the last five years are summarized on the following page.

* Actual passenger revenue per revenue passenger mile for Pan American and some of its subsidiary companies in 1939 are given below. They are lower than the figures quoted above because of deductions for round trips, official reductions, etc.

<u>Company</u>	<u>Cents per Mile</u>
Pan American	8.99
Panair do Brasil	7.65
Cia. Mexicana	4.89
Cia. Cubana	5.59

Safety Record of Latin American Airlines
1936-1940

<u>Company</u>	<u>Fatal Accidents*</u>	<u>Miles Flown per Fatal Accident*</u>	<u>Psgr. Miles per Fatal Accident*</u>
Pan American System	8	5,836,000	6,983,000
Faucett	1	5,568,000	3,588,000
AVIANCA (SCADTA)	3	3,180,000	3,575,000
Condor	3	2,186,000	2,752,000
VASP	1	1,750,000	1,221,000
U. S. Domestic	21	18,614,000	19,482,000

It appears that air transportation in Latin America is considerably more dangerous than in the United States, for the Pan American System which has the best record of any line in Latin America flew only about one-third as many miles per fatal accident as the U. S. domestic airlines.** Apparently the hazard of operation without complete airway facilities and other factors more than offset the advantages of all daylight flying and better weather conditions. Though Pan American's safety record was closely approached by Faucett, a small U. S. managed company in which Panagra has an interest, it was very much better than that of any of the German companies. Pan American flew 2.7 times as many miles per fatal accident in 1936-1940 as did Condor, the safest German operation.

Mail Traffic

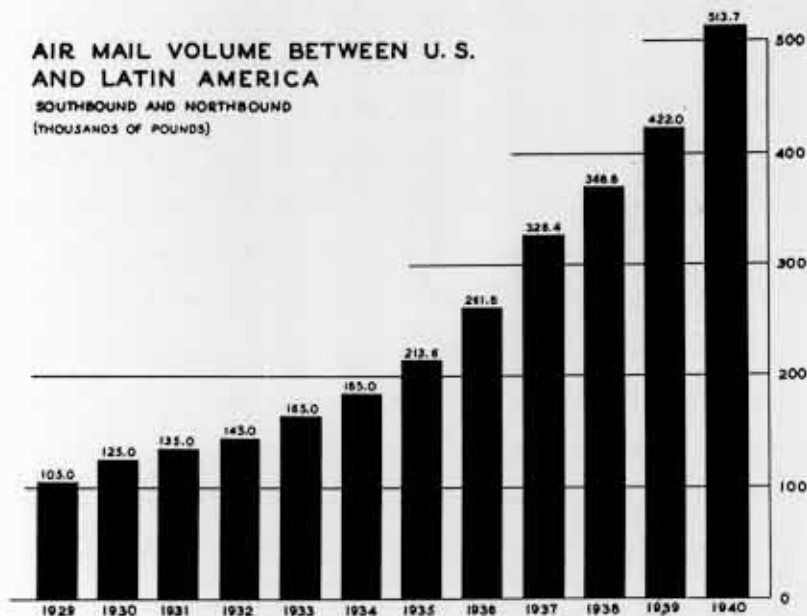
The volume of air mail between the United States and Latin America has increased steadily since 1928 despite wide fluctuations in the volume of business and the volume of surface mail. The increase has not been as great, however, as in passenger traffic which rose 1180%

* Accidents involving passengers only.

** The U. S. domestic line with the best record, American Airlines, flew 90,953,000 miles in the 1936-1940 period with only one fatal accident - in January, 1936.

between 1930 and 1940*, as compared to 310% increase in air mail traffic. Air mail poundage in the 1940 fiscal year is estimated at 33% of surface mail exchanged between the United States and Latin America while in the United States it was only 3.7%** of non-local first class mail.

AIR MAIL VOLUME BETWEEN U. S.
AND LATIN AMERICA
SOUTHBOUND AND NORTHBOUND
(THOUSANDS OF POUNDS)



A comparison with air mail traffic between Latin America and Europe is possible for 1937. Air mail between Mexico, Central America, and the West Indies and Europe was negligible in importance but air mail between Europe and South America totalled 118,500 pounds, as compared to 90,700 pounds between the United States and South America. Letters exchanged with Europe are lighter than in the case of the United States be-

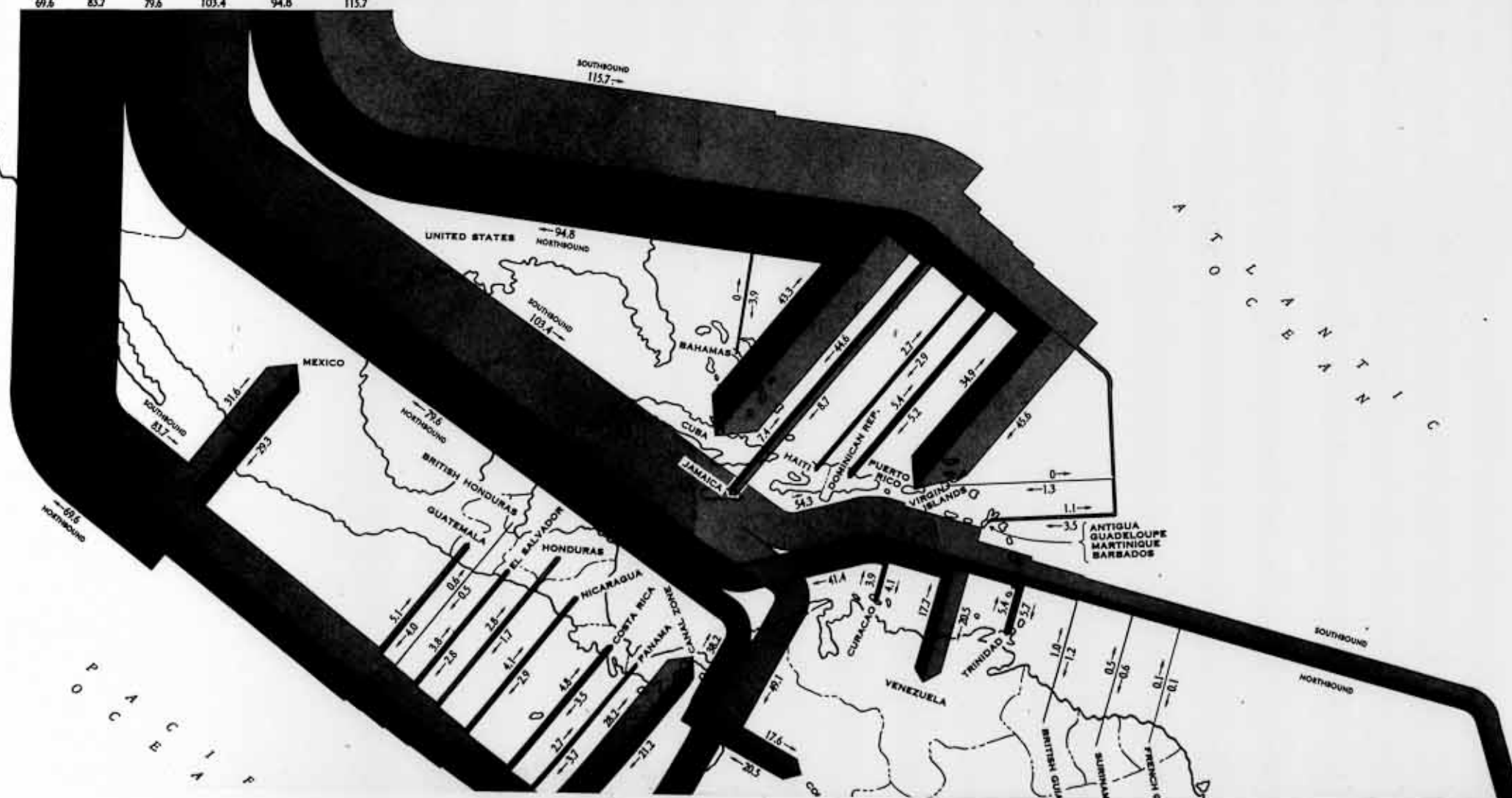
* Pan American and Pan American-Grace Airways only. The traffic of these companies includes a substantial amount of local travel but is roughly indicative of the movement between the United States and Latin America.
** 10.7% of pound-miles.

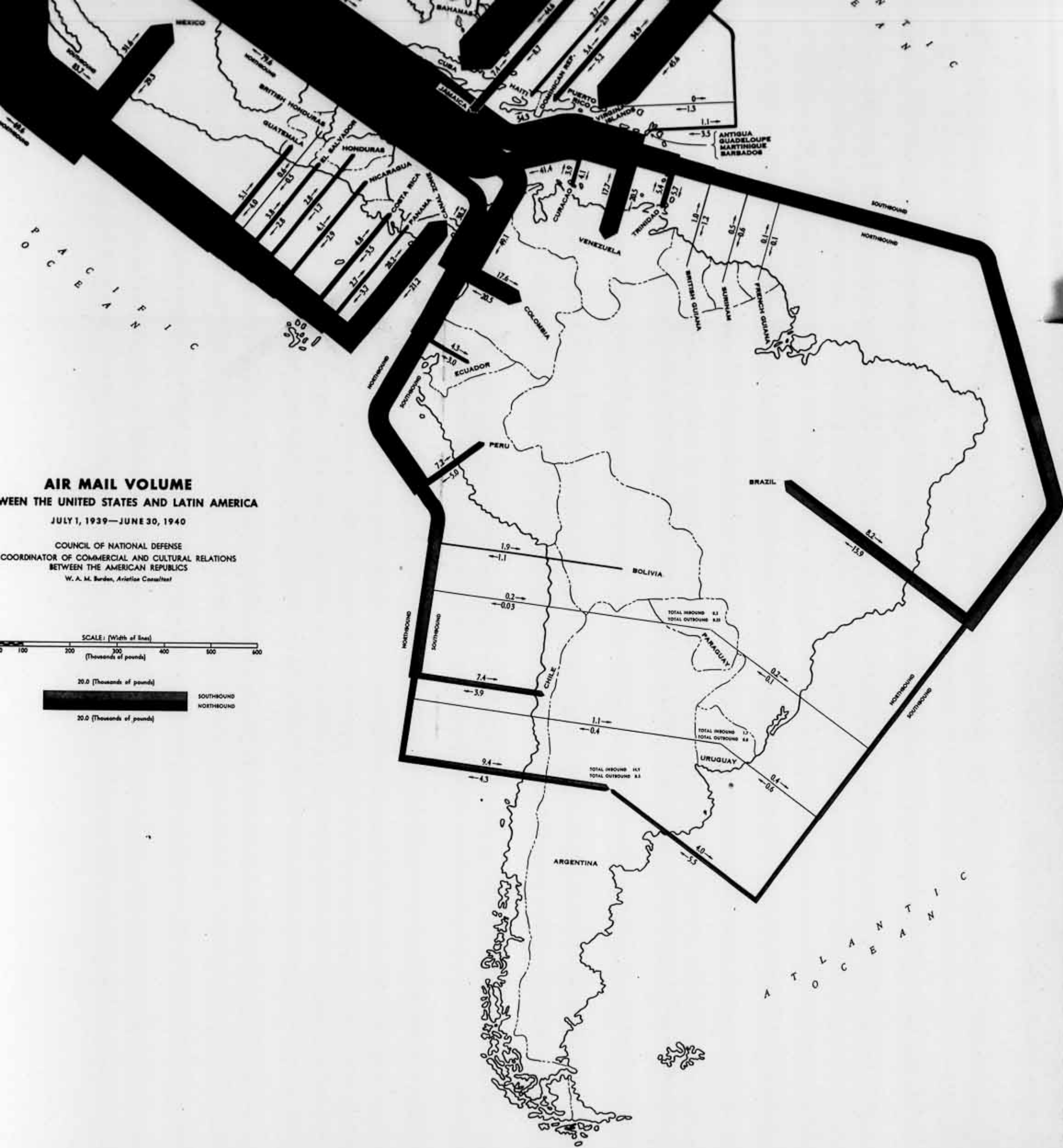
TOTALS BY REGIONS

(Thousands of pounds)

BETWEEN U.S. and	SOUTHBOUND	NORTHBOUND	TOTAL
Mexico and Central America	83.7	69.6	153.3
Caribbean Countries	115.7	94.8	210.5
South America	103.4	79.6	183.0
Grand Total	302.8	244.0	546.8

69.6 83.7 79.6 103.4 94.8 115.7





cause of the 5 gram weight limit. In number of pieces the European volume in 1937 was 2,961,000 or 57% greater than the U. S. volume. Over three-quarters of the European mail volume was with Argentina and Brasil. Poundage exchanged with these countries totalled 91,800 as compared to 25,400 between these countries and the United States in 1937. This is a striking indication of the close business and social ties with Europe.

There are no really accurate statistics as to the total unduplicated mail poundage carried by Latin American lines, but a rough estimate indicates that in 1940 Pan American performed some 330,000 ton-miles, as compared to 253,000 ton-miles for all other Latin American airlines. In Latin America air mail constitutes a less important part of total airline traffic than is the case in the United States. In 1940 it supplied only 3% of Pan American's and Pan American-Grace's total traffic and from 1% to 3% of total ton-miles of representative local lines, as compared to 9% for the U. S. domestic system.

Distribution. Map I depicts the distribution of air mail traffic between the United States and Latin America. A high proportion of this volume consists of business correspondence and it might be expected that the volume of air mail between the United States and the various areas of Latin America would bear some relationship to the volume of trade. This theory is borne out by the following tabulation except for the case of South America which produces a much smaller volume of air mail than of trade, possibly because of the very high mail rates to that area. It will be noted that the West Indies accounted for 38.5% of total pounds of air mail as against 15.6% of total trade. This difference is apparent rather than real and stems from the fact that Puerto Rico, being a U. S.

possession, is not included in the trade figures. If its mail poundage is excluded the percentage for the West Indies would be 13.7%.

Air Mail and Trade between U. S. and Latin America
(Fiscal Year 1940)

Area	Air Mail (Pounds)	% Total	Total Trade* (\$000)	% Total
Mexico and Central America	153,263	28.1	314,008	23.3
West Indies	210,539	38.5	210,728	15.6
South America	183,017	33.4	822,162	61.1
Total	546,819	100.0	1,346,898	100.0

Except in the case of Brazil and Argentina the distribution by individual countries also bears some relation to trade volume, for the Latin American countries providing the largest air mail volume, Cuba (87,900 lbs.), Mexico (60,900 lbs.), and Venezuela (38,200 lbs.), are also important trade producers. The U. S. possessions of Puerto Rico and the Canal Zone account for a large proportion of total air mail, primarily because of their close connection with the United States and the relatively large U. S. populations. For example, Puerto Rico (80,500 lbs.) produced over three times as much mail as Brazil (24,100 lbs.) and the Canal Zone (49,400 lbs.) twice as much.

Air Mail and Trade between U. S. and Latin American Countries
(Fiscal Year 1940)

Country	Air Mail (Pounds)	% Total	Total Trade* (\$000)	% Total
Cuba	87,853	16.1	190,128	14.2
Puerto Rico	80,592	14.8	-	-
Mexico	60,910	11.1	172,721	12.8
Canal Zone	49,372	9.1	44,763	3.3
Venezuela	38,131	6.9	110,857	8.2
Brazil	24,133	4.4	215,754	16.0
Other	205,828	37.6	612,675	45.5
Total	546,819	100.0	1,346,898	100.0

* Calendar year 1940 - excludes gold and silver imports from Latin America.

In contrast to air passenger traffic which is relatively evenly balanced, it is estimated that northbound air mail traffic is only 60% (1940) of the southbound volume. Our exporters generally make more liberal use of the relatively expensive air mail service than do the Latin American business men.

Rates. U. S. air mail postage rates for mail to Latin America run from 10¢ to 40¢ per half ounce depending on the distance. They are considerably lower than European air mail postage rates to South America which ran from 50¢ to 60¢ for 5 grams (1/6 oz.) by Luft Hansa and 87¢ to \$1.00 by Air France before the war. The Italian LATI at present charges 27¢ per 5 grams from South America to Europe.

Air Mail Rates U. S. to Latin America
(Cents per Half Ounce)

Year	Mexico	Peru	Chile	Argentina	U. S. Domestic*
1929	.05*	.40	.50	.55	.05
1937	.10	.30	.40	.40	.06
1940	.10	.30	.40	.40	.06

The U. S. rate has not been changed since 1937 when it was reduced 20%-25%. It is the opinion in U. S. business circles that a further substantial cut in rates might stimulate traffic enough to increase gross revenues. It might also be desirable in the interest of a closer liaison between the American republics.

Postage rates for mail from Latin American countries to the United States are set by those countries. As shown in the tabulation on the following page they are considerably higher than our southbound rates except in the case of Mexico.

* Per ounce.

Air Mail Rates from Latin America to the U. S.

Country	Weight Unit		Postage Rate	
	Grams	Ounces	Local	U. S.
Mexico	5	1/6	\$0.20	\$0.04
Colombia	10	1/3	\$0.35	\$0.20
Venezuela	5	1/6	\$0.75	\$0.18
Brazil	5	1/6	\$0.00	\$0.25
Argentina	5	1/6	\$1.15	\$0.35
Chile	5	1/6	\$7.60	\$0.39

South American countries pay Pan American Airways on a poundage basis for the carriage of their mail north, usually at a rate considerably less than the postage revenue received. Prior to the passage of the Civil Aeronautics Act these payments were turned over by Pan American to the United States Post Office Department. Under the present Act the carrier receives the payments but the mail rates to be set by the Civil Aeronautics Board will presumably be correspondingly reduced.

Local Mail. While local mail traffic in Latin America is light by U. S. standards, it is not inconsiderable, especially in Brazil and Mexico where loads of 125 to 175 pounds are not uncommon. In view of the poor surface transportation in Latin America and the relatively low volume of surface mail it would seem desirable for most countries to dispatch all mail by air without surcharge as soon as possible. This may be resisted by the local postal departments, however, as they pay the airlines only 50%-60% of the air mail stamp revenue for carrying mail and thus reap a handsome profit on the transactions.

Ecuador was the first Latin American country to contract for the carriage of all first class mail by air (at 10 sucres per kilo or 30¢ U. S. Cy. per pound*). Brazil and Peru have taken a step in this direc-

* The amount of mail being carried under this contract is negligible - 5-10 kilos (11-22 lbs.) per trip.

tion by carrying all first class mail on their military lines without surcharge to remote towns devoid of surface transportation.

As the following table shows, there is little uniformity in local air mail rates. When expressed in U. S. currency many are higher than our domestic rate of 6¢ per ounce and some reduction might be desirable.

Intra-Country Air Postage Rates

Country	Weight Unit		Postage Rate	
	Grams	Ounces	Local	U. S.
Argentina	20	2/3	\$0.05	\$0.01
Brazil	5	1/6	1\$200	\$0.06
Colombia	20	2/3	\$0.25	\$0.14
Cuba	16	1/2	\$0.05	\$0.05
Ecuador				
Via SEDTA	20	2/3	\$40.40	\$0.03
" Panagra	20	2/3	\$40.80	\$0.06
Mexico	20	2/3	\$0.20	\$0.04
Uruguay	10	1/3	\$0.08	\$0.03
Venezuela	5	1/6	\$0.40	\$0.10
United States	32	1		\$0.06

Express and Freight Traffic

The U. S. international airlines have not developed express traffic much more successfully than the U. S. domestic carriers. In 1940 express business provided 4.5% and 2.9% respectively of Pan American and Pan American-Grace revenues, compared to 3% for the leading U. S. domestic lines. Local South American lines carried a much higher proportion of express and freight. Figures available for certain companies show, for the most part, that they derived 6%-20% of their revenues from this category. One company however, TACA, derived over one-half its revenue from these sources.* These companies usually charge lower rates for large

* This is a special case however. Surface transportation in the area is poor and TACA handles a relatively heavy volume of specialized commodity traffic.

shipments of heavy commodities, which they classify as freight, than for express. Express rates are roughly comparable to those in the United States while freight rates are about one-third our express charges. This latter relationship is interesting as most students of commodity traffic possibilities in the United States have maintained that no substantial business can be developed until rates are reduced to a corresponding level.

Express and Freight Rates Charged
by Latin American Airlines 1940
(per Ton-Mile)

<u>Company</u>	<u>Express</u>		<u>Freight</u>	
	<u>Local</u>	<u>U. S.</u>	<u>Local</u>	<u>U. S.</u>
Pan American				
Brownsville-Mexico City		\$1.30		
Miami-Lima		\$0.85		
Condor	11\$800	\$0.59		
Lloyd Aereo Boliviano	Bs. 34.90	\$1.05	Bs. 10.65	\$0.32*
Faucett	\$ 5.40	\$0.86		
SEDTA	\$21.90	\$1.50		
TACA		\$0.67		\$0.36**
U. S. Domestic		\$0.80		

Two Latin American airlines operating in territory where surface transportation is poor have developed commodity and merchandise traffic to the point where it provides from 20% to 60% of total revenues. Where surface transportation is limited for the most part to mules, it is often cheaper to carry even very low value goods by air. TACA has built up a large business carrying a variety of products between the

* Loads of 500 kilograms or over.

** Only on special commodities designated as freight.

The records of a large South American mining company show a direct ton-mile cost of 28.9 cents for mule transportation. This figure does not include the substantial extra cost of having goods specially packaged and machinery sectionalized.

ports and mines and agricultural enterprises in the interior of Central America. In 1940 TACA carried 28,261,000 pounds of freight and express, or 126% more than all the U. S. domestic lines. However, this poundage was carried over short distances and the ton-miles of transportation performed were only 1,068,000. This was one-third of freight and express traffic of all Latin American lines and 31% of the express traffic of the U. S. domestic lines.

Lloyd Aereo Boliviano, which operates in Bolivia where rail and highway transportation is sketchy, has developed a large traffic in miscellaneous commodities including such low value goods as cereals and salt. The company carries more freight than passengers from the standpoint of weight.

Both TACA and LAB have flexible commodity rate policies. As indicated in the table their standard rates for freight are 32¢ to 36¢ per ton-mile but a large volume of freight is carried under contract at even lower rates.

Pan American's 1940 express traffic was relatively large in comparison with total parcel post traffic between the United States and Latin America*, and looking to the future, there is unquestionably a large amount of commodity traffic available. A comprehensive survey would undoubtedly show that there are many high value commodities interchanged between the areas which could be diverted to air by smart promotional work and a reduction in rates. There are doubtless many parts of Latin America where freight traffic could be developed on a large scale, par-

* Southbound parcel post in 1940 (no figures are available for northbound) amounted to 7,499,949 pounds or only 1.42 times Pan American's 1940 express traffic.

ticularly in the mining districts of the Andes and Central America and the inaccessible regions of the Amazon. The production of inexpensive heavy capacity airplanes with low ton-mile operating costs will push the growth of air freight transportation but development of such equipment will, of course, be postponed until after the war.

II ANALYSIS OF OPERATIONS OF PAN AMERICAN AIRWAYS 1929-1940

Formulation of future U. S. policy toward Latin American air transportation must take into account Pan American Airways' accomplishments in the field to date. In order to evaluate the achievements intelligently it is well to trace the main features of the system's evolution.

Pan American concentrated solely on the development of its Latin American system until 1933 when it began active preparation for trans-oceanic service. From 1935 through 1940 the company carried out a worldwide expansion program which kept the United States in the forefront of international aviation. Trans-Pacific service was begun in 1935, Atlantic service in 1939, and service to New Zealand in 1940. Operations in Alaska were expanded and operations in China continued. As a result of this expansion, the Latin American system which constituted 87% of total Pan American route mileage in 1934 amounted to only 52% of the total in 1940.

Pan American did not willfully neglect its Latin American operations during these years but there is no question but that the company's entrance into other fields - an expansion which was unquestionably in the best interests of the United States - absorbed a considerable proportion

of its energies. In 1940, its major expansion completed, Pan American again devoted particular effort to improving its Latin American operations. This effort has been spurred by a number of outside influences - the growing interest in both government circles and throughout the country in Latin America, the threat of competition from other U. S. airline groups*, and the examination of its operations by the Civil Aeronautics Board in preparation for the setting of new mail rates. Since June, 1940 Pan American has increased the speed of its main services substantially, placed three new four-engined Boeing land transports in service, and submitted a program to the Civil Aeronautics Board for increased schedules which would involve a 57% increase in seat miles flown beginning in July, 1941.

United States Mail Revenues of Pan American and U. S. Domestic Systems
Cents per Total Miles Flown (Mail and Non-Mail)

	Pan American System		U. S. Domestic System	
	Dollars	Cents per Mile	Dollars	Cents per Mile
1930	4,150,916	100.2	14,618,232	44.5
1935	7,222,720	93.2	8,834,732	15.8
1940	12,570,586	57.1	18,678,921	19.8

Latin American operations have been extremely profitable, particularly in the last five years. There has been a striking increase in traffic since 1930 and a substantial reduction in operating costs, but Pan American's U. S. mail payments per mile flown with mail have been reduced only some 10%.** Due to a voluntary increase in non-mail mileage

* In March, 1940 American Airlines filed an application for a certificate to operate from El Paso to Mexico City. American Export Airlines has purchased TACA's extensive Central American operations, subject to the approval of the Civil Aeronautics Board, and is believed to have extensive plans for expansion in South America.

** Mail payments to the U. S. domestic lines per mile flown with mail have been reduced some 68% in the same period.

the income from mail per total miles flown excluding the operations of all subsidiaries has been reduced 56% but, as tabulated on the preceding page, it is still approximately three times as high as the mail income of the U. S. domestic system on a corresponding basis.

The U. S. government's net mail payments (after deduction of applicable stamp revenues) for Latin American services for the eleven fiscal years July 1, 1929-June 30, 1940 total \$47,202,000. Comparable net payments to the U. S. domestic lines in the same period total \$59,852,000. In addition, the government has expended approximately \$126,468,000 on the maintenance and construction of domestic airway facilities, making total U. S. expenditures for domestic air transport approximately \$186,320,000, or four times greater than the net expenditures on Pan American.* Another interesting index of comparative U. S. government transportation expenditures is the fact that the operating subsidy to U. S. merchant marine services to Latin America in the 1940 calendar year totalled \$4,114,000, as compared to a net payment of \$2,893,000 for its Latin American operations during the fiscal year 1940.

U. S. Government Expenditures on Air Transportation
1930-1940

	Pan American and Pan American Grace	U. S. Domestic
Total Mail Payments	\$71,324,000	\$167,396,000
U. S. Govt. Stamp Revenues, etc.	24,122,000	107,544,000
Net Cost	47,202,000	59,852,000
Expenditures on Airway Aids	-	126,468,000
Total Cost	\$47,202,000	\$186,320,000
Passenger Miles Performed	564,313,000**	4,360,047,000

* Approximately \$23,146,000 of this amount represents capital investment; the remainder is operating expense. These facilities are also used to a large extent by private fliers and by the Army and Navy.

** Pan American System.

What has the United States received for this expenditure? In evaluating the return we must remember that Pan American is more than a transportation system and much of its value to the United States is of an intangible nature. It has contributed toward building U. S. prestige throughout Latin America. It has also provided valuable aid to the defense of the Panama Canal and to our military position throughout the Latin American area and has rendered important service during hurricanes and epidemics. These imponderables defy exact analysis but they are important.

From the transportation standpoint Pan American's achievement is easier to evaluate. The basic question is - "Has the company performed its task in building an air transportation system in Latin America as efficiently as the government could reasonably have expected for the moneys expended?" There are three possible standards - none of them exact - by which Pan American's past achievement and present services can be judged: the long distance lines of the important European air transport companies; the other airlines operating in Latin America, both European and locally owned; the U. S. domestic lines.

COMPARISON WITH EUROPEAN AIR TRANSPORT COMPANIES

The leading European air transport companies are comparable to Pan American in that they are well financed institutions created by their respective governments to implement national policy by operating airlines to areas in which the parent government has a vital interest. The operations of KLM and Imperial Airways to India and Australia being largely overland are most nearly comparable to Pan American's Latin American service

from the technical standpoint. Luft Hansa's and Air France's prewar services from Europe to South America were not technically comparable to Pan American's, as they were for mail only and involved a long (1,900 miles) overwater hop, but they represent Europe's attempt to compete with the U. S. air service to South America and must therefore be considered. The following table compares the speed and fare of Pan American's service on its important Miami-Buenos Aires route with those of the European services on routes of comparable length. Comparisons have been made as of the middle of 1932 and the middle of 1939, the former year being the first in which the Pan American South American service was really in full operation and the latter the last period of normal operations of European lines before the war. Safety comparisons are given for the 1934-1937 period, the only years for which accurate European accident figures are available.

Comparative Speeds, Fares, and Safety Records
of Pan American and Leading European Airlines

Company	Overall Speed (miles per hour)		Fare per Mile (in cents)		Miles Flown per Fatal Accident Invol. Passengers (1934-1937)
	1932	1939	1932	1939	
KLM	39	91	6.8	7.2	1,954,000
Imperial	33	73	5.7	7.5	7,285,000
PAA System	42	53	10.7	10.1	4,227,000*
Air France	37	85			12,797,000
Luft Hansa		83			9,542,000

It is apparent that in 1932 Pan American's overall speed was 8% and 27% faster than that of KLM and Imperial, respectively. The Pan American fare was 57% higher than KLM and 88% higher than Imperial, but this was largely due to the difference in exchange rates. In 1939 the situation was drastically reversed and KLM was 72% faster and Imperial 38% faster than

* Excluding SCADTA..

Pan American. In 1939 Pan American's fares were 40% and 35% higher respectively than those of the two European airlines. Pan American's introduction of four-engined land equipment in the fall of 1940 increased the average speed on this route to 72 miles per hour and it should be noted that the German lines at least had comparable four-engined transport equipment available, which would have been introduced on the long distance routes in 1940 with consequent improvement in speed had it not been for the outbreak of the war. In this connection it should be noted that in 1939 the scheduled speed in miles per hour of the Air France mail service from Paris to Rio de Janeiro was more than twice as fast as that of Pan American and the Luft Hansa mail service 55% faster.

A comparison of safety records is also constructive. The Pan American System flew only 4,227,000 miles per fatal accident in its Latin American service* in the 1934-1937 period, or 42% less than Imperial and 56% less than Luft Hansa.

It would appear on balance that the European long distance services showed much greater improvement over the 1932-1939 period than did Pan American. Even the improvements in Pan American's service in 1940 did not bring it to the level of performance which the European services reached in 1939 as far as speed was concerned. In contrast to this lag of its Latin American operations, Pan American's Atlantic and Pacific services were infinitely superior to any comparable European air transport achievement. Similarly the U. S. domestic services were far superior in technique, service, and safety to any European internal services.

* Excluding SCADTA.

COMPARISON WITH OPERATIONS OF OTHER LATIN AMERICAN AND U. S. DOMESTIC AIRLINES

The most useful yardsticks by which to measure Pan American's performance is the standard of service offered by competing lines operating in the same territory and by U. S. domestic lines. The former comparison is obviously a fair one but the latter might be misleading unless prefaced by an explanation of the major differences between domestic and foreign operations. To begin with, the economics of the areas in which they operate are fundamentally different. There are also wide differences in their operating technique. The domestic lines connect areas of very dense population and compete with high speed, safe, and luxurious surface transportation. They operate frequencies as high as 15-25 per day on certain routes and the larger companies do nearly half their flying at night. They have elaborate ground facilities provided by the U. S. government. Pan American, on the other hand, operates largely in relatively sparsely settled undeveloped areas and competes primarily with slow steamships and primitive surface transportation. It operates an average of only three frequencies per week and flies almost entirely by day. It must provide a considerable portion of its own ground facilities. Nevertheless, there are points of similarity. Both systems have had the same tools to work with in that they have been operating with U. S. equipment and to a large degree with U. S. personnel. It is, therefore, fair to compare the trends of speed, fares, and safety in U. S. domestic and U. S. Latin American operations over the past eleven years.

Speed

It would appear that Pan American's local services are 20% to 25%

faster than those of other airlines operating in South America, most of which use Junkers JU-52 transports of 140 m.p.h. speed, and have also shown a somewhat more rapid relative increase in speed over the 1935-1940 period.

Typical Overall Speeds
(Average of Representative Routes)

	1930	1935	1940
<u>Local Lines</u>			
Panair do Brasil	75	100	159
Condor	95	126	130
VASP	*	99	135
Aeroposta	*	94	132
Faucett	*	*	128
<u>Trunk Lines</u>			
Pan American Inc.	37**	56**	75**
U. S. Domestic	67**	146	167

Comparison with the U. S. domestic lines shows that Pan American's long distance services average less than one-half the speed of our trans-continental lines, primarily due to the necessity for overnight stops. On routes where such stops are not necessary, such as Miami-Cristobal, the average speed, thanks to the introduction of new four-engined transports in 1940, now is fully as good as the best domestic services. Although Pan American's speed was doubled between 1930 and 1940, the improvement was somewhat less favorable than that of the domestic lines.

The matter of night flying is highly controversial for there are qualified persons who believe that it should already have been introduced in Latin America. Pan American, on the other hand, while planning a certain amount of flying after sunset in its new 1941 schedules, wishes to defer full night flying until four-engined equipment is available in large quantities

* Not available.
**Overnight stops.

and airports are improved.

Fares

Pan American's per mile passenger rates vary greatly on different parts of the system, from between 5 and 6 cents per mile on certain parts of the Brazilian network to 13-14 cents per mile on the Cristobal-Trinidad or the Miami-Cristobal non-stop, apparently depending primarily on the competitive situation.

Typical Comparative Passenger Fares* 1930-1940
(One Way Fare in Cents per Mile)

	1930	1935	1940
<u>Local</u>			
Panair do Brasil		11.6	6.9
Condor	**	10.2	6.8
SCADTA	27.4	13.8	10.1
<u>Trunk</u>			
Pan American System	16.9	10.2	10.7
U. S. Domestic	8.3	5.7	5.2

The fares of the company's locally incorporated subsidiaries are set in local currencies and usually are closely comparable to those charged by competing lines. Panair do Brasil's charges are exactly the same as Condor's on competing runs, though VASP is considerably cheaper (5.2 cents per mile vs 7.1) on the Rio de Janeiro-Sao Paulo service. However, the competing German companies are considerably more liberal in making both fare

* Net return to Pan American Airways per revenue passenger mile (after deduction of round trip discounts, half fares, etc.) for the first six months of 1940.

Miami-Havana	\$.08
Miami-Cristobal	.11
San Juan-Kingston	.12
Rio de Janeiro-Buenos Aires	.05
Brownsville-Mexico City	.08
Cristobal-Trinidad	.14

** Not available.

concessions and granting free transportation. In Ecuador, for example, SEDTA gives a 25% discount to officials and to parties of four travelling together and a 75% discount to telegraphers.

On its trunk routes Pan American's fares, though some 35% below 1930, are slightly above 1935 in some cases. While 10-11 cents per mile was not excessive for Latin Americans eight or more years ago, the drastic depreciation in many Latin American currencies since has made such rates a serious barrier to widespread use of the trunk line services, particularly on journeys to the United States. The steamship fare from Buenos Aires to New York, for example, is only slightly more than half the air charge and despite the time saving of fourteen odd days the extra cost of \$292 is a barrier to a Latin American of moderate means. However, in certain instances Pan American quotes fares between Latin American points in local currencies, which in reality reduces such rates to a point where they are comparable to those of other Latin American operators.

Pan American's trunk route fares are approximately double the average per mile fares of the U. S. domestic lines. In both cases reductions since 1930 have approximated 40%.

Frequency of Service

Pan American's local services offer a considerably greater frequency per week than those of most competing Latin American lines. Its Cuban, Mexican, and Colombian operations all have frequencies of from 4 to 5 per week, whereas there are only two local lines in South America (VASP 4.5 and Faucett 5.7) which approach this figure. In Brazil, Panair's frequency of 2.1, while low, is higher than Condor's. In general most of the small Latin American lines average 1.5 to 2 frequencies a week over the entire systems

with the German companies in the lower range, probably because of the remote points which they serve and their general desire to cover as much route mileage as possible with the minimum amount of flying.

Comparative Average Frequency of Service (Round Trips per Week)

	1930	1935	1940
<u>Local</u>			
Cia. Mexicana	4.9	5.1	5.3
Panair do Brasil	1.7	1.5	2.1
Condor	1.1	1.6	1.7
VASP		1.0	4.5
<u>Trunk</u>			
Pan American Inc.	2.0	2.6	3.1
Panagra	1.7	2.9	2.6
U. S. Domestic	10.3	18.9	26.3

The frequency on Pan American's trunk routes, 2.6 to 3.1 round trips per week, is much lower than on the company's local networks and only about one-tenth the average on the U. S. domestic network. It has been increased only about 40%-50% since 1930, as compared to a 150% increase on the part of the U. S. domestic airlines in the same period.

Safety

The safety record of the various Pan American operations differs considerably but in the 1936-1940 period even the least safe of the local operations were safer than Condor and VASP, the local German and German influenced operations. Of the Pan American local companies, Cia. Mexicana and AVIANCA with their 2,000,000 - 3,000,000 miles per fatal accident were only slightly above the German level of 1,750,000 - 2,000,000 miles. Panair do Brasil, however, which was in direct competition with the German operations, operated for the entire ten years without a fatal accident, as did Cia. Cubana - a proof that safe operation with almost entirely Latin

American personnel is entirely feasible. Aeroposta Argentina, a purely South American company, also had a five year accident-free record.

Comparative Safety of Operations
(Miles Flown per Fatal Accident Involving Passengers)*

	1931-1935	1936-1940
Cia. Mexicana	(4,105,000)	2,360,000
Cia. Cubana	1,816,000	(3,483,000)
AVIANCA	1,867,000	3,180,000
Panair do Brasil	(3,025,000)	2,186,000
Condor		
VASP		1,750,000
Aeroposta Argentina	1933-1940 (1,743,000)	6,085,000
Pan American and Pan American-Grace		
U. S. Domestic	9,522,000	18,614,000
American Airlines	8,687,000	95,374,000

The trunk operations, Pan American and Pan American-Grace, averaged 6,085,000 miles per fatal accident, or only about one third as much as the domestic lines. Moreover, these companies showed practically no improvement over their 1931-1934 record, while the domestic system flew twice as many miles per fatal accident in 1936-1940 as in the previous five years. It should be pointed out, however, that Pan American has not had a fatal accident since 1939 and Pan American-Grace has not had one since 1938. A period of greater safety may therefore have begun.

Dependence on Subsidy

The final measure of the commercial success of an air transportation enterprise is the degree to which it can support itself from commercial revenue alone. On this basis Pan American's Mexican subsidiary

* Figures in () indicate miles flown by companies which had no accidents during the period.

with 82.6% of its revenues from commercial sources compared favorably with any Latin American operation except TACA. Panair do Brasil, while in a less favorable position, still makes a fair showing, better than any Latin American owned line except VASP.

Comparison of Dependence on Commercial Revenue
(percent of passenger, express, and freight revenues to total revenues)

	1930	1935	1940
<u>Local</u>			
Panair do Brasil	2.6	26.7	61.8
VASP		27.4	73.4
Faucett			83.5
Cia. Mexicana	33.7	68.2	82.6
TACA			91.5
<u>Trunk</u>			
Pan American-Grace			37.7
Pan American Airways	21.5	29.0	47.4
U. S. Domestic	30.7*	65.1**	74.0**

The trunk line operations, however, showed a low percentage of commercial revenues in 1940, 38%-47%, as compared to 74% for three leading U. S. transcontinental lines. Moreover, the Pan American operations little more than doubled their proportion of commercial revenue since 1930 while the U. S. lines increased theirs two and one-half times.

Conclusions

It would appear that Pan American's local services in Latin America are 20%-25% faster, no more expensive, offer a somewhat higher number of frequencies, and are somewhat safer than are competing local lines.

* Estimated total industry.

** Average of American, TWA, and United.

They also make a fairly good showing as to their degree of self support. However, while Pan American has and is furnishing a far better service than its Latin American competitors, the standard of service of the latter is not particularly high.

In comparison with the U. S. domestic lines Pan American's trunk services are comparable in speed, except where overnight stops are involved where they are only one-half as fast as our transcontinental services. Pan American's fares are twice as high as U. S. domestic fares; frequency of operation only one-tenth as great; operations one-third as safe, and its proportion of commercial revenue to total revenue one-half as great. In most of these categories, however, the percentage improvement since 1930 is about as great as in the case of the domestic system. Exceptions are safety, which has not been improved significantly in the last five years over the 1931-1934 period, as compared to a 100% improvement for the domestic lines, and, proportion of commercial to total revenue which the domestic lines have improved somewhat more than has Pan American. As far as its performance is concerned, it still lags far behind the U. S. domestic system although it has continued to receive three times as much money per mile.

However, when we later discuss the proposed improvements in the international services, to become effective in the middle of 1941, it will be seen that a start at least has been made toward bettering the situation.

PART THREE

FUTURE POLICY

INTRODUCTION

The previous pages have dealt with the development of air transportation in Latin America, the elements of its existing structure, and an appraisal of the performance of Pan American Airways. We are now concerned with the major problems for which solutions must be found if future policy is to be developed on a sound basis.

The approach to these problems will be controlled by our basic aims in relation to Latin American air transportation and the principles which we believe should govern our choice of means to attain those aims.

The latter fall into two main categories:

1. The rapid reduction or elimination within Latin America of the air transport activities of enemies of the United States;
2. The active expansion and improvement of the existing Latin American air transport system, both trunk and local, by the United States and the nations of Latin America with the dual purpose of
 - a. providing an effective auxiliary to the military requirements of national and hemisphere defense, and
 - b. fulfilling the present and future needs of inter-American travel and communications, thus bringing about closer political, cultural, and economic relations and more complete understanding

between the citizens of the American republics.

If these aims are to be achieved in accordance with sound principles, Latin American air transportation should

1. be enduring and to this end invoke the reciprocal interests of all concerned,
2. be carried out in part at least by Latin American nations,
3. be formulated as far as possible on the basis of sound economic principles with due regard to the present and potential needs of inter-American trade and commerce (immediate military exigencies will make it necessary to compromise with economic principles in the early stages of the program but they should never be lost sight of),
4. be based as far as possible on activities already in existence, and
5. utilize approved methods of enterprise consistent with the principles of Pan Americanism.

The following discussion of the basic problems presented by Latin American air transportation is framed by these aims and principles. Four major but interlocking questions are considered.

1. What steps should be taken to improve the trunk line service?
2. What should future policy be in regard to local service?
3. How should the United States combat Axis air transport activities?
4. Should the United States air transport system in Latin America continue as a monopoly or should competition be permitted?

I IMPROVEMENT OF U. S. INTERNATIONAL SERVICES

The world crisis and the resulting enormously greater importance of Latin American-U. S. relations to hemisphere defense and hemisphere trade has greatly increased the demands on our international air transport system. These demands - commercial, political, and military - will continue to grow rapidly over the foreseeable future.

The system as presently operated is not adequate for the task and certain immediate improvements are necessary. Fortunately most of these are already well under way. Looking farther ahead, plans must be laid at once for the development of the system to meet the requirements of the next few years, and steps must be initiated to implement these plans. Prompt action is necessary, for certain preparations such as the construction of new equipment, the integration of equipment requirements with defense demands, and the building of ground facilities will inevitably take a considerable amount of time.

INCREASE IN CAPACITY OF SERVICE

The capacity of the present service is clearly inadequate to cope with existing traffic, to say nothing of that to be expected in the near future. Although the load factor on the Pan American Airways trunk

system as a whole was only 55% in 1940*, there were several important sections where it averaged 70%-80%.

Sections of Pan American System with High Load Factor
1940

Section		Passenger Miles (thousands)	Load Factor %
Miami	Havana	11,495	79
Miami	San Juan	7,474	73
Belem	Buenos Aires	9,011	61
Asuncion	Buenos Aires	780	82

In March, 1941 traffic increases raised the System's load factor to 66% and on some key sections such as Miami-Cristobal, Miami-San Juan, and Belem-Rio de Janeiro to 80%-90%.

As large four-engined equipment will not be available in quantity for some time, the only practical method of raising capacity immediately is to increase the number of frequencies with existing types. Pan American and Pan American-Grace have ordered 18 Douglas DC-3s** on which priorities have been granted. These airplanes will all be delivered by early summer and the company has proposed to the Civil Aeronautics Board an expansion of service as of July 1, 1941, which will result in an increase of 57% in seat miles offered. Present schedules and proposed additions are tabulated on the following page. It will be noted that the present high frequency routes generally receive a smaller percentage increase than the low frequency routes.

* It is difficult to maintain as high a load factor in long distance, low frequency services such as Pan American's, as is possible in the short distance high frequency services flown by many of the domestic airlines. Competent authorities feel that the maximum possible load factor on the Pan American System at its present schedule frequency is in the vicinity of 60%.

** These companies operated 21 DC-3s on December 31, 1940.

Proposed Service on Selected routes of Pan American Airways

Route	Equipment		Schedules per week		
	Present	Proposed July 1, 1941	Current	To be added July 1, 1941	Total
Miami to Havana	S-42	DC-3	14	7	21
Barranquilla via Cienfuegos & Kingston	S-42	S-42	2	2	4
Cristobal	B-307	B-307	3	-	3
Miami-Buenos Aires					
Miami-San Juan	B-307	B-307)			
	S-42	S-42)	4	3	7
	S-43	S-43)			
San Juan-Trinidad (Non Stop)	B-307	B-307)	3	3	6
Trinidad-Belem(Non Stop)	B-307	-	3	-	-
" " (All Stops)	S-43	DC-3)	1	6	7
		S-43)			
Belem-Rio de Janeiro (Via Cut Off)	DC-3	DC-3	3	3	6
Rio de Janeiro- Buenos Aires	DC-3	DC-3	4	2	6
Brownsville-Mexico City	DC-2 or 3	DC-3	14	-	14
Mexico City-Cristobal	DC-2 or 3	DC-3	6	1	7
Cristobal-Trinidad	DC-2 or 3	DC-3	4	3	7

It is beyond the scope of this report to analyze the requirements of particular sections of the system and obviously tourist demands on such routes as Miami-Havana are less important than the requirements of business traffic on the main trunk lines. Nevertheless, there is no question but that present traffic necessitates a very substantial increase in capacity.

Looking farther into the future, there is a very large amount of surface travel from which an expanded air service can draw. Steamship traffic between the United States and Latin America in 1940 is estimated to be equivalent to 338,000,000 passenger miles of air travel and, as shown on the following page, Pan American is estimated to have carried only about

10% of the combined steamship and air traffic between the two areas.

In the United States 1940 air traffic was 11.3% of combined air and Pullman, despite the fact that the airplane offers a much smaller time saving over the train than Pan American does over the steamship. There appears no reason why in the future much more than 10% of inter-American traffic should not move by air.

Estimated Surface and Air Passenger Miles
Between United States and Latin America
1940

	Equivalent Air Passenger Miles (North & Southbound)	% Total
<u>Surface</u>		
South America	162,000,000	43.0
Mexico & Central America	112,000,000	29.7
West Indies	64,000,000	17.0
Total	338,000,000	89.7
<u>Air</u>		
Latin America	38,850,000	10.3
	376,850,000	100.0

Traffic between the Americas in the years ahead should exceed the 1940 level. Increased trade and strenuous defense activities will stimulate travel. The development of pleasure travel to Central and South America has hardly begun. Only 1,316 U. S. citizens went to South America on cruises in 1940, despite the fact that the formerly large volume of pleasure travel to other parts of the world had virtually ceased due to the war. Continuance of war conditions or the entrance of the United States into the war may prohibit most pleasure travel, but under reasonably normal conditions and given intelligent promotion and improved hotel accommodations, it should be possible to develop a fair amount of air tourist travel between the Americas.

RATES AND TRAFFIC PROMOTION

The avowed purpose of the United States to encourage travel and trade between the American republics can be accomplished by low passenger, mail, and express rates. As a matter of fact a reduction in such rates to below cost might be one of the most effective and inexpensive ways of stimulating inter-American relations. Pan American's representative one way passenger fares on trunk routes, which are actually somewhat higher than in 1935 in some instances, are some 10.7 cents per mile, or twice the average U. S. domestic rate. They are 40%-50% higher than corresponding steamship fares while U. S. domestic fares are only 5%-10% above Pullman fares and are sometimes actually less when all expenses are considered.

Now that such stress is being placed on inter-American relations and Pan American is proposing to increase its service nearly 60%, it would seem appropriate to experiment with fairly drastic fare reductions. The company has proposed to reduce its average fare some 10.5% by lowering those on routes now in the highest brackets some 15% and by other minor changes. This will still leave the air rates some 30%-40% above the steamship rate. While this premium is probably commercially justified because of the great time saving involved, it nevertheless constitutes a large barrier to the use of the airplane by those of moderate means and particularly by Latin Americans, many of whose currencies have depreciated greatly since 1929. As it is this government's expressed policy to encourage travel between the Americas, it would seem justifiable to offer a limited number of special air cruises at rates substantially less than those proposed. The response to this experiment would give a sound basis

for future fare policy. Similarly, it may be wise to liberalize our discount and free transportation policy as far as Latin American government officials are concerned. The Germans' offer of free transportation within Latin America and from Latin America to Germany* has been a potent weapon in building up good will.

It is quite probable that these experiments may prove commercially successful but if they do not, any losses resulting from government instigated policies should be compensated for by increased mail payments. This is one of the occasions where an international airline must act as an arm of the government rather than as a purely commercial concern. It emphasizes the difference between the international and the domestic air transport companies.

Besides reducing fares, there is no question that the international carriers should increase their promotional effort. In 1940 Pan American's advertising expense amounted to only 4.3% of passenger revenues as compared to around 9% for the best managed domestic lines. On the other hand, its traffic expense was 24.5% of passenger revenues. Such expenses for domestic lines run around 10% of passenger revenues. A reduction in traffic expense and a substantial increase in advertising expense should produce results, particularly if accompanied by a general campaign for increased inter-American travel on the part of the government.

Speed and Quality of Service

The inauguration of the Belem cut-off and the introduction of

* Many South American officials were carried free on the German Zeppelin service.

three long range four-engined Boeing land planes on the Miami-Cristobal and Miami-Trinidad routes in 1940 have cut two days from the Pan American east coast schedule and about one day from west coast schedules (Miami-Buenos Aires). Nevertheless, the average overall speed to distant South American points is still extremely low (72 miles per hour from Miami to Buenos Aires) and can never be increased substantially until night flying is introduced. It is extremely questionable whether night flying can be safely carried out with twin-engined equipment, particularly on the west coast, and the problem of increasing speed brings us squarely to the desirability of installing modern high speed four-engined equipment throughout the system.

Even the proposed improved services to be inaugurated in July are essentially makeshift; a glance at the schedules shows that nothing larger or more modern than DC-3 equipment will be used in South America and that the traveler from New York to Buenos Aires via the east coast will still spend three nights on the ground en route. This is simply not modern air transportation over distances of such magnitude and every attempt should be made to provide a more advanced service particularly in this area where we are anxious to impress the inhabitants with our superiority in the air.

Introduction of Modern Four-Engined High Speed Equipment

The British Empire services and the German internal network have all been operated with large four-engined equipment for the last two years. The Germans would have had a substantial amount of such equipment in their South American service long before now had it not been for the war.

Pan American, on the other hand, has only three really modern four-engined airplanes in service in Latin America, its 32-passenger Boeing 307s, and under its proposed new schedules none of these will be operating in South America proper. However, it fully realizes the necessity of new equipment and has ordered eighteen four-engined long range, 40-ton, 45-passenger Lockheeds* for Latin American services. If this order is approved by the Priorities Board, these airplanes can be placed in service in late 1942 or early 1943. They will eliminate the necessity for overnight stops and will permit a reduction of the Miami-Buenos Aires time to about 20 hours, as compared with the present 83 hour service. The effect of such a reduction in time is dramatically illustrated in Map XI which shows how much closer the Americas have been brought together through reductions in travel time. The effect of this new service will be so far-reaching that it is absolutely essential to inaugurate it if the international trunk route system is properly to meet the needs of commerce, national defense, and inter-American relations. The new airplanes are not in any sense luxuries.

The introduction of large, four-engined commercial equipment is desirable also from the defense standpoint because it will require the construction of an extensive system of large airports and comprehensive ground facilities, which will have military value. Moreover, a fleet of this size would have a considerable carrying capacity, if rapid movement of large numbers of men to certain sections of Latin America should be necessary.

* Pan American-Grace has four DC-4s on order. If approved by the Priorities Board, they can be placed in service in 1942.



Present airport facilities in the Caribbean and South America, with few exceptions, are inadequate for large aircraft and in certain sections the distance between emergency fields is so great that it would be difficult for short range private or military airplanes to make the trip. There are practically no facilities for night flying and repair bases are limited, most of Pan American's being situated on U. S. territory.

The effect on inter-American travel and commercial and social relations will also be great. We have ample evidence from U. S. domestic operations of the stimulating effect of the introduction of faster and larger equipment. Such new types have invariably created new travel in addition to merely diverting it from surface carriers.

The introduction of new equipment will place most countries in Latin America within twenty-four hours of New York - a service incomparably more comfortable than the present three day service. It should have the same stimulating effect on traffic that the introduction of overnight service between New York and California had on transcontinental air travel.

From the psychological standpoint the larger airplane - three times the gross weight of the present DC-3 - will build greater confidence among the traveling public and make a real contribution toward enhancing U.S. prestige throughout the area. The tremendous effect of the Hindenburg service on German prestige in Brazil is well known and the proposed high speed Pan American service should have the same sort of effect, multiplied enormously because of the number of countries served. At present Condor's four-engined Focke-Wulf dwarfs any plane which Pan American has in service in South America. If the situation were reversed, the effect would obviously be most striking.

It is not too much to say that the inauguration of 24 hour service between the American republics in large comfortable airplanes will be one of the greatest single contributions that can be made to the cause of hemisphere solidarity.

II FUTURE DEVELOPMENT OF LOCAL SERVICES

The development of local air transportation is of vital importance to Latin America; it is bound to have a profound influence on the future economic and social development of the individual American republics. Foreign nations will have to play an important part in this development because of Latin America's dependence on foreign sources of aeronautical materiel, technicians, and capital. It is obviously desirable that the United States take advantage of present conditions to sponsor the development rather than let it fall once more into the hands of European powers.

The problem of our exact relation to local air transportation in general and to local airline companies in particular is a delicate one for it involves a practical, political, and commercial approach to Latin American governments and industry. There is unquestionably a possible conflict of interests. Should we expand the local operations of our international lines in order to secure a dominating position in as many countries as possible or should we aid Latin American countries to expand their locally owned companies, thus building up possible future competition for the present U. S. owned trunk and local services?

EXTENT AND OWNERSHIP OF PRESENT LOCAL NETWORKS

It is a truism that large parts of Latin America have skipped an era of transportation and leapt at a bound from the mule to the airplane. There are dozens of Latin American communities, both large and small, which have literally no mechanical transportation except for the airplane and it is not surprising that there are actually more miles of airlines in these areas than there are miles of railroads.

Airline Coverage of Latin American Republics (including trunk routes)

Country	Miles of Airlines Per 1,000 Sq. Miles	% of Total Popu- lation Served
<u>South America</u>		
Argentina	5.1	24.8
Bolivia	6.9	15.4
Brazil	9.8	24.1
Chile	7.7	19.2
Colombia	12.5	16.5
Ecuador	6.3	14.0
Paraguay	3.6	12.8
Peru	13.3	14.3
Uruguay	22.9	42.3
Venezuela	11.0	19.4
Total South America	9.1	21.9
<u>Central America</u>		
Costa Rica	74.8	30.6
El Salvador	19.7	6.4
Guatemala	14.0	9.9
Honduras	37.9	17.4
Nicaragua	27.3	18.1
Panama	24.1	28.4
Total Central America	30.7	14.3
Mexico	12.8	13.8
<u>West Indies</u>		
Cuba	29.0	27.0
Dominican Republic)	10.8	7.4
Haiti)		
Total West Indies	21.7	15.5
Total 20 Latin American Republics	10.2	19.7

As the above breakdown shows, the coverage varies greatly in

different countries, most of the Central American countries having rather complete networks. In South America, Colombia, Venezuela, Brazil, Uruguay, and Peru are relatively well served and Argentina and Chile in view of their importance are both notably deficient, as they have a lower coverage than any of the other South American republics except Paraguay and Bolivia.

Some of the routes operated by local companies connect important cities between which there is a large volume of surface traffic. A few such routes are listed below and it will be noted that few of them offer as much service as the size of the cities which they serve would appear to justify. Nevertheless, their profit potentialities are substantial.

Local Air Routes Connecting Large Latin American Cities

From City and Population	To City and Population	Distance (miles)	Surface Transport	No. Air Schedules Per Week
Rio de Janeiro 1,711,000	Sao Paulo 1,217,000	225	Rail	28*
Rio de Janeiro 1,711,000	Porto Alegre 322,000	744	Boat	9*
Buenos Aires 2,318,000	Montevideo 683,000	120	Boat	26
Bogota 330,000	Barranquilla 152,000	440	Part river steamer - part train	10
Bogota 330,000	Medellin 168,000	150	No mechani- cal means	21

Next in importance commercially to these high density routes are those connecting cities of small and moderate size which have been developed over a period of years to the point where they justify a relatively high frequency and are proving reasonably profitable. Typical of these are AVIANCA's network in Colombia, Faucett's in Peru, CNCA's in Cuba, and TACA's in Central America.

* Includes schedules of trunk line companies.

Finally, there are services to small, remote communities valuable from the standpoint of public service but in many cases not commercially justifiable unless relatively heavily subsidized. Typical of these are the services of Panair and Condor to the interior of Brazil, the local services of L&B, those of SEDTA in Ecuador, and various local operations in Peru. This type of service seldom operates more than twice a week and even then on a somewhat irregular basis. Loads are usually small and except in the case of the U. S. services the routes are operated with obsolescent equipment often of the single-engined type.

Local and trunk operations* are reasonably well segregated from the corporate standpoint due to Latin American laws restricting cabotage activities to nationally incorporated companies. Condor is the only Latin American incorporated company which operates an international trunk system in addition to its local operations** and Pan American's extensive local operations are segregated from its trunk system being carried out by locally incorporated subsidiaries.

It will be noted in the table on the following page that, contrary to the general impression, U. S. controlled lines operate nearly one-half the local services in South America or almost twice as much as the Germans. In Central America and the West Indies where the United States controls 85% of local operations, there are no German services.

Geographically, U. S. controlled operations, almost all in the

* Local air transport companies may for the purpose of this study be defined as those whose operations are confined to the boundaries of a single country.

** TACA's Central American system provides through service between several Central American countries but operations are separately incorporated within each country.

Pan American Airways group, carry out all local operations in Cuba and Colombia, the majority of operations in Peru, and have a strong position in Mexico, Brazil, and Ecuador. German operations are strongest in Brazil, Bolivia, and Ecuador. It is the Latin American owned operations, however, which must receive our particular attention here.

Nationality of Ownership of Local Operations in Latin America
(Based on an arbitrary division of trunk and local routes)

	Route Miles of Local Service	% Total
<u>SOUTH AMERICA</u>		
U. S.	18,433	47.8
German	10,770	27.8
South American*	7,360	19.0
Other	2,090	5.4
Total	38,653	100.0
<u>MEXICO</u>		
U. S.	994	16.5
Mexican	5,020	83.5
Total	6,014	100.0
<u>CENTRAL AMERICA</u>		
U. S.	5,661	96.0
Central American	235	4.0
Total	5,896	100.0
<u>WEST INDIES</u>		
U. S.	2,991	69.5
Other	1,317	30.5
Total	4,308	100.0
<u>SUMMARY</u>		
<u>LATIN AMERICA</u>		
U. S.	28,079	51.1
German	10,770	19.6
Local	12,615	23.1
Other	3,407	6.2
Total	54,871	100.0
Local Mileage	54,871	59.0
Brazilian Military & Navy Lines	10,445	11.3
Total Local Mileage	65,316	70.3
Total Trunk Mileage	27,491	29.7
Grand Total	92,807	100.0

* Excluding some 10,000 miles of the Brazilian Military and Naval Services which offer mail service only.

From the positive standpoint there is no question that a strong Latin American air transport industry, controlled and managed as far as possible by Latin Americans, is the most effective possible protection against future European aeronautical penetration. It is to the best interest of the United States that Latin America be strong aeronautically and we should be willing to make immediate and long term sacrifices to achieve that end. This does not mean that we should throw away our present strong position in local air transportation for nothing or make lavish loans for the building up of Latin American airlines in a spirit of sentimental philanthropy. It will be futile to sacrifice our interests foolishly in the hope of buying cooperation. There are, however, certain practicable steps by which we can help develop Latin American air transportation on a business-like basis. These steps should form an integral part of our program against Axis influences.

Among the various methods the sale of U. S. equipment to bona fide Latin American airlines on a favorable basis can constitute a powerful stimulus to local air transport development, particularly when combined with some technical operating assistance.

There is considerable controversy as to what type of equipment the United States should make available for local lines operated either by U. S. or Latin American companies. Our own international companies operate their local services with modern equipment and often in a somewhat unnecessarily expensive manner. The Latin American nations naturally desire the most modern airplanes and sometimes for reasons of prestige wish to obtain larger types than traffic justifies. At the other extreme certain successful local companies such as TACA and Faucett operate princi-

pally second-hand obsolescent airplanes often eight to ten years old.

While our international carriers should be dissuaded from operating unnecessary expensive local services it does not appear that except on certain freight routes there would be enough saving by operating second-hand equipment to justify the loss of prestige to the United States. Similarly, it would be unwise to sell second-hand equipment to Latin American lines.

It is highly important to work out a sound arrangement for joint U. S. - Latin American ownership whereby Latin American governments and responsible private capital can obtain an interest in local enterprises which are now 100% U. S. owned (such as the U. S. owned companies in Mexico, Cuba, and Brazil) and later to take a leading part in new airline development.

From the negative standpoint no attempt should be made to replace operations in which Latin Americans have an important interest with U. S. owned organizations, unless the Latin American interests refuse to cooperate in the elimination of German influence.

THE LATIN AMERICAN OWNED AIR TRANSPORT INDUSTRY

The locally owned Latin American air transportation industry is small. At the end of 1940 the 18 companies composing it owned only about 30 multi-engined airplanes and employed only 700 persons. Its operations cover only 12,600 route miles or 14% of the area's total network (23% of purely local operations).

There are fundamental reasons for the limited growth of local airline operations. The technical foundation has been lacking; there is no

aircraft factory in Latin America capable of building multi-engined transport airplanes or their power plants. Qualified flying and maintenance personnel has also been scarce except in Brazil and Mexico where U. S. airlines have been required by law to train enough personnel to conduct their operations. In addition to these technical weaknesses the financial resources of the industry have been very limited. Air transportation in Latin America generally has not been highly profitable except in the case of the liberally subsidized U. S. international lines. Local private capital which is accustomed to a high rate of return has been reluctant to enter the industry and most of the capital for air transport development has come from government sources.

Six Latin American governments have financed commercial air transport ventures in whole or in part*. Chile (1929) and Venezuela (1933) established government owned companies with monopolies of local service. Bolivia has had a substantial interest in privately owned Lloyd Aereo Boliviano since 1925**. The Brazilian states of Sao Paulo and Rio Grande do Sul have small interests in VASP and VARIG. Colombia acquired a 15% interest in AVIANCA in 1939#.

The few privately owned lines are relatively small. PLUNA (Uruguay) and Aeroposta (Argentina) are by far the largest but they fly an average of only about 300,000 miles each per year, one-fourth as much as Condor. There are three other privately owned lines in the Argentine, SANA, Corporacion, and TARSA, but none of them flies more than 100,000 miles

* In addition to the Brazilian Military and Navy mail lines.

** In May, 1941 the Bolivian government acted to force the withdrawal of private interests.

To be increased progressively under the terms of its contract with Pan American.

per year. In addition South American private business-men have an interest in VASP (550,000 miles) and it is believed in VARIG (350,000 miles) but German interests have a substantial equity in the former company and a controlling one in the latter.

There are nine Mexican owned companies of varying size which together fly as much mileage as all the South American owned lines. The three largest, Sarabia (736,000 miles), Woodside (430,000 miles), and LAMSA (415,000 miles), are all larger in terms of volume of operation than any wholly South American owned company. The remaining six are of varying size operating from 30,000 to 200,000 miles a year but some of their operations are on an irregular basis. In Panama, Gelabert, a locally owned company, flew some 170,000 miles.

The local Latin American industry will continue to depend on foreign sources of equipment for some time to come but Latin American capital can be expected to play a more important role in its development over the next few days. Increasing nationalism and a growing realization of the importance of both air transportation and military aviation are causing Latin American governments to look more favorably on airline ventures from the standpoint of providing capital and furnishing subsidies. Colombia has recently taken an interest in its local air transportation company, AVIANCA, and other countries are rumored to be interested in a similar arrangement.

WHAT PART SHOULD THE UNITED STATES PLAY IN LOCAL AIR TRANSPORT DEVELOPMENT?

Until very recently U. S. government policy toward local oper-

ations by U. S. subsidized carriers has been either passive or definitely restrictive. This has been in sharp contrast to the German policy. Their Latin American air transport system has consisted primarily of a series of local networks, with trunk operations and direct connections with Germany of secondary importance until the last few years.

Our own international system was conceived as a trunk line network connecting the United States with the Latin American countries. It has been subsidized entirely through contracts for the carriage of U. S. mail. The operation of a network of local lines was not contemplated nor any provision made for subsidizing such operations. On the contrary the government frowned on such services, feeling that the U. S. operator might make use of these to conceal earnings and that in cases where they were unprofitable they in effect "siphoned off" the subsidy intended for international trunk operations. The U. S. operators on their part have not been anxious to initiate local services without U. S. subsidy; there were relatively few routes which produced sufficient commercial traffic to permit profitable operations.

Despite this, the creation of our international trunk system was followed inevitably by the absorption of a number of local companies by trunk route operators; this in effect resulted in a U. S. owned local system of considerable proportions. Pan American absorbed Cia. Mexicana de Aviacion in 1928 and Cia. Cubana de Aviacion in 1931. In the latter year a substantial interest in SCADTA was also purchased, later being increased to represent control of the Colombian company. Pan American-Grace absorbed Peruvian Airways in 1928 and bought a substantial interest in Faucett in 1938. All these operations were subsequently expanded and in addition

Pan American has built up a substantial local network in Brazil through its subsidiary, Panair do Brasil, formed for the purpose.

World Crisis Forces Change in U. S.
Policy Toward Local Operations

The outbreak of the war brought a sudden reversal of the U. S. negative attitude toward local operations. Our government and later the public began to realize the importance of the local German operations as vehicles of German influence and became aware of the necessity of eliminating them. To combat them effectively it has been suggested that our international carriers should expand their local operations greatly and that we should extend aid in the form of aircraft, personnel, and financial assistance to Latin American owned local lines.

The United States is therefore faced with the problem of developing a new fundamental policy toward local operations. As stated in the beginning of this section two principal courses are possible. We can either develop our own local services aggressively without regard to the needs or ambitions of the Latin American owned industry, or we can aid that industry as much as possible and extend our local operations only when such service is clearly essential and Latin American companies are unable or unwilling to provide it. The latter course unquestionably builds up potential Latin American competition for our existing local operations and over the long term would create a Latin American industry which might well compete with us in the international field through interchange agreements between national lines or even by straight international operations.

While it may seem sufficiently desirable to protect our own position at all costs, we should not lose sight of the fact that it is right

in principle that Latin America should control its local systems and that ultimately it will do so. There are powerful arguments for encouraging their development even at the risk of potential competition to our own companies rather than retarding it for selfish ends. Any attempt on our part to dominate permanently the local networks of Latin American countries will ultimately produce a strong reaction against us. Latin American nations are already beginning to resent a large proportion of their local airlines being in foreign hands and this resentment will grow in the future. The difficulties of the foreign owned oil companies in Mexico are indicative of what might happen.

Any arrangement for joint ownership should include a provision whereby the Latin American partner can increase its interest in an orderly fashion over a period of time. The agreement between Pan American and the Colombian government in regard to AVIANCA is illustrative of the type of arrangement which appears fair to both U. S. and Latin American interests. By its provisions the government received a small initial interest (15%) in the jointly owned company and has an option to increase its ownership over a period of years. Pan American on its part agrees to furnish technical management as long as its stock interest does not fall below 25%.

A sound joint ownership arrangement under present conditions might be one in which the Latin American government in question owned 40%, the U. S. operator 40%, and Latin American private interests friendly to the United States the remaining 20%.

Long Term Development of Local Air Transportation

Looking to the more distant future a large scale expansion of local services under Latin American or joint Latin American-U. S. auspices

will be a contribution to the economic development of the individual Latin American republics. Many important towns and certain of its larger countries - notably Argentina and Chile - are inadequately served at present. In addition there are various areas in the Amazon region which can only be opened to trade and commerce by the airplane. Air transportation can also help greatly in opening up new mining enterprises in inaccessible mountain regions to which surface transportation is prohibitively expensive.

The shortage of airplanes and pilots in the United States will, of course, make it difficult for us to assist large scale expansion of local routes at this time. Moreover, these new services can best be carried out by types of airplanes which are not in production. Most of the local Latin American passenger routes can best be operated by small, cheap twin-engined airplanes. Relative cheapness is essential because of the limited financial resources of the purchasers but high speed is not important because of the primitive nature and slowness of competing carriers. There will also be need for a special type of large freight-carrying airplane with a roomy fuselage and the lowest possible ton-mile operating cost. Neither of these types is available at present. Our manufacturers have concentrated on satisfying U. S. airline requirements for relatively large, high speed machines whose first cost is of secondary importance because of the great intensity of use in domestic service.

After the war our country will be free to concentrate on the development of special designs for the Latin American market and ample supplies of manufacturing facilities and technicians will be available to accelerate this development. It may be well to inject a word of caution, however, against over-optimism as to the ultimate size of the Latin American

market in terms of present military production. A relatively few airplanes can perform a great deal of transportation - for example, some 2,000 DC-3s could carry all the Pullman traffic in the United States.

III THE PROBLEM OF COMBATting AXIS AIR TRANSPORT ACTIVITIES IN SOUTH AMERICA*

The Germans organized the first successful airlines in South America** in the early 1920's. These enterprises were primarily commercial in nature and remained so until shortly after the accession of the National Socialist government. At that time German air transport policy underwent a fundamental change and German activities in South America, while commercial in form, became largely propagandistic and even semi-military in intent. A large scale expansion program was begun early in 1935, the spearhead of which has been the Brazilian incorporated Syndicato Condor. Condor is to all intents and purposes an arm of the German government-owned Luft Hansa and has been liberally supplied with equipment and funds. Besides expanding the services of wholly German owned companies the Germans have acquired influence over a number of South American owned lines by selling them equipment and furnishing them with technical personnel on very liberal terms.

There are nine airlines (16,600 route miles) operating in South

* See Pages 40-48 for description of the expansion of German airline activities in South America under the Hitler regime and Pages 68-73 for a resume of the problems confronting the German operators as a result of the war.

** There are no Axis controlled or influenced airlines in Central America, Mexico, or the West Indies.

America which use German equipment exclusively.* Seven of these also employ various proportions of German personnel. Two of the latter, Condor in Brazil and SEDTA in Ecuador, totaling 8,300 route miles, are completely German owned and managed.** Two others, Lloyd Aereo Boliviano in Bolivia and VARIG in Brazil, totaling 3,600 route miles, though partly South American owned, were originally organized by Germans, are German managed to a large degree, and undoubtedly still have a large proportion of German ownership. The remaining three, VASP in Brazil, Aeroposta in Argentina, and CAUSA in Uruguay, totaling 2,900 route miles, are South American owned companies to which the Germans sold airplanes on attractive terms with the stipulation that German pilots and technical personnel be employed until the equipment was fully paid for. German influence is still significant in VASP but Aeroposta and CAUSA have reduced their German personnel greatly in the last two years and are entirely under South American management.

Serious Italian air transport activity in South America is comparatively recent. In 1938 the Italians provided equipment and personnel to Corporacion, a small Argentine airline, but their first major effort dates from December, 1939 when LATI began operations from Rome to Rio de Janeiro. This line now provides the only air connection between South America and Europe, the German and French trans-Atlantic services having been discontinued as a result of the war. In February, 1941 the Argentine government granted LATI permission to extend its operations from Rio de

* Included in this category are Lloyd Aereo Boliviano which has one U. S. plane and Aeroposta Argentina which has a few obsolete French planes in storage.

** A third German owned line, Lufthansa Peru (1,070 route miles), was taken over by the Peruvian government in April, 1941.

Janeiro to Buenos Aires and thence to Santiago. The announcement of the concession stressed the "traditional friendship" between Argentina and Italy.

AXIS ACTIVITIES A SERIOUS THREAT TO THE UNITED STATES

Axis and particularly German airline activity in South America, even on the present scale, is certainly against the best interests of the United States. It offers both a near term threat which is primarily military and a more serious long term menace which in addition is economic and political.

Unquestionably there has been a quasi-military purpose in some of the German operations during recent years. Certain of their routes appear to have been opened to tap strategic areas without regard to traffic possibilities and aerial photography has been extensive. In contrast to the U. S. airline practice of keeping pilots more or less steadily on one route for reasons of safety, the Germans have rotated crews among their South American lines and between Germany and South America. Presumably this has been done in order to familiarize as many men as possible with South American terrain.

Since the outbreak of the war some of the activities of the Axis lines have been almost openly military. Until prohibited by the Brazilian government, Condor used its four-engined Focke-Wulfs on several occasions to observe the positions of British cruisers operating in the South Atlantic probably passing this information on to German surface raiders. In March, 1941 Brazil fined LATI because of an extended "test flight" that may have had some connection with the departure of Italian

freighters from Rio de Janeiro the next day.

Despite these activities the German lines cannot be regarded as a serious immediate threat to our country. The only military operations which they could conceivably perform against us would be a surprise attack on the Panama Canal* or the provision of ground facilities for an invading German air fleet. Their resources are inadequate for either task. Including the equipment of South American owned lines, there are only 35 multi-engined German airplanes in South America and all but two of these are obsolescent Junkers planes of about 140 m.p.h. cruising speed.** European experience has shown that while lucky hits are possible large numbers of well escorted bombers are necessary for successful raids. Even if this tiny fleet of obsolescent transports could be secretly assembled and equipped with bomb racks, they would be incapable of delivering a serious attack on the Canal.

Similarly the airports and ground facilities of the German lines are insufficient for even a moderate number of military airplanes, much less a large invading air fleet. With few exceptions, airports throughout South America are small and not equipped for night flying. Radio installations are modern but servicing facilities even at the principal bases are limited. Condor's base at Rio de Janeiro, which is the only one equipped to carry out major overhauls, represents an investment of not over \$65,000. The original cost of the total ground facilities of the four principal

* In this connection it is interesting to note that the airline distance from the shoulder of Brazil (the most logical point of military invasion) to the Panama Canal is some 3,000 miles.

** The only modern German ships are the two four-engined 200 m.p.h. Focke-Wulfs owned by Condor, which are out of service because of Brazilian regulations on the use of German pilots.

German lines are valued at less than \$500,000, as compared to about \$4,000,000 for those of Pan American Airways, Inc. alone.

In short, while the very existence of the German lines must inevitably be a source of anxiety to us, it is difficult to consider them a real and immediate military threat. However, the potential danger is of the utmost seriousness. If Germany should win the war, the German controlled airlines would have grave military potentialities. Their network would undoubtedly be greatly expanded. Elaborate ground facilities of military value would be established and large numbers of high performance airplanes placed in service. Under such conditions the SEDTA operations in Ecuador and the Condor lines in the western regions of Brazil would constitute real menaces to the Canal. The Condor bases on the shoulder of Brazil could be of great value as a bridgehead for an invasion attempt.

The political threat, though less tangible, is more immediate. The German lines are a menace to our relations with South American countries and to the political stability of the republics themselves. German airmen are people of importance in these lands where air transportation is vital to commerce. They have been carefully chosen for the political aspect of their task. Many of them are men of culture and charm and they are in a particularly favorable position to influence Army, Navy, and Air Force officials who wield great power in most South American countries. German ground crews in sparsely settled districts and pilots passing through those districts have unique opportunities to spread political propaganda on a broad scale. Control of the commercial air transport system would be a most valuable weapon to a faction attempting a coup d'etat in one of the smaller countries. It is believed that German airline offi-

cials have already attempted to influence local political attitudes. It is easy to see how powerful they might become if their companies were expanded greatly and backed by the prestige of a victorious Germany.

There is no doubt that the early elimination of German influence is necessary to the national interests of the United States.

THE ESSENTIALS OF A SOUND ANTI-AXIS PROGRAM

The elimination of German influence will involve the replacement of wholly German owned lines by U. S., South American, or joint U. S.-South American operations. Also all German personnel and equipment should be replaced with U. S. personnel and equipment.

The success of such a program depends both on the South American nations taking more or less active steps against German interests and on our ability and willingness to provide the necessary equipment, personnel, and funds. Here, as in the entire Latin American aviation program, we have a short term and a long term objective. The short term objective is disposing of German owned (as distinct from German influenced) activities as rapidly as possible. The long term objective is permanently replacing German with U. S. influence in Latin American aviation affairs.

That Germany values her Latin American ties highly is evidenced by the fact that she sent three freighters to South America this year through the British blockade, at great risk. All three carried airplanes and spare parts among other products. The success of this effort was widely publicized and enhanced German prestige considerably. It is therefore evident that if our program is to succeed, we must put forth an equally strong effort with dispatch and decision. We cannot allow our

program to be delayed by too great a regard for the sensibilities of those concerned.

The essentials of a successful program are outlined in a confidential memorandum not incorporated in this report.

IV U. S. AIR TRANSPORT POLICY AS APPLIED TO LATIN AMERICA
MONOPOLY OR COMPETITION

PAST POLICY

Prior to the passage of the Civil Aeronautics Act in 1938, there was no law which clearly set forth the policy of the United States toward the economic phase of air transportation. The carriers operated under the Air Commerce Act of 1926 (administered by the Bureau of Air Commerce) which was primarily devoted to technical regulation of operations and promotion of civil aviation. The only laws dealing directly with the economic phase of air transportation were the various air mail Acts authorizing the Post Office Department to contract for the carriage of mail. As the Acts were written in broad terms, the Postmaster General really controlled the economic development of the domestic and foreign air transport companies by his policy of letting mail contracts and selecting mail routes.

The first domestic air mail contracts were let* by competitive bidding. Competition was strictly limited and controlled by the Postmaster General but it nevertheless existed among the several companies operating the system. After the cancellation of mail contracts in 1934,

* Authorized by the Kelly Bill signed February 2, 1925.

competition was intensified as a result of the reletting of contracts after cutthroat competitive bidding. For a while rate wars, unethical advertising, and the other evils attendant on unregulated competition were in evidence.

There is now direct competition on most of the heavily traveled routes in the United States and indirect competition between terminals by different routes on many others.* There is no competition on the majority of the light traffic routes. Competition may be excessive in a few instances and inadequate in others but on balance there is little question that the competitive stimulus has been effective in producing rapid improvement of equipment and service - more rapid than could be reasonably expected under a monopoly. However, the cost to the government in supporting a number of companies has probably been greater, particularly in the early stages, than it would have been had the entire system been operated by one organization.

The Foreign Air Mail Act of 1928 provided for competition on foreign routes, requiring that contracts be let to the "lowest responsible bidder that can satisfactorily perform the service".** As it was unlikely that one company would be low bidder on all routes, the possibility of more than one line entering the foreign field was at least implied. How-

* Three lines compete between New York and Chicago and two between New York and Washington but there is no competition between New York and Boston and San Francisco and Los Angeles. Three major lines offer transcontinental service to Los Angeles and San Francisco by different routes. The largest domestic company operates 17% of total route miles and the five largest companies 65%. The remaining 35% are operated by small companies.

** In contrast, the first domestic air mail Act merely authorized the Postmaster General to let contracts for carrying the mail without any stipulation that there should be competitive bidding. This permitted negotiated contracts.

ever, a review of the development of U. S. air transport abroad shows that in practice it has been our national policy to have our foreign air transport operations conducted as a monopoly. When the Latin American system was established, bids were sought for the various mail contracts in technical compliance with the Act. However, by requiring that routes be put in operation in a very short time and by other sometimes arbitrary interpretations of the law, the Postmaster General so arranged matters that no company except Pan American Airways and its associate, Pan American-Grace Airways, ever had a real opportunity to obtain a contract. Similarly, competition was not encouraged when the Pacific contract was let in 1935.

Civil Aeronautics Act of 1938 - Recent
Competitive Developments in the Foreign Field

The passage of the Civil Aeronautics Act in 1938 paved the way, potentially at least, for the development of competition in the foreign field. This Act turned the economic regulation of aviation over to a five-man Authority* and for the first time clearly set forth government policy toward air transportation, both domestic and foreign. The Authority was empowered to grant certificates of convenience and necessity which in effect gave the carriers a franchise for their routes and for the first time provided a means of controlling excessive competition. On the other hand, the policy clause of the Act stated that "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" should be considered in the public interest and in accord with the public con-

* Now the Civil Aeronautics Board.

venience and necessity. This provision certainly indicated that some competition might be permitted in the foreign field and since the enactment of the law a number of companies have applied for route certificates for operations abroad.

In July, 1940 the Civil Aeronautics Board awarded a certificate of convenience and necessity to American Export Airlines, Inc. for a trans-Atlantic service in competition with Pan American. This decision has been nullified for an indefinite period of time by the refusal of the Congress to appropriate funds for the operation* on the grounds that as "the foreign air mail was on a subsidy basis, increasing the cost of the operation without in any way increasing the revenue is a doubling up process on the Treasury of the United States". This was in spite of the fact that the State Department, Navy Department, Maritime Commission, and Civil Aeronautics Authority forcefully endorsed the appropriation.

American Export Airlines is also anxious to enter the Latin American field. Subject to the approval of the Civil Aeronautics Board, it has purchased TACA, a company operating approximately 5,000 route miles of local lines in Central America. It has also applied for a route from New Orleans to Guatemala City which, if granted, would connect the TACA system with the United States. TACA, in turn, has sought the right to extend operations to the Canal Zone. Besides attempting to build up a system which would parallel that of Pan American in Central America, American Export Airlines is interested in expanding to South America. It

* In October, 1940 the Appropriations Committee of the House refused to appropriate the necessary funds (contained in a Deficiency Bill). Earlier this year the Senate Appropriations Committee endorsed the necessary appropriations but the proposal was again rejected.

is rumored that if its applications in Central America are approved, the company will attempt to acquire other local airlines in South America and establish an extensive system competitive with Pan American's on that continent.

Pan American has sought to combat American Export Airlines' activities in Central America by financing and equipping a new local operator in Guatemala, who is said to be a close associate of the Guatemalan dictator. This operator has succeeded in having some of TACA's franchises cancelled and it is reported that several unsavory incidents have occurred, such as the "hijacking" of TACA's freight by the new company.

Further competition in Latin America is threatened by American Airlines which has applied for a certificate from El Paso to Mexico City. Waterman Steamship Company has also applied for a Guatemala-New Orleans certificate.

FUTURE POLICY: MONOPOLY OR COMPETITION?

The United States is now in the position of encouraging active competition in its domestic air transport system and operating its foreign air transport system as a monopoly. Both systems have been successful and are more efficiently managed than the comparable operations of other countries though our lead in the foreign field is perhaps somewhat smaller than in the domestic.

As a result of current efforts of other companies to enter the foreign field, the question of monopoly or competition is now very much to the fore. There is a clamor in government and aviation circles for the establishment of a definite policy in international air transportation.

This idea of a "definite" future policy is dangerous because of two factors which must receive fundamental consideration in all decisions as to air transport policy.

Air transportation, as a well organized industry, is little more than ten years old. It is young and its future course too unpredictable to warrant freezing its future development by an irrevocable step.

The United States is in the midst of a great world crisis and present policy must be primarily determined by existing international dangers.

We must therefore adopt a short term policy geared to the exigencies of the near future but flexible enough to embrace the essentials of a long term policy. The principal arguments for and against competition are outlined below in the light of these basic considerations and with special reference to the Latin American air transport problem.

Arguments for Monopoly

Competition has worked so well in the domestic field that on the surface it would seem logical to extend it to the foreign field. There are, however, important differences between the two types of activity. The purpose of our foreign airline operations is not, in the present state of world conditions, solely or even primarily economic. Our foreign airlines are more than means of transportation - they are implements of national policy. As long as chaotic world conditions continue all arguments for or against monopoly must be considered in this light. The two strongest arguments for monopoly stem from the international struggle and are:

Only a monopoly can be strong enough to combat the national government-owned air transport monopolies of other powers. Germany, Italy, Japan, England, and France all operate their foreign airlines through such monopolies.* These are the companies with which Pan American must compete. It must be as large and powerful as possible if it is to combat them successfully. The foreign air transport service of the United States represents an investment on its part for the furtherance of national interest and national defense. It should have the full force of U. S. diplomatic power behind it which would be impossible if it were split into several different companies. Only a monopoly with worldwide operations can have the same prestige as the government backed foreign companies. This argument has a great deal of force, not only because of the present crisis but also because the United States may be engaged in an economic struggle with militaristic nations for world domination long after the present war. It was a controlling factor in leading Great Britain to abandon competition in foreign service between two privately owned companies for a single government managed monopoly, British Overseas Airways*, whose securities were guaranteed by the State. Air Minister Kingsley Wood, in advocating this move, said in Parliament that "national ends" could not be attained by "private companies which must quite properly have regard for the interests of their shareholders".

Monopoly obviates the danger of competition between U. S. com-

* In Germany, Italy, and Japan, both capital and management is supplied by the government. In the case of England, the capital is subscribed by the public but is guaranteed by the government and the management is appointed by the government. In France, the capital is largely private and the management government controlled.

** In April, 1940 this company took over both Imperial Airways and British Airways.

panies in their relations with foreign governments which may embarrass the United States. This danger is a very real one, particularly under present conditions where it is of the utmost importance to maintain U. S. prestige. The present controversy between American Export Airlines and Pan American Airways in Central America is an excellent example of the unsavory squabbles that may develop. It has certainly redounded to the disadvantage of our government as did previous controversies between NYRBA and Pan American in 1930-1931 when those companies were competing on the east coast of South America. This type of controversy is almost inevitable in direct competition on the same route. The danger of trouble would be much less serious under indirect competition or regional monopoly and would be particularly unfortunate in Latin America where one of the primary purposes of building our air transport system has been, and still is, to increase the prestige of the United States.

The other arguments in favor of monopoly are primarily of an economic nature and are intended to prove that monopoly in the foreign field is cheaper than competition and, under proper government control, equally efficient. They are more applicable to the formulation of long term policy as cost is not a primary consideration in the present crisis.

Monopoly is less expensive to the government than competition. A second line operating in the same territory will necessarily duplicate some of the costs of the first line and on very few routes is there enough traffic for more than one airline. A large monopoly is cheaper to operate than several small companies because of the advantages of large scale purchasing and spreading of overhead over a large volume of operation. There is a point, however, beyond which the degree of cost reduction

diminishes and it is not necessary for one company to cover the world in order to be efficient. If competition is attempted however, it is important that the competitive units operate efficiently and be strong enough financially to ensure the development of new equipment.

Lower cost is not a controlling argument in favor of monopoly by a powerful and wealthy country whose primary aim is the development of the most effective and efficient air transport system possible.

There is no danger of a U. S. foreign air transport monopoly becoming indolent or wasteful. There is active competition from the lines of other nations and this, combined with the complete regulation provided or to be provided in the Civil Aeronautics Act, assures economical and efficient operation. Foreign competition is keen but it is not as satisfactory a stimulus to efficiency as competition from other U. S. lines. Because of national pride there is a tendency to underestimate the value of foreign operating standards and techniques which reduces their efficacy as spurs to improvement. For example, the competition between European lines has not been particularly effective in forcing them to improve their services.*

Even if foreign competition forces an American monopoly to improve its airplanes, it does not result in the most productive type of

* The superiority of Pan American's de-icing equipment was not appreciated by Imperial until they had a fatal accident on their Bermuda service despite the fact that the two lines were operating in direct competition. National loyalties have also influenced the flow of traffic in Europe. In 1935-1936 British subjects rode happily in Imperial Airways' 8-year old 105 m.p.h. Handley-Page Hannibals in preference to KLM's 170 m.p.h. Douglas DC-2s. It is questionable, however, whether the travel patronage of U. S. citizens would be influenced as much by national loyalties. In prewar days they flocked to the faster and more luxurious European steamships at the expense of our own lines.

competition between U. S. equipment manufacturers. A monopoly is likely to buy only one model of a given type of ship at a time. Thus only one manufacturer is given an opportunity to demonstrate his product. Moreover, the research and development of foreign manufacturers in producing superior airplanes is not available to the United States. Finally, foreign competition is of limited value as a yardstick of efficiency to a government regulatory body because the policies and operating standards of other nations differ greatly.

The presence of foreign competition and government regulation combined do not in themselves ensure maximum efficiency in the operation of a U. S. monopoly. They do not provide the same stimulus to improved service and reduced costs that are furnished by competition between U. S. companies. Nevertheless, they do provide some stimulus and strengthen the argument for monopoly if it appears in the national interest or for other reasons.

Arguments for Competition

Competition in air transportation may be direct or indirect and it is even possible to secure some of the advantages of competition through the establishment of regional monopolies. To be economically sound, direct competition on the same route, particularly in a subsidized industry, must be limited to those routes having enough potential traffic to support both companies. Except for the North Atlantic there are relatively few routes in the foreign field where the traffic potentials are clearly great enough to justify two U. S. airlines. Indirect competition to the same termini, or at least to the same area by different routes, which is the most common form of competition in the domestic airline system, is possible in some

cases. As an example, two airlines, completely independent of each other, could each operate a route (East Coast or West Coast) between the United States and Buenos Aires.

The principal arguments for competition are as follows:

Competition is in the American tradition and has proved successful in many fields of activity, including the domestic air transport field. The United States is probably going to make great sacrifices to uphold its philosophy of life in the world. We should therefore not abandon the basic principle of competition in any field unless there are very good arguments for doing so. Moreover the operation of the domestic airline system by a number of companies and direct and indirect competition on a number of its routes has proved a successful policy. It is perhaps the greatest single reason for our preeminence in air transportation technique.

This argument in itself should be conclusive unless there is clear evidence that in holding to competition we endanger our national position in world affairs.

Competition is the most effective stimulus to better service and lower operating costs. When one company installs new equipment, improves its advertising or introduces a new standard of service, its competitor is virtually forced to do something about it reasonably soon. The admonitions of a government regulatory body can force the correction of outrageously bad service but they cannot provide the constant stimulus for improvement which competition furnishes. Neither is the profit motive an adequate stimulus. There are usually good reasons as to why a new technique or service may not expand profits and if the company is

doing fairly well the burden of proof is on those who wish to change the status quo.

This argument is certainly sound and is borne out by the beneficial effect of competition in improving the equipment* and service of the domestic lines. New types of airplanes and important improvements such as soundproofing and sleeper service have been introduced much earlier than they would have been under monopoly.

The foreign field is so large that more than one company is necessary to handle it efficiently. While not basically an argument for the competitive principle, the argument that an enterprise can become too big for efficient management is a popular one at the moment. The possible evils of unlimited expansion are likely to prove dangerous in the early stages of a new transportation industry where there is a constant temptation to enter new fields without properly consolidating and developing existing properties. There is no doubt, for example, that Pan American would have given more attention to its Latin American service in 1934-1939 if it had not been engaged in opening its Alaskan, Pacific, Chinese, and Atlantic services. The Cadman Committee was moved by those considerations when it recommended that British Airways rather than Imperial should be

* Competition has forced the domestic system to be extremely progressive in equipment development. In 1933, for example, United Air Lines installed 150 m.p.h. Boeing 247s. Less than a year later TWA introduced 170 m.p.h. Douglas DC-2s. In 1936 only two years after TWA had equipped with DC-2s American Airlines introduced the 180 m.p.h. Douglas DC-3s and all lines were anxious to purchase this plane. TWA introduced four-engined 200 m.p.h. Boeing 307s in 1940 and the other lines are now attempting to meet this competition. A monopoly would not have introduced new types as rapidly. The changes in equipment have been expensive from the near term standpoint but they have greatly improved service to the public. As each new type attracted more traffic and reduced costs they have in the long run reduced the dependence of the system on government subsidy more rapidly than would otherwise have been the case.

permitted to operate the British South American service "to avoid overburdening" Imperial.

Competition simplifies the regulatory task of government by providing a yardstick for regulatory decisions. If there is only one U. S. line, it is almost impossible for the regulatory agency to tell whether its operation represents maximum efficiency and whether government aid is at the proper level. Foreign competition does not provide an adequate yardstick because of the differences in standards and national policies.

Competition is more expensive in the beginning but in the long run it hastens rather than delays self-support. In the early stages of development of a subsidized industry competition is more expensive than monopoly for in effect the government is subsidizing two deficits instead of one. However, the advocates of competition argue that, provided enough potential traffic is available, it reduces the ultimate cost to the government by encouraging each line to improve equipment, intensify traffic solicitation and reduce costs, thus hastening the day on which it will become independent of subsidy.

Competition can, of course, be carried to excess as it was in certain stages of the development of the domestic system when the paralleling of routes, rate wars, and unethical advertising campaigns threatened to do serious damage.

The Civil Aeronautics Act has eliminated the danger of such uneconomic competition by providing for adequate control over the establishment of new routes and other activities. To make it a complete safeguard it should be amended to provide control over adequacy of service and pas-

senger rates in foreign air transportation.

Arguments for Regional Monopoly

The problem of establishing really effective competition between U. S. airlines in the foreign field is complicated by the relatively few areas where there is enough readily available traffic to make competition, either direct or indirect, justifiable in the present state of the art. The opponents of complete monopoly argue, however, that this should not force the United States to abandon all hope of retaining some of the advantages of the competitive principle. They offer as a solution the creation of "regional" monopolies whereby one company would, for example, operate the Pacific service, another the Atlantic service, and a third the Latin American system. This is the policy which has been adopted for our subsidized merchant marine.

There are four principal arguments for regional monopoly:

Regional monopoly, though it does not provide as active a stimulus for improving service as direct or indirect competition, does provide a standard of comparison which is of real value to a regulatory body. It also encourages wide experimentation in equipment and operating techniques.

It is cheaper to the government than competition as there is less duplication of costs.

As the companies operate in different areas, it greatly reduces the danger of competition for diplomatic favors.

If properly planned, it limits the system entrusted to any single company to a reasonable size and eliminates the danger of management being spread too thin. It is argued that a world-

wide system is too big for any one company to operate.

Arguments against Regional Monopoly

The principal argument used against regional monopoly by the advocates of monopoly is that it has been tried by England, Germany, and France but abandoned after the regional companies failed in competition with other nations. This contention is not strictly accurate as will be seen from the following outline of the foreign air transportation policy of these leading nations.

It is true that all the countries in question began their air transport activities after the World War with a multiplicity of privately owned companies* and later (1924-1926) consolidated them into monopolies, which in most cases were government controlled. However, due to high costs and low traffic, the economic position of air transportation was so different from what it is today and the European countries were so pre-disposed to monopoly because of their long standing state controlled transport and communications systems, that these decisions of fifteen years ago have little value as precedents for us today. European policy in more recent times is worthy of examination, however.

England. Imperial Airways (founded in 1924), the British national company**, was privately owned but had three government directors

* In 1923 there were 4 companies in England, 11 in France, and 20 or more in Germany. From 1922-1924 the British segregated the activities of their lines into zones, one line running from London to Paris, one to Brussels, and one to Amsterdam and Berlin. However, air transportation in those days was barely out of the experimental stage and this experiment in regional monopoly has little application under present conditions.

** The British have, like ourselves, encouraged competition in their domestic system but domestic air transportation in England is a minor matter because of the small size of the country.

on its Board. Well run at first, it lapsed into serious inefficiency in the middle 1930's. At that time British Airways, a small unsubsidized company, had an extensive, well run competitive service in Europe and there was a strong feeling in Parliamentary circles that further competition should be encouraged.

Partly as a result of this Parliamentary outcry, the Cadman Committee was appointed in 1938 to inquire into the state of British air transportation and to recommend a future policy. The Committee recommended against direct competition between British subsidized companies on any one route but stated that Imperial Airways was overburdened with the task of operating the entire British overseas air transport system. It endorsed the previous decision of the Air Ministry that British Airways, a small and hitherto unsubsidized company, continue to operate the European services and be entrusted with the task of opening a service to South America. Although the value of the competitive stimulus in such an argument was not stressed, the recommendation was an endorsement of regional monopoly.

The government almost immediately (November, 1938) rejected the recommendations of the Cadman Committee and in April, 1940 formed a single government company, British Overseas Airways*, to take over British Airways and Imperial Airways and carry out all British air transport activities overseas. The entire Board of this company is appointed by the Secretary of State and its securities are guaranteed by the State both as to principal and interest.

* Probably due to the government's decision to form this new company British Airways never inaugurated its South American service although extensive surveys of the route were made in 1938-1939.

The arguments advanced in favor of this new type of organization did not include criticism of the functioning of regional monopoly which in fact had never come into full operation. They were rather arguments against any kind of private operation in the foreign air transport field. In justifying the policy, Air Minister Sir Kingsley Wood said, "Under the new corporation national interests and national advance would come first." This and a "farsighted long range policy" in transport plane production could not be attained "in the face of heavily subsidized competition from national airlines of other countries" as long as the British system was operated by private companies. Private companies must "quite properly have regard for the primary interests of their stockholders", and could only obtain capital at a high rate of return which would increase the ultimate cost to the State. If British national interests were to be furthered most effectively the pretense of commercial operation had to be abandoned and the system made practically an arm of the State.

It was also argued that the new monopoly did not represent an abandonment of competition as there never had been direct competition between Imperial and British Airways and ample competitive stimulus was provided by the national companies of other nations.

It is clear that England has never given regional monopoly a thorough trial in modern times although she was tempted to do so by the inefficiency of her privately managed monopoly. Her recent adoption of a state monopoly has been motivated by the fact that foreign air transport

* Quotation from Parliamentary Debate on the British Overseas Airways Act, July 11, 1939.

development under present conditions is more a weapon of national policy than a commercial enterprise.

France. The French, on the other hand, did institute a full-fledged regional scheme in the early 1920's with Latécoere operating to South America, Air Orient to Indo-China, and Air Union in Europe. These companies, and particularly Latécoere, failed in competition with the national airlines of other nations but as they were extravagantly and even fraudulently managed it is difficult to attribute their failure primarily to the fact that they were regional. In 1933-1934 the French government merged the three regional lines into a single system called "Air France" which was one-third owned by the State and whose entire Board was State appointed. This company, which ceased operations with the collapse of France, was somewhat better managed than its predecessors but was still the least efficient of the major European airlines. Monopoly was not a cure for its troubles.

Germany. In 1926 Germany combined her many small local lines into Deutsche Luft Hansa, a government owned and managed monopoly. This is the most progressive airline in Europe and one of the most progressive in the world - strong evidence that a government monopoly need not be technically backward - and in view of the current German philosophy of state ownership, it is inconceivable that Germany will again adopt competition, regional or otherwise. It is of interest, however, that the successful German expansion in South America was carried out by several small German sponsored companies rather than directly by Luft Hansa itself,

* Air France was not a complete monopoly. Chargeurs Reunis operated a small line on the west coast of Africa and Air Afrique operated an extensive network in central Africa.

indicating that the prestige of a great worldwide system is not always necessary for successful competition abroad.

Except for the brief English flirtation with competition in 1937-1938 all important European nations* have operated their foreign airlines as national monopolies since 1933. This certainly indicates a belief that this is the best form of organization. It should be noted, however, that their background of state ownership of railroads and communications facilities predisposes Europeans to this type of organization. France is the only country to have given regional monopoly a serious trial and her failure was probably due as much to corruption and inefficiency as to the inherent defects in the type of organization.

Another argument advanced against regional monopoly, (as distinct from the general arguments against the principle of competition itself) aside from European experience, is that with modern long range, high speed equipment there is every likelihood that the regional zones will overlap. With airplanes that can span the Atlantic in twelve hours no company will be satisfied with the size of its zone and will wish to penetrate that of its competitors. This possibility exists but if government regulation is adequate and if the number of zones is kept small, the danger is reduced to the vanishing point.

CONCLUSIONS

None of these arguments are clearcut for there are many advantages inherent in competition and many in monopoly. Nevertheless, it is

* The small European countries (Holland, Belgium, Poland, etc.) have also operated their transport systems as national monopolies.

possible to draw certain general conclusions and to translate them into specific terms as far as our Latin American air transport operations are concerned.

General

The world is now confronted with a war which may last for years and the results of which no one can foresee. At least as long as the present crisis lasts, every effort should be made to avoid destructive disputes between U. S. carriers in Latin American service. Such disputes tend to generate contempt for the United States in all Latin American countries. They greatly complicate the task of the Department of State, making it impossible to exert the full force of our diplomacy. To prevent such unfortunate occurrences no U. S. carrier should be given financial or diplomatic support to establish service in a country where another U. S. carrier is already operating unless it can be shown that the new service will be supplementary to, or at least non-competitive with, existing U. S. services. No line should be given a certificate to provide such service or to provide service already being adequately rendered by another U. S. carrier.

The type of international structure established after the peace will inevitably have a controlling effect on our foreign air transport policy but unless there are radical changes in world philosophy (such as would result from a German victory), we should give serious consideration at that time to extending competition. The eventual establishment of competitive standards of service without direct duplication or cut-throat competition is desirable. There are few routes in Latin America which will support two companies at present and the end in view might best

be achieved by completely segregating the Latin American air transportation system into two basic trunk lines, each with its connecting feeders. One could operate from Miami to Buenos Aires via the east coast and the other from Brownsville, Texas, to Buenos Aires via Central America and the west coast.

The basic reason for recommending such extension of competition is that the success of air transportation for many years to come will depend on the rate of its technical progress. Competition is the most effective method of accelerating technical advances and improvements in service. It has achieved this result in the domestic field and will do the same in the foreign field.

If intelligently planned and controlled, competition should be little more expensive to the government than monopoly. It might actually be cheaper over the long run. Adherence to the following principles will ensure the avoidance of economically unsound competition:

The competing units should be sufficiently strong financially to ensure the development of equipment and to avoid sapping the strength and lowering the prestige of U. S. air transportation.

Direct competition between U. S. lines in Latin America should not be permitted except on the few routes where there is ample traffic and where the relations of the United States with the countries traversed are such that there would be no possibility of endangering our national prestige. Direct competition could be justified on the heavy traffic route between New York and London, for example, while it would be indefensi-

ble in certain parts of South America where total traffic is light and diplomatic relations delicate.

Indirect competition between the same termini or areas but by different routes should be used as a substitute for direct competition when the latter is not feasible.

If it proves impracticable to establish sufficient direct and indirect competition to secure the full value of competitive stimulus, consideration should be given to establishing a very limited number of regional monopolies.

PART FOUR

SUGGESTIONS

The purpose of this report has been more to explore the field and throw the major problems into relief than to make specific recommendations. Nevertheless, our examination has inevitably produced some specific suggestions and it seems well to summarize them here.

GENERAL

The entire approach of the United States to Latin American aviation policy must be based on the fact that there is a short term and a long term problem in each of the major fields covered and that there must, therefore, be a short term and a long term policy in each case.

The short term approach must take into account the stern reality that we are involved in a world crisis of titanic proportions and that Latin America and particularly its air transportation are essential elements in our national defense. The way in which we combat German influences, the methods for and degree of improvement of international and local services, and our choice of competition or monopoly must all be controlled by this overwhelming reality. We must fight force with force; we cannot abide by the niceties of sound business practice and conventional economics if by doing so we impede our national defense.

Our longer term program which will come into effect after the war can be approached in a more deliberate, though not in a leisurely, fashion. It must be based as far as possible on sound economic principles and on the very real community of interests between ourselves and Latin

America in aviation matters. It must be broad in scope because of the size of the area involved and the importance of the commercial and political stakes to be won.

INTERNATIONAL SERVICES

Our own air transport operations in Latin America are distinctly superior to the German and Latin American services with which they compete from the standpoint of speed, schedule frequency, safety, and the quality of service. However, their fares are considerably higher in some cases. On all counts our services are at least as good as any comparable long distance service operated by European companies before the war. They are, however, distinctly inferior to the best U. S. domestic services in all these respects. Their inferiority cannot be attributed wholly to the difficulty of operating in foreign countries with limited airports and airway facilities.

They can and should be improved in certain important respects. Fortunately most of the immediately necessary improvements have already been proposed by Pan American and can be put into effect in the near future.

Short Term

Capacity of Service. The capacity of the service is inadequate for present traffic and should be increased as load factors have averaged 80%-90% in recent months on several important sections. An increase of 57% in seat miles flown has been proposed by Pan American and priorities have been granted on the necessary airplanes. It is difficult to determine the degree of increase required on specific routes but more service

is certainly necessary. A heavy increase is desirable if stimulation of traffic between the American republics is our objective. As surface traffic between the United States and Latin America is approximately ten times air traffic, ample potential business is available.

Fares. Fares are high in relation to surface rates (40%-50% above first class steamship fares) and should be lowered. Pan American has proposed to the Civil Aeronautics Board an average reduction of about 10%, which appears most desirable. To explore the effect of fare reductions on revenues, experiments should be made with even lower fares to encourage a wider use of the service by Latin Americans.

High Speed Four-Engined Service. The present service is largely flown with 21-passenger twin-engined DC-3s and flying is confined to daylight hours. This is an obsolescent type of equipment for really long distance routes. Continuous night and day service with four-engined high speed airplanes is desirable from the commercial and military standpoint and should be inaugurated as soon as possible. Such airplanes are under development and whether they are in operation or not in 1942-1943 depends primarily on the judgment of our military services. By cutting the present New York-Buenos Aires time by two-thirds such service will have a profound effect on inter-American relations.

Airport and Airway Facilities. Present airport and airway facilities are inadequate for night and day service with modern four-engined aircraft. They should be improved not only in strategic areas but throughout our trunk line network.

Long Term

Monopoly or Competition. The beginning of competition between

U. S. companies in Latin America has already produced unsavory quarrels damaging to the prestige of the United States. There should be no change in our present monopolistic structure in that area until the present crisis is past.

If the world returns to a more or less sound basis after the war, serious consideration should be given to the introduction of limited competition between U. S. companies in Latin America, preferably on a regional basis.

LOCAL SERVICES

Contrary to general belief the United States controls over one-half the local service in Latin America, local companies operate one-quarter, and German companies one-fifth of the route mileage. German influence, however, is strong in several of the South American owned lines. Our attempts to eliminate this influence will bring us in close contact with local Latin American airlines.

Short Term

Providing U. S. Equipment to Local Airlines. A strong Latin American owned and managed air transport industry is the best protection against European aviation penetration. We should endeavor to build such an industry. Supplying U. S. equipment and personnel to bona fide Latin American airlines on a favorable basis, can be one of the most effective forms of aid. The amount of equipment needed would be small for there are only 35 multi-engined German airplanes in Latin America.* If we are to

* In addition the locally owned Latin American airlines operate 27 multi-engined airplanes of varying ages, mostly of U. S. manufacture.

retain the respect of Latin Americans, all loans of equipment or funds should be on a business-like basis. An attempt to buy cooperation by lavish financial aid would be unwise.

U. S. Technical Personnel. U. S. technical personnel should be supplied with U. S. equipment to ensure indoctrination of Latin American personnel in safe operation.

Preservation of Existing Latin American Operations. In the course of the U. S. anti-axis program no attempt should be made to substitute U. S. operations for those in which Latin Americans have an important interest unless cooperation in eliminating the German influences is refused.

Long Term

Joint U. S.-Latin American Ownership. One of the most effective ways of ensuring Latin American-U. S. cooperation in air transport matters is through joint ownership of companies. A sound arrangement should be worked out whereby Latin American governments and private local capital can acquire an interest in local lines (such as Mexicana and Panair do Brasil) which are 100% U. S. owned. Contracts for the purchase of stock on a sliding scale over a period of years (such as that between Pan American and the Colombian government in the case of AVIANCA) would be a desirable method.

Future Expansion of Local Service. Many Latin American countries have inadequate local service at present. Extension of freight and passenger service to remote regions can be effective in improving the economic and social position of individual countries and strengthening Latin American solidarity. After the war, when ample equipment and personnel

will be available, the United States should furnish technical and possibly financial assistance for large scale expansion of local services.

Development of Special Types of Aircraft. Types of aircraft not now in production will be necessary for efficient development of local service. Chief among these are a cheap twin-engined transport of moderate size and a large freight ship with a low ton-mile operating cost. After the war U. S. designers will be able to devote their attention to such projects.

COMBATING AXIS INFLUENCES

German owned and influenced operations cover some 15,000 route miles or about 23% of the total route mileage in South America. They operate only 31 multi-engined airplanes practically all of which are obsolescent and do not constitute a serious immediate military menace. However, they are effective propaganda-spreading instruments and would constitute a grave military and political threat to the United States should Germany win the war. Under such conditions their facilities would be expanded to the point where they would become of real military use. The early elimination of German influence is therefore essential.

Specific recommendations as to a program to achieve this end are embodied in a confidential memorandum not incorporated in this report but it is possible to make a few general recommendations here.

Equipment and Personnel

Equipment and personnel should be made available immediately for the anti-Axis program. The amount needed will not be large as there are only 35 multi-engined German airplanes in South America (including German

airplanes owned by other than German and German influenced lines).

Immediate Action Necessary

The importance which Germany places on retaining her position is evident from the fact that, despite her gigantic military operations, she has sent three freighters through the British blockade to South America each of which carried airplanes and parts. In combatting German owned airlines (as distinct from German influenced lines) we are not competing with a rival business firm but are warring against a politico-military arm of the German government in a field which it considers of vital significance. We must act with as much force and dispatch as if we were defending the United States from military attack.

6035

PSF: Rockefeller Folder
4-41

COUNCIL OF NATIONAL DEFENSE
COORDINATOR OF COMMERCIAL AND CULTURAL RELATIONS
BETWEEN THE AMERICAN REPUBLICS

COMMERCE DEPARTMENT BUILDING
WASHINGTON, D. C.

July 31, 1941

WHITE HOUSE

AUG 2 9 19 AM '41

RECEIVED

Dear Mr. President:

Thank you for your memorandum of July 11th calling our attention to the fact that William MacKinnon has the American and South American rights to distribute a cure for hoof and mouth disease.

We had already received some correspondence on the matter and are investigating it in cooperation with officers of the Department of State and the Department of Agriculture. If action on our part seems warranted, I shall not fail to inform you of it.

Sincerely,



Nelson A. Rockefeller

The President

RECEIVED THE UNITED STATES DEPARTMENT OF COMMERCE
CONFIDENTIAL
CONFIDENTIAL

PSF: Rockefeller Folder
4-4

THE WHITE HOUSE

WASHINGTON

July 11, 1941

MEMORANDUM FOR

HON. NELSON ROCKEFELLER

I get the following confidential information:

"Informant says that William McKinnon has the American and South American rights to distribute a cure for hoof-and-mouth disease. This cure is a discovery of Charles Heim (Swiss Jew) and its efficacy has already been demonstrated in France. McKinnon expects to make money from the distribution of this antidote but suggested it might be offered to Argentina and Brazil as proof of this country's good neighbor policy. He is trying to contact the Nelson Rockefeller outfit with this idea. McKinnon is believed to be a reliable man, vouched for by MacDonald of U. S. Steel."

Will you look into it and if there is anything to do, go ahead and investigate?

F. D. R.

JOHN FRANKLIN CARTER

(Jay Franklin)

1210 NATIONAL PRESS BUILDING
WASHINGTON, D. C.

"We, the People"
"The Week in Washington"

Metropolitan 4112
Metropolitan 4113

July 10, 1941.

MEMORANDUM ON INTERVIEW WITH WILLIAM McKINNON (Canadian subject)
RECENTLY RETURNED FROM OCCUPIED FRANCE.

McKinnon can be located at Hotel Madison, New York City.

He reports much opposition to the Laval-Petain policy in Brittany, with a threat of civil war against the Vichy regime if collaboration with Germany led to hostilities against England.

Important
Informant also says that McKinnon has the American and South American rights to distribute a cure for hoof-and-mouth disease. This cure is a discovery of Charles Heim (Swiss Jew) and its efficacy has already been demonstrated in France. McKinnon expects to make money from the distribution of this anti~~note~~ but suggested it might be offered to Argentina and Brazil as proof of this country's good neighbor policy. He is trying to contact the Nelson Rockefeller outfit with this idea. McKinnon is believed to be a reliable man, vouched for by MacDonald of U.S.Steel.

J.F.C.

McKinnon
Walker

July 9, 1941.

William McKinnon, Canadian (previously reported upon) living temporarily at Hotel Madison, this city, called me for a lengthy talk.

He said that he felt the recent removal of Sen. Gaston duParc as Mayor of St. Malo, France, would bear closer study and expressed the opinion that it came at the request of the Nazi representatives in Vichy. He characterized duParc as a genuine Frenchman with pro-British leanings, and said that duParc is a native Breton.

He reported that in Brittany the Nazis withdraw small policing forces at night, concentrating them into larger garrisons at various points because the Bretons were killing off the small detachments.

Incidentally, he mentioned that when Laval tried to get Marechal Petain to declare war on England about two months ago Briand, also a native Breton, blocked the effort by declaring that such action would result in civil war in France and that he had 300,000 men who would fight to the death if a war declaration was made by the Vichy regime. Petain prevented the declaration after Briand staged a parade of several hundred Frenchmen armed with machine guns.

He also reported that the Bretons are constantly contacting British Intelligence and turning in information about Nazi troop movements.

Laval and Briand are constantly against each other with the former completely under Nazi domination, for which he is being well paid--in Nazi currencies -- one of the deals being the German purchase of the Havas News agencies which have a large coverage in South America as well as in Europe.

At this point in the interview the telephone interrupted and the call was from Sir Ashley Sparks secretary arranging for an interview.

McKinnon said that Albert , of Maximes in Paris, is the go-between for all dirty work against individuals as he takes the money paid for such efforts and splits it with the Nazi Gestapo and Army officers.

Separate report is made on suggestions of McKinnon regarding Prince Vishnu, brother of the Maharaja of Nepal, India.