REPORT BY THE

Comptroller General

OF THE UNITED STATES

The Changing Airline Industry: A Status Report Through 1979

The airline passenger industry is changing, responding to greater freedoms provided by the Airline Deregulation Act of 1978. GAO's review of airline operations, since deregulation began through 1979, shows

--significantly increased traffic,

--lower rate of increase in fares than in airline costs and consumer prices,

--higher industry rate of return on investment,

--improved productivity,

--more weekly departures and available seats for most areas of the Nation,

--more small community service to and from larger communities but less direct service between small communities, and

--no apparent adverse effect on safety.

It is too early to judge airline deregulation's ultimate success or failure because deregulation is a gradual process that will not be completed until 1985.

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-197119

The Honorable Harold T. Johnson
Chairman, Committee on Public
Works and Transportation
House of Representatives

The Honorable Glenn M. Anderson
Chairman, Subcommittee on Aviation
Committee on Public Works and
Transportation
House of Representatives

The Honorable Elliott H. Levitas
House of Representatives

This report discusses changes in the airline industry since passage of the Airline Deregulation Act of 1978. In response to your request, the report discusses airline traffic; fares; profits; productivity; air service patterns, including service to small communities; and the safety records of domestic passenger airlines prior to and after the start of deregulation.

As requested we did not obtain agency comments on the matters discussed in this report. As arranged with your offices, we are sending copies of this report to the Director, Office of Management and Budget; the Chairman of the Civil Aeronautics Board; interested congressional committees; and other interested parties.

Comptroller General
of the United States

COMPTROLLER GENERAL'S
REPORT TO THE CHAIRMEN,
COMMITTEE ON PUBLIC WORKS
AND TRANSPORTATION AND ITS SUB-
COMMITTEE ON AVIATION, AND THE
HONORABLE ELLIOTT H. LEVITAS
HOUSE OF REPRESENTATIVES

THE CHANGING AIRLINE INDUSTRY: A STATUS REPORT THROUGH 1979

D I G E S T

The airline industry is changing, responding to greater freedom provided by the Airline Deregulation Act of 1978. It is too early to judge the ultimate success or failure of deregulation because it is a gradual process which will not be completed until 1985. Secondly, GAO's comparisons of air service reflect changes that have also been caused by circumstances other than airline deregulation.

Because most 1980 data is not yet available, GAO's analysis of airline operations after deregulation is limited, in most areas, to data from calendar years 1978 and 1979. However, preliminary indications are that 1980 operating results may differ significantly because of changed economic conditions.

INDUSTRY CHANGES

GAO analyzed four aspects of the industry's operations--traffic, fares, profitability, and productivity.

Since deregulation began, airline traffic has increased substantially, outpacing the general economic indicators. Despite a small shift in traffic away from trunk airlines--larger airlines--the nontrunk airlines' share of the market remains relatively small. (See p. 3.)

Air fares have increased before and after deregulation but have not kept pace with airline costs and the consumer price index. Since deregulation began, air fares increased only about 6 percent, while an index of airline costs increased by about 30 percent and the consumer price index increased by 20 percent.

The industry's average rate of return on investment was higher in the 2 years after deregulation than in the prior 8 years. (See p. 7.)

Two major factors that have contributed to moderating fare increases and increasing airline profitability in 1978-79 were improved airline productivity and favorable economic conditions. While it is hard to measure each factor's impact, it is clear that airline productivity has improved. Load factors have increased to a high of 63 percent in 1979 compared to about 55 percent before deregulation.

Using revenue ton-mile costs as an efficiency measure, a Civil Aeronautics Board index (1976 dollars) shows that airline costs have decreased. Prior to deregulation costs decreased at a 4.3-percent annual rate, while after deregulation the annual rate of decrease was 7.3 percent. (See pp. 8-10.)

AIR SERVICE PATTERNS

Air service nationwide was up. The total number of weekly departures and available seats from October 1977 to October 1979 increased by about 15 and 12 percent, respectively. The number of competitive markets was also up, as was single-plane service, which allows travelers to reach their destination without transfering planes. (See p. 12.)

Small community air service patterns have shifted since airline deregulation. From October 1977 to October 1979, more service was provided to small communities from larger communities, but less direct service was provided between small communities. Most small communities, however, had weekly departure increases greater than the national average. (See p. 12.)

Despite nationwide increases in air service, not all geographic areas benefited equally. Thirteen States experienced a decrease in service. During the 10 years before the act was passed, 137 communities lost all of

their certificated air service--service provided by airlines holding Board certificates of public convenience and necessity--an average of about 14 a year. After deregulation, only one community lost all certificated service, and that was with the community's consent--the loss of service was for 19 months. (See pp. 15-19.)

Through July 1980, 130 communities have been affected by some airline service terminations since deregulation, but the majority continue to receive air service by one or more certificated airlines. (See p. 18.)

SAFETY

The level of air safety appears to have been unchanged by deregulation. According to a study by the Secretary of Transportation, there is no evidence that deregulation has caused an increase in airline accident rates for 1979. Although GAO did not review the detailed support for the Secretary's findings, the methodology used appears reasonable. (See p. 20.)

Contents

ABBREVIATIONS

CAB	Civil Aeronautics Board
FAA	Federal Aviation Administration
GAO	General Accounting Office

GLOSSARY

Available seats	Installed seats in an aircraft excluding any seats not offered for sale.
Available seat-miles	The aircraft miles flown on each flight stage multiplied by the number of seats available for revenue use on that stage.

Certificate of public convenience and necessity	A certificate issued to an airline by CAB authorizing it to engage in air transportation and containing any CAB specifications on routes, points or areas to be served, and limitations and restrictions on such service.
Certificated airlines	A class of air carriers which hold CAB certificates of public convenience and necessity authorizing them to engage in air transportation, including certificated route airlines and supplemental airlines.
Certificated point	A place authorized by CAB to receive scheduled air service by a certificated airline, including a place covering more than one community or served through more than one airport.
City pairs	The origin and destination cities of an air trip.
Commuter airlines	A class of noncertificated air carriers which operate small aircraft (under 56 seats) and weekly conduct at least five round trips between two or more points based on published flight schedules.
Competitive market	A pair of places served by more than one airline.
Departure	An aircraft takeoff from an airport.
Enplanements, passengers	The total number of passengers boarding aircraft, including originating and stopover of online transfer passengers
Essential air service	The threshhold number of departures linking a community to the nationwide air transport network. Two round trips per day, 5 days a week, is the statutory minimum service.
Flight, scheduled	Any air trip periodically operated between two places which is designated by a flight number or otherwise in the airline-published schedule.

Hub, air traffic	The cities and standard metropolitan statistical areas requiring aviation services. Communities fall into four classes as determined by each community's percentage of the total enplaned passengers in scheduled and nonscheduled service of the domestic certificate route airlines in the 50 States, the District of Columbia, and other U.S. areas designated by the Federal Aviation Administration. A large hub is a community which enplanes 1 percent or more of total enplaned passengers for all air services in the United States; a medium hub, from 0.25 to 0.99 percent; a small hub, from 0.05 to 0.24 percent; and a nonhub, less than 0.05 percent.
Hub-and-spoke network	A traffic system which feeds air traffic from small communities through larger communities to the traveler's destination via connections at the larger community.
Intrastate airlines	A class of noncertificated air carriers operating wholly within the same State of the United States.
Load factor	The proportion of aircraft seating capacity that is actually sold or used, determined by dividing revenue passenger-miles by available seat-miles.
Local service	A class of air carriers which originally provided service to small and medium communities on low-density routes to large hubs and which were eligible for CAB subsidies to cover operating losses from such service. These carriers have since evolved from their "feeder" airlines' origination into medium to large airlines with only certain of their operations eligible for subsidy.
Official Airline Guide	A bimonthly publication of the airlines' scheduled operations and service, showing service and fares to one city from all other cities, where

	direct or simply connecting service is available. Information published in the Guide must be included in published schedules filed by the airlines with CAB.
Rate of return	The rate of return is developed by dividing (1) the net income after taxes plus interest expenses on debt by (2) the total investment in the carrier.
Revenue passenger-mile	One paying passenger transported 1 mile in revenue service, computed by multiplying aircraft miles flown by the number of paying passengers for each interairport flight.
Revenue ton-mile	One ton of revenue traffic transported 1 statute mile. Revenue ton-miles are computed by multiplying tons of revenue traffic by the miles this traffic is flown.
Single-plane service	Air service between two cities using the same plane even though the flight involves one or more enroute stops.
Small aircraft	An aircraft having a maximum passenger capacity of less than 56 seats.
Trunk airlines	A class of certificated route air carriers engaged in providing primarily domestic scheduled passenger service between medium and large hubs.

CHAPTER 1

INTRODUCTION

The Chairmen of the House Committee on Public Works and Transportation and its Subcommittee on Aviation and Representative Elliott H. Levitas asked us to compare the conditions that existed in the airline industry before and after enactment of the Airline Deregulation Act of 1978 (Public Law 95-504). Specifically, we were asked to analyze airline traffic trends; fares; profits; productivity; service patterns, particularly at small communities; and air safety.

OBJECTIVES, SCOPE, AND METHODOLOGY

This report is not intended to be an assessment of deregulation's impact. Rather, it is more of a snapshot of the airline industry before and after passage of the act.

We conducted our review at Civil Aeronautics Board (CAB) headquarters and Federal Aviation Administration (FAA) headquarters in Washington, D.C. The statistical information we used in our review came from CAB records and airline service schedules on file at CAB, except for traffic data obtained from former intrastate airlines. A more detailed explanation about data sources and methodologies used appears at appropriate sections in this report. (See pp. 8, 9, 11, 16, and 20.)

Our review deals with five airline groups: trunk, local service, intrastate, commuter, and other airlines. The intrastate group covers four newly certificated former intrastate airlines whose traffic remains primarily intrastate. We included newly certificated former commuters in the commuter category. These former commuters generally continue to operate small aircraft primarily in service to small- and medium-sized communities and have continued to "look" like commuters. The "other" category includes all other scheduled air passenger service by certificated airlines.

Although the Airline Deregulation Act was not enacted until October 24, 1978, CAB began easing airline controls before that time. Since 1977, CAB has gradually lessened restraints on an airline's ability to enter and exit markets and has provided airlines increased fare flexibility. To better reflect these changes in our comparisons, we arbitrarily considered calendar years prior to 1978 as being before deregulation and 1978 and 1979 as after deregulation. These comparisons, however, require a word of caution. They reflect changes which have also occurred from other than airline deregulation.

Because most 1980 data is not yet available, our analyses of airline operations after deregulation are confined, in most areas, to calendar years 1978 and 1979 data. However, preliminary indications are that 1980 operating results may differ significantly because of changed economic conditions.

AIRLINE DEREGULATION ACT

Airline deregulation is a gradual process. The act provides for the phasing out of the Civil Aeronautics Board and transferring of some of its functions to other agencies. On December 31, 1981, most of CAB's domestic route authority expires. On January 1, 1983, its authority over domestic fares expires. Also on that date, CAB's authority over domestic mergers and interlocking relationships will be transferred to the Department of Justice.

On January 1, 1985, CAB ceases to exist unless the Congress has taken action to the contrary. At that time CAB's authority to provide subsidies for air transportation to small communities will be transferred to the Department of Transportation. Authority over foreign air transportation will also go to the Department of Transportation, which must exercise it in consultation with the Department of State. Authority over airline agreements, mergers, and interlocking relationships involving domestic airlines with foreign airlines or persons will go to the Department of Justice. Determinations of domestic mail rates will be made by the U.S. Postal Service.

CHAPTER 2

CHANGES IN AIRLINE TRAFFIC, FARES, PROFITS, AND PRODUCTIVITY

Air traffic increased sharply in 1978 and 1979. Air fares have increased but at a lesser rate than airline costs and general price increases experienced by consumers. Airline rates of return on investment for 1978 and 1979 were 12.9 and 7.1 percent, respectively. These rates are significantly higher than the 6.1-percent average return for the 8 years prior to deregulation. Airline productivity has improved. Load factors for 1978-79 were 61 and 63 percent, respectively, compared to an average load factor of about 55 percent prior to deregulation. Although actual average costs per revenue ton-mile have been increasing, when the effects of inflation are removed these costs have decreased significantly.

TRAFFIC TRENDS

Using both revenue passenger-miles and total passengers as a measure, air passenger traffic during the period 1973-79 increased substantially. During 1978-79 revenue passenger miles have increased by an average of about 24 billion per year while the average annual increase before 1978 amounted to 8 billion. Similarly, the number of airline passengers increased by an average of about 30 million per year, compared to an average annual increase of about 11.5 million before 1978. (See app. I.)

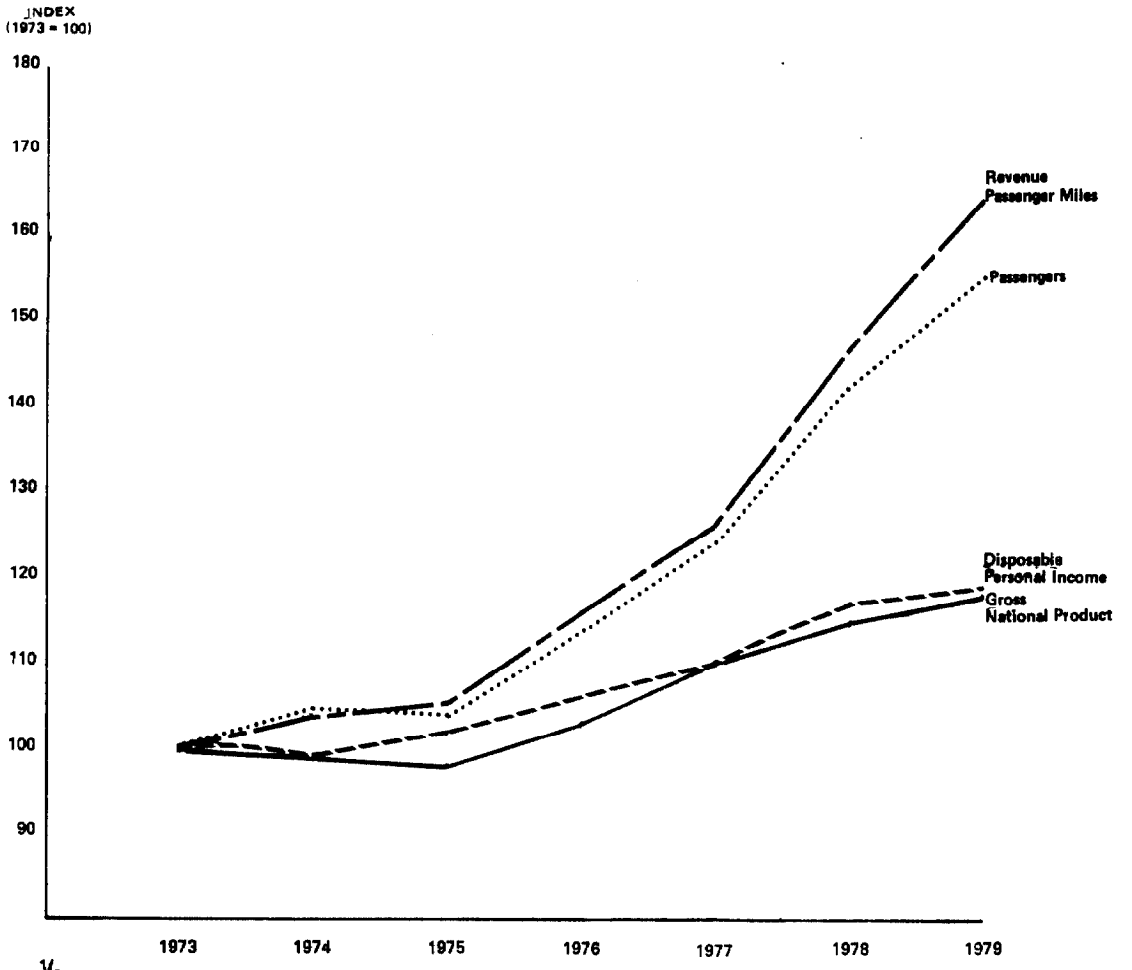
It is generally thought that as the economy expands and incomes rise, the demand for air travel increases. Two U.S. Department of Commerce indexes are available to measure this correlation: gross national product, and disposable personal income. Both reflect the general economic changes likely to influence both business and nonbusiness demand for air travel. As chart 1 shows, passenger traffic increased sharply since 1977, considerably more than both economic indexes.

Market shares

Although their percentage of the total market has decreased, trunk airlines still dominate the industry. Between 1977 and 1979, their share of the market dropped from 87.6 to 86.1 percent. Local service airlines were the primary beneficiary of this shift. Their market share increased about 1 percent to a 9.5-percent market share. (See app. II.)

Chart 1

CHANGES IN TRAFFIC[1/] AND ECONOMIC INDICATORS CALENDAR YEARS 1973 - 1979



1/ Covers domestic scheduled certified carriers, former intrastates carriers, and commuters

FARES

During the past 10 years, air fares and airline costs have risen significantly. (See table 1.) In the years before deregulation (1970-77), air fares per passenger-mile increased by 42.4 percent, or about 5.2 percent compounded annually. During that same period airline costs went up 95.7 percent, or about 10.1 percent compounded annually.

Table 1

Changes in Consumer and Airline Costs

	Before deregulation (1970-77)		After deregulation (1978-79)	
	Total increase	Average annual compounded increase	Total increase	Average annual compounded increase
	(percent)			
Air fares	42.4	5.2	5.9	2.9
Airline costs index (note a)	95.7	10.1	30.6	14.3
Consumer price index	56.1	6.6	19.9	9.5

a/Based on an index of costs to the airlines--fuel, personnel, goods and services purchased, landing fees, rentals, and depreciation. This index compares prices paid by airline management in a given period to prices paid in the fourth quarter of 1976 for purchase of fourth quarter 1976 quantities.

In the 2-year period after deregulation began (1978-79), average fares per passenger-mile increased 5.9 percent, or about 2.9 percent compounded annually. During this period, airline costs rose 30.6 percent, or about 14.3 percent per year compounded.

If the consumer price index is used as an approximate indicator of how consumer prices have increased, then air fare increases have been moderate. Prior to deregulation, average air fares increased at an average rate near but less than the consumer price index. After deregulation, both the price index and air fares continued to increase, but air fares increased at a substantially lower rate than the general price increase encountered by consumers.

Table 2 shows the actual average fare per passenger-mile for the past 10 years. As can be seen from this table, air fares had been rising steadily. However, when the effects of inflation are eliminated air fares have actually declined in terms of 1970 dollars. (See table 3.) This decline occurred in both first class and coach service. Only nonscheduled fares per passenger-mile have increased and even in that case, only slightly.

Table 2

Average Fare Per Passenger-Mile on Domestic Air Services
(actual dollars)

Calendar year	All travelers	Travelers on scheduled service			Nonscheduled service travelers
		Combined	First class	Coach	
	(cents)	(cents)	(cents)	(cents)	(cents)
1970	5.9	6.0	8.3	5.5	2.6
1971	6.2	6.3	8.6	5.8	3.3
1972	6.3	6.4	8.7	5.9	3.3
1973	6.5	6.6	8.9	6.1	3.3
1974	7.4	7.5	9.9	6.9	3.7
1975	7.6	7.7	10.6	7.1	4.2
1976	8.0	8.2	11.5	7.5	4.1
1977	8.4	8.6	12.1	7.9	4.3
1978	8.4	8.5	12.0	7.8	4.8
1979	8.9	8.9	11.3	8.3	5.5

Table 3

Average Fare Per Passenger-Mile on Domestic Air Services System (1970 dollars)

Calendar year	All travelers	Travelers on scheduled service			Nonscheduled service travelers
		Combined	First class	Coach	
	(cents)	(cents)	(cents)	(cents)	(cents)
1970	5.9	6.0	8.3	5.5	2.6
1971	6.0	6.1	8.2	5.6	3.2
1972	5.9	5.9	8.1	5.5	3.0
1973	5.7	5.8	7.8	5.3	2.9
1974	5.8	5.9	7.8	5.5	2.9
1975	5.5	5.5	7.6	5.1	3.0
1976	5.5	5.6	7.8	5.1	2.8
1977	5.4	5.5	7.8	5.1	2.7
1978	5.0	5.1	7.1	4.7	2.8
1979	4.7	4.8	6.1	4.5	2.9

RETURN ON INVESTMENT

Although airline fares have not kept pace with rising costs, airlines have been making profits. During the 10-year period 1970-79, the average rate of return for domestic operations of U.S. airlines was 6.9 percent. As shown in table 4, the rate of return on investment after deregulation began has been higher not only than the 10-year average but significantly higher than the 6.1-percent average for the 8 years prior to deregulation.

Table 4

Rate of Return on Investment (note a)
Domestic Operations

Year	Percent of return on investment
1979	7.1
1978	12.9
1977	9.7
1976	7.9
1975	3.2
1974	9.0
1973	6.3
1972	6.1
1971	4.3
1970	2.0
1970-77 Average	6.1
1970-79 Average	6.9

a/Based on CAB definition of airline rate of return. Basically, the figure represents net income and interest expense divided by the sum of airline debt and equity.

PRODUCTIVITY

Airline productivity through 1979 has improved, as evidenced by higher load factors and lower airline costs per revenue ton-mile adjusted to 1976 dollars. Improved productivity has contributed to increased airline profitability without fares rising at the same rate as costs. Another important factor, however, probably has been favorable economic conditions.

Load factors

Along with the traffic boom which occurred in 1978 and 1979, airlines were able to significantly increase the percentage of available seats sold. As chart 2 indicates, load factors averaged about 55 percent for the 4 years prior to deregulation. However, during 1978 and 1979, the load factor increased to about 61 and 63 percent, respectively.

Cost per revenue ton-mile

As table 5 shows, actual costs per revenue ton-mile have been increasing. However, when these costs are deflated and stated in 1976 dollars (using an index established by CAB), the airlines' costs have decreased significantly. Prior to deregulation they decreased at a 4.3-percent average annual rate; after deregulation the average annual rate of decrease was 7.3 percent.

Table 5

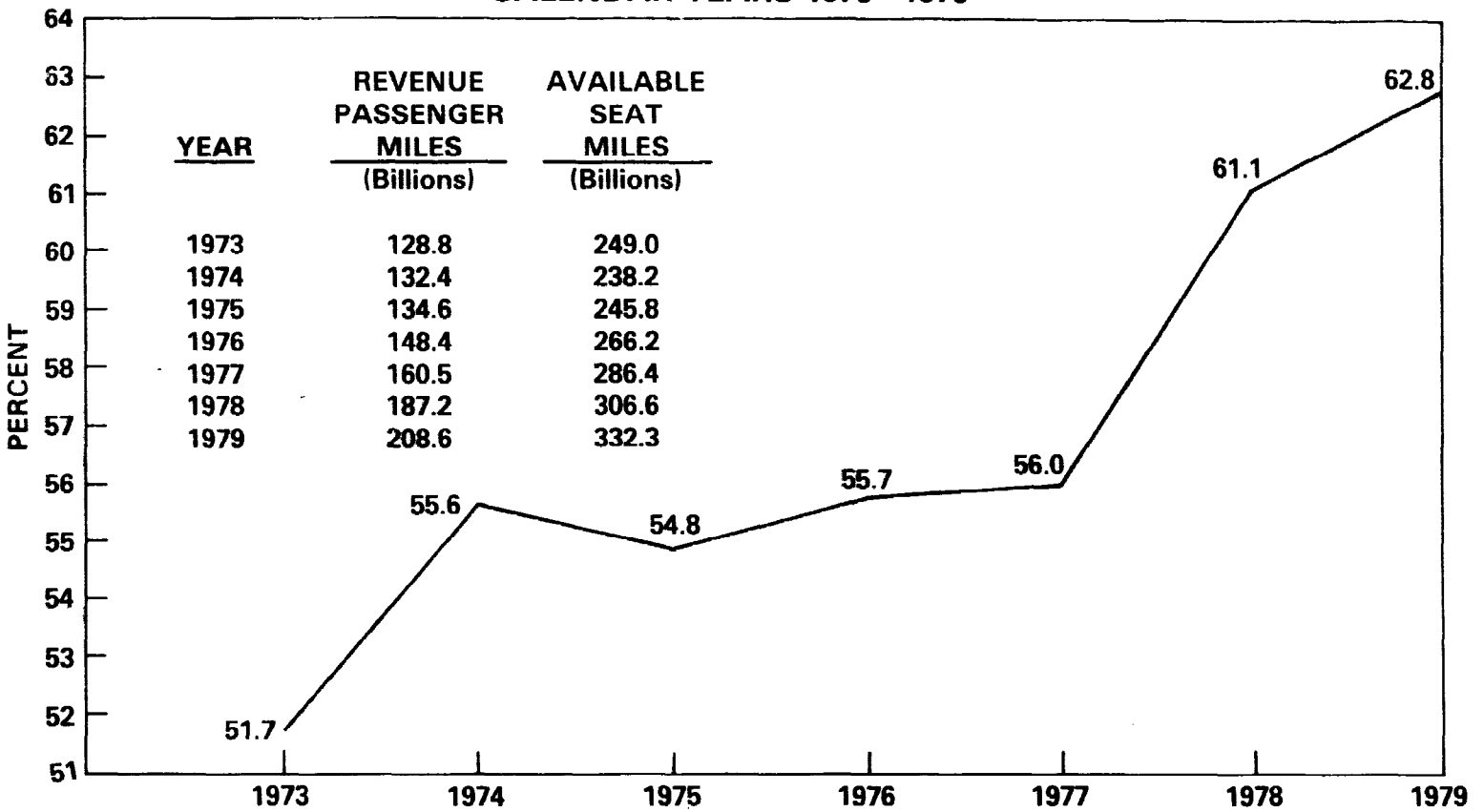
Operation Costs Per Revenue Ton-Mile
Domestic Airline Operations

Year	Actual cost per ton-mile	Costs per ton-mile in 1976 dollars (note a)	Average percent of decrease
	(cents)	(cents)	
1970	51.75	95.48	
1971	53.01	95.06	
1972	52.35	91.22	
1973	55.07	83.47	
1974	63.30	79.07	
1975	69.73	79.09	
1976	70.87	72.57	
1977	74.50	70.25	
1970-77			-4.3
1978	74.15	63.56	
1979	83.66	60.42	
1978-79			-7.3

a/Actual costs were adjusted to 1976 dollars using an index developed by CAB. The actual and deflated 1976 costs differ because CAB's index uses the fourth quarter of 1976 as a base period. Had the base period been the entire year 1976, actual and deflated 1976 costs in this table would be the same.

Chart 2

CHANGES IN PERCENTAGE OF AVAILABLE SEATS SOLD[1] (LOAD FACTORS)[2] CALENDAR YEARS 1973–1979



YEAR	REVENUE PASSENGER MILES (Billions)	AVAILABLE SEAT MILES (Billions)
1973	128.8	249.0
1974	132.4	238.2
1975	134.6	245.8
1976	148.4	266.2
1977	160.5	286.4
1978	187.2	306.6
1979	208.6	332.3

[1]Covers domestic scheduled certificated carriers and former intrastate carriers. Data was not available for domestic commuters.

[2]Revenue passenger miles divided by available seat miles.

CHAPTER 3

CHANGES IN AIR SERVICE PATTERNS

Since 1977 the number of weekly departures and available seats has increased at most domestic communities. Airline competition between these communities has increased as has single-plane service which allows travelers to reach their destination without transferring planes. Air service patterns also appear to have changed. There is more small community service to and from larger communities, but less direct service between small communities. However, most small communities had weekly departure increases greater than the national average. The number of available seats also increased at small communities, but only slightly.

Although not all communities benefited equally, only one community has lost all its certificated air service since enactment of deregulation, and that was with the community's consent. In contrast, during the 10 years prior to the act's passage, 137 communities lost air service, an average of about 14 a year.

Despite nationwide air service increases, 13 States experienced a decrease in certificated air service. Although 130 domestic communities have been affected by airline service terminations since deregulation was enacted until July 1980, the majority continue to receive air service by one or more certificated airline.

METHODOLOGY

To analyze how air service has changed in terms of weekly departures and available seats, particularly at small communities, we analyzed air service patterns at four different categories of communities. FAA classifies communities as either large hubs, medium hubs, small hubs, or nonhubs based on the percent of total U.S. passengers enplaned at each airport.

Using CAB data developed from the "Official Airline Guide," we assessed the changes that have occurred at each hub category. The data is limited to points in the 48 contiguous States and represents the scheduled but not necessarily the actual operations of the certificated, commuter, and intrastate airlines. While we did not verify the accuracy of all CAB's statistics from the "Official Airline Guide," we did selectively check the reasonableness and accuracy of key data used in our report. In certain cases we adjusted CAB-produced statistics to reflect more up-to-date data not included in CAB's data bases.

To minimize seasonal variations which occur in air travel, we compared the weekly departures of each point for the weeks of October 1, 1977, October 1, 1978, and October 1, 1979. In the United States, October is normally an average month for air traffic volume. October is also the anniversary month of the passage of the Airline Deregulation Act.

SYSTEMWIDE SERVICE PATTERNS

Overall, our comparison of weekly departures for the week of October 1, 1977, and October 1, 1979, shows that total weekly departures have increased by 14.6 percent and the number of available seats have increased by 11.7 percent at all hubs. As shown in table 6, each hub category experienced similar increases in departures, but not in available seats. Although each hub category showed an increase in available seats, nonhubs had the lowest--1.6 percent. The largest increase was at large hubs--up 15.2 percent.

In addition to increased departures nationwide, an increase has also occurred in single-plane service and new competitive markets which were formerly served by only one carrier. There were 2,093 new single-plane markets and 1,568 deletions for a net gain of 525. New competitive markets also increased by 257--512 new competitive markets and 255 deletions.

Perhaps a better gauge of air service is a comparison of service between various city pairs. This analysis provides a more detailed look at service between the 10 possible market-type groups based on hub size. Using flight frequencies by market type as a measure, flights per week have increased by 6.1 percent. However, as shown in table 7, not all market types benefited equally. The only decreases were at nonhub to nonhub (5.3 percent) and medium hub to medium hub (2.6 percent).

Small community service

Service to nonhubs has been of particular concern since passage of the Airline Deregulation Act. Some feared that service to these communities would be greatly reduced or eliminated in favor of higher density markets. Based on weekly departures, this does not appear to be true. As a group, nonhubs had an average of 16 percent more weekly scheduled departures on October 1, 1979, over October 1, 1977. In terms of flight frequencies the decrease in nonhub to nonhub services implies that a hub-and-spoke network is operating. CAB officials consider nonhub to nonhub the least useful form of small community service. It believes

that a hub-and-spoke network facilitates the flow of air traffic from small communities via connections at a hub airport.

Table 6

Summary of Aircraft Departures and Available Seats by Hub Category

	Market type				
	Large hubs	Medium hubs	Small hubs	Nonhubs	Total
Number of communities	26	33	76	570	705
Departures per week					
Oct. 1, 1977	62,049	18,908	14,421	25,035	120,413
Oct. 1, 1978	65,750	20,147	15,354	27,332	128,583
Oct. 1, 1979	71,174	21,457	16,363	29,046	138,040
Percentage change					
1977-78	5.9	6.5	6.4	9.2	6.7
1977-79	14.7	13.5	13.5	16.0	14.6
Available seats per week					
Oct. 1, 1977	6,988,530	1,865,683	1,221,456	891,021	10,966,690
Oct. 1, 1978	7,419,386	1,926,119	1,277,942	892,897	11,516,344
Oct. 1, 1979	8,052,389	2,001,758	1,296,932	905,119	12,256,198
Percentage change					
1977-78	6.1	3.2	4.6	0.2	5.0
1977-79	15.2	7.3	6.2	1.6	11.7

Table 7

Summary of Flight Frequencies by Market Type

October 1, 1977, and October 1, 1979

Market type	Flights per week			
	10-1-77	10-1-79	Change	Percent change
Nonhub to large hub	35,989	39,220	3,231	9.0
Nonhub to medium hub	9,539	11,487	1,948	20.4
Nonhub to small hub	10,405	11,402	997	9.6
Nonhub to nonhub	16,765	15,881	- 884	-5.3
Small hub to small hub	4,306	4,356	50	1.1
Small hub to medium hub	9,876	10,050	174	1.8
Small hub to large hub	29,839	31,747	1,908	6.4
Medium hub to medium hub	6,403	6,234	-169	-2.6
Medium hub to large hub	39,854	42,354	2,500	6.3
Large hub to large hub	53,309	56,773	3,464	6.4
Total (note a)	216,285	229,504	13,219	6.1

a/Differences in the percentage change in departures and the market flight frequencies result from two factors. The first is that the data bases differ. The departure data includes foreign flag operations while the market data does not. Secondly, there is a compounding effect which multiplies the number of city pairs resulting from a multistop itinerary. For example, consider a flight itinerary which serves the itinerary A, B, C, and D. There are three aircraft departures--A, B, and C. There are, however, six city pairs: A-B, A-C, A-D, B-C, B-D, C-D.

Statewide service

Even though air service has increased nationwide, not all areas of the Nation have benefited equally. Based on air service listed in the "Official Airline Guide," 35 States

and the District of Columbia received increases in departures and available seats. (See table 8.) The remaining 13 continental States have a decrease in either departures or available seats. (See table 9.)

A further analysis of service at these 13 States reveals that some of the decrease was not a result of airline deregulation. Because our comparisons include all scheduled air service offered, they necessarily include service to uncertificated communities and certificated points which were not served when the Airline Deregulation Act was passed. Thus, to isolate airline deregulation's impact on air service at the 13 States with decreases, we adjusted the scheduled air service to include service offered only at certificated points which received air service on October 24, 1978.

Using this adjusted service as a measure, only 9 States had decreases in either weekly departures or available seats. Some States showed dramatic changes. For example, Delaware's adjusted service shows that its certificated service has not changed. Unadjusted, it shows a 65.5-percent loss in departures and a 48.9-percent loss in available seats. The reason for this change is that when the Airline Deregulation Act was enacted, Delaware had no certificated air service. The air service that was provided was discretionary and could be dropped without Federal approval.

SERVICE TERMINATIONS

Since passage of the Airline Deregulation Act, only one community receiving certificated air service during October 1978 has experienced a loss of essential air service. That point is Astoria/Seaside, Oregon, which, with the community's consent, lost its air service December 29, 1978. The act requires CAB to assure the continued provision of essential air transport services to small communities and authorizes it to employ subsidies where necessary to achieve this result. Service was reinstated at Astoria/Seaside on July 29, 1980, on a subsidized basis.

In contrast to the one community which has lost certificated air service since passage of the act, during the prior 10 years 137 communities lost air service. As of July 1, 1980, 22 of these 137 communities were receiving air service, mostly by commuters and all without subsidy.

The Airline Deregulation Act also provides that an airline may terminate service at a community by filing a notice with CAB 90 days before termination. Since the act's passage until July 1, 1980, 308 termination notices have been filed involving 244 communities. Trunk airlines filed 87 notices;

Table 8

States With Increases in
Weekly Departures and Available Seats (note a)
October 1, 1977, vs October 1, 1979

States (note b)	Percentage change in weekly Departures	Available seats
New Jersey	255.9	140.9
Idaho	130.7	31.6
New Hampshire	119.0	100.0
Arizona	55.0	36.4
North Dakota	46.9	17.3
Utah	45.2	42.2
Nevada	42.9	57.9
Maine	34.0	39.0
Connecticut	31.5	12.4
Oregon	30.4	7.5
Montana	26.2	8.2
Virginia	24.0	8.1
Washington	23.1	23.8
Colorado	20.9	27.2
Missouri	19.9	17.2
Indiana	19.6	5.7
South Dakota	19.4	35.4
Florida	18.5	21.1
Georgia	17.0	19.6
California	14.8	10.2
Michigan	14.2	15.2
Massachusetts	13.5	4.7
Pennsylvania	13.5	3.8
Illinois	11.7	3.4
Ohio	10.4	2.9
Texas	9.4	18.7
Kentucky	8.5	3.8
Louisiana	7.6	6.2
Kansas	7.2	12.3
Minnesota	5.7	11.5
District of Columbia	5.2	3.0
North Carolina	5.1	7.7
Tennessee	4.9	0.2
New York	4.7	6.7
Wisconsin	4.3	11.9
Maryland	0.5	5.8

a/Includes scheduled air service listed in the "Official Airline Guide" for the 48 contiguous States and the District of Columbia.

b/Listed in descending order based on percentage change of departures.

Table 9

States With a Decrease in Either Departures or Available Seats October 1, 1977 vs October 1, 1979

State (note c)	All Scheduled Service (note a) Percentage change in weekly Departures	All Scheduled Service (note a) Percentage change in weekly Available seats	Adjusted Scheduled Service (note b) Percentage change in weekly Departures	Adjusted Scheduled Service (note b) Percentage change in weekly Available seats
New Mexico	26.3	-5.6	40.4	-3.0
South Carolina	25.9	-2.6	25.9	4.3
Arkansas	24.5	-4.0	30.9	-3.3
Oklahoma	16.0	-9.2	16.2	-9.2
Nebraska	11.8	-1.9	11.8	-1.9
Rhode Island	-1.8	8.8	15.4	9.3
West Virginia	-5.7	-15.6	-5.9	-15.8
Vermont	-7.8	-0.1	31.2	34.8
Iowa	-8.2	-5.3	4.1	-3.5
Wyoming	-12.0	-0-	-18.3	-2.7
Alabama	-14.8	-5.9	-16.8	-6.1
Mississippi	-18.0	-15.1	-17.0	-15.0
Delaware	-65.5	-48.9	-0-	-0-

a/Includes scheduled air service listed in the "Official Airline Guide" for the 48 contiguous States and the District of Columbia.

b/Includes scheduled air service listed in the "Official Airline Guide" for only certificated points in the 48 contiguous States and the District of Columbia which received air service on October 24, 1978.

c/Listed in descending order based on percentage change in departures.

local service airlines filed 154; and others (commuters, intrastate, and newly certificated airlines) filed 67 notices. These notices affected the various hub categories as follows:

Notices filed	Hub category affected
17	14 Large hubs
14	13 Medium hubs
51	35 Small hubs
226	182 Nonhubs
Total 308	244

At 55 of these 244 hubs, the airlines were merely filing to terminate service which CAB had previously allowed them to suspend before passage of the act. In 47 other cases, CAB was still requiring the airline to provide service at the affected community until a replacement could be found. There were also 12 cases where the termination had not taken effect as of July 1, 1980. Thus, in only 130 cases were the communities actually affected by terminations. As the following table shows, most of the communities--87--continued to receive air service by one or more certificated airline.

Communities where air service was actually affected	Air service provided as of July 1, 1980
50	Receive air service by two or more certificated airlines.
37	Receive service by one certificated airline.
41	Receive replacement service by commuters including small certificated airlines operating small aircraft.
1	One commuter airline replaced by another commuter airline.
1	Government-owned aircraft. This point is an FAA station in Alaska which had received one certificated flight a month. FAA has agreed to provide service.
Total 130	

Of the 41 communities which received replacement service by a commuter or small certificated airline operating small aircraft, 31 received this air service without Federal subsidy.

CHAPTER 4

DEREGULATION AND AIR SAFETY

The Airline Deregulation Act directs the Secretary of Transportation to report annually on the extent airline deregulation has affected air safety. In his first report entitled "The Effect of the Airline Deregulation Act on the Level of Air Safety" dated January 1980, the Secretary found no evidence that deregulation has caused an increase in the accident rates of airlines for 1979. Although we did not review the detailed support for the Secretary's findings, we examined the methodologies used to arrive at the report's findings and discussed the planning and execution of the study with the staff involved. The methodology used appears reasonable.

DEPARTMENT OF TRANSPORTATION'S SAFETY STUDY

The Secretary's report analyzed the operating statistics of domestic airlines for 1979 by examining the number and rates of nonfatal accidents, fatal accidents, fatalities, and other occurrences involving safety hazards and violations of air safety. Based on statistical rates of occurrences per 100,000 flight hours, the Secretary concluded that:

--The accident rates for certificated airlines closely parallel those of previous years, except for the fatality numbers and rate primarily from two major accidents.

--Among those airlines engaged primarily in extensive domestic passenger service in the contiguous United States, the best statistical safety record per flight hour was compiled by the trunk airlines, followed by the local service airlines, then the commuter airlines.

--The commuter airlines experienced one of their highest traffic growth rates in 1979 as a result of the stimulus provided by deregulation, but their accident and fatal accident rates remained comparably similar to the past 4 years of reported data.

--For commuter airlines engaged in passenger service, the largest operators (those with flight hours of 8,500+ in the first 9 months of 1979) had accident, incident, and violation rates similar to those experienced by the local service airlines. However, the smaller commuter operators experienced rates

significantly exceeding those of both the larger commuter operators and the local service airlines.

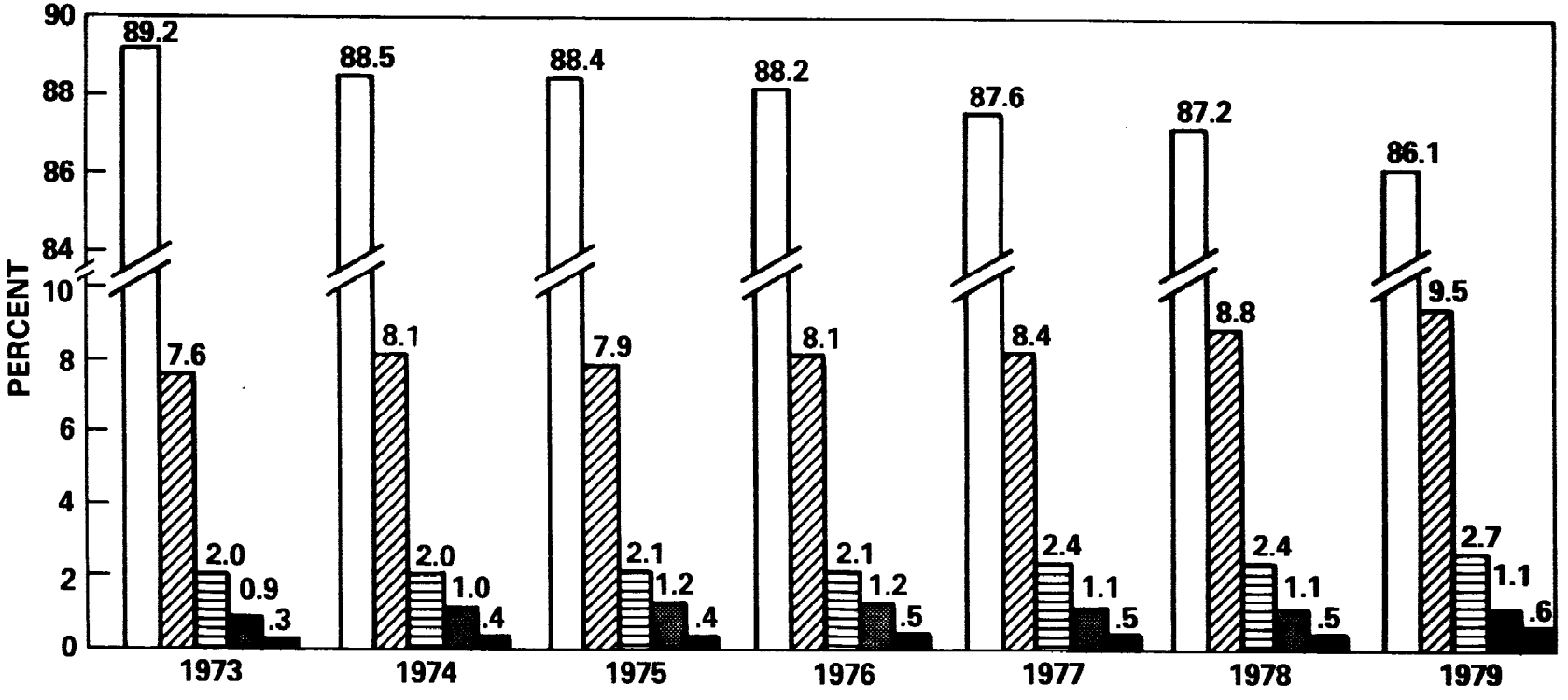
--During the first 9 months of 1979, the new commuter airlines, and those which expanded rapidly in calendar year 1979, experienced accident rates lower than the operators which were conservative in their expansion. In the last 3 months of 1979, however, a different accident trend began to emerge. Of the nine accidents that occurred during that period, all but one occurred in those groups which were expanding greater than 25 percent.

--Overall, commuter airlines engaged in passenger service have substantially lower accident, incident, and violation rates than those conducting cargo/mail-only operations.

ANNUAL INCREASES IN REVENUE PASSENGER-MILES AND NUMBER OF PASSENGERS OF DOMESTIC AIR SERVICES

Year	Revenue passenger-miles	Annual increase	Number of passengers	Annual increase
	(billions)		(millions)	
1979	209.9	21.7	301.6	24.8
1978	188.2	26.9	276.8	35.4
Average		24		30
1977	161.3	12.2	241.4	19.3
1976	149.1	13.9	222.1	19.2
1975	135.2	2.2	202.9	(0.5)
1974	133.0	3.7	203.4	7.8
1973	129.3	-	195.6	-
Average		8		11.5

CHANGES IN MARKET SHARE OF TRAFFIC[1]
CALENDAR YEARS 1973—1979



[1]Represents revenue passenger miles for domestic scheduled certificated carriers and commuter carriers.

[2]Represents newly certificated former intrastate carriers.

[3]Covers all domestic scheduled certificated carriers other than trunks, locals, and certificated former intrastate and commuter carriers.

[4]Includes newly certificated former commuters.

TRUNK LOCAL SERVICE INTRASTATE[2] OTHER[3] COMMUTER[4]

APPENDIX II

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