



*UNITED STATES  
GENERAL ACCOUNTING OFFICE*

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## Changes Needed In Procedures For Setting Freight-Car Rental Rates

The per-diem rental rate one railroad pays another for using its freight cars is set by the Interstate Commerce Commission.

The Commission revised its rules, regulations, and practices for freight-car per diem in August 1977. The Commission should go further by:

- Discontinuing the higher incentive-per diem rates paid for plain boxcars
  
- Amending its regulations to allow incentive-per-diem funds currently being held to be spent for purposes that promote sound car-service practices, including the efficient utilization and distribution of cars.



UNITED STATES GENERAL ACCOUNTING OFFICE  
WASHINGTON, D.C. 20548

COMMUNITY AND ECONOMIC  
DEVELOPMENT DIVISION

B-139052

The Honorable A. Daniel O'Neal  
Chairman, Interstate Commerce Commission

Dear Mr. O'Neal:

The General Accounting Office has reviewed the Interstate Commerce Commission's policies and procedures for setting the rental rates for using freight cars. We have discussed our findings with Commission personnel from the Bureaus of Operations, Economics, and Accounts and have considered their views in this report. We also considered the Commission's August 10, 1977, report issued in response to requirements of the Railroad Revitalization and Regulatory Reform Act of 1976.

This report contains recommendations to you on page 36. As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the House Committee on Government Operations and the Senate Committee on Governmental Affairs not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report. We are sending copies of this report to the Acting Director, Office of Management and Budget, and to appropriate congressional committees.

Sincerely yours,

A handwritten signature in cursive script that reads "Henry Eschwege".

Henry Eschwege  
Director

D I G E S T

When one railroad uses another railroad's freight car it pays a per-diem rental rate. The Interstate Commerce Commission establishes criteria and procedures for determining per diem.

The per-diem rate reimburses freight-car owners for the costs of owning a freight car and for a fair return on investment. Ideally, this allows an adequate supply of freight cars to move easily and fairly among railroads. Shortages, however, have been common.

To combat freight-car shortages, in 1966 the Congress authorized an incentive payment to be added to per diem so that the additional payment would (1) cause better use of existing freight cars and (2) provide funds to purchase additional freight cars. The Commission implemented the incentive program in 1970.

The Railroad Revitalization and Regulatory Reform Act of 1976 mandated that the Commission revise its rules, regulations, and practices for compensation paid for the use of freight cars. The Commission's August 1977 report in response to this mandate should produce some improvements, but more can be done.

These problems remain:

- The assumptions on which per diem is based and formulas used for calculating per diem may not be current. Therefore, the rates may be inadequate to reimburse the freight-car owners.
- The Commission has not evaluated whether incentive-per-diem payments achieved the desired results. Incentive per diem was added by the Congress to produce better use of existing freight cars and provide money to buy more cars.

--The Commission has not established specific measurable objectives for incentive per diem.

#### PROBLEMS WITH CURRENT PER-DIEM PROCEDURES

The Commission's procedures for setting basic per-diem rates are based on a 1968 decision (previously railroads working through the Association of American Railroads determined rates). Factors involved in this decision may no longer be valid in the 1977 market.

For example, costs between freight-car owners and users were allocated in 1960. Ownership costs are considered in calculating per diem whereas user costs are not. Seventy-nine percent of direct repair costs are allocated to ownership and considered in calculating per diem; the remaining 21 percent are considered user costs. If a current study were to produce a different allocation, per-diem rates would change greatly. (See p. 20.)

In its 1977 report, the Commission acknowledged that allocation percentages should be restudied but stated that it did not have enough time to do so under the timetable required by the 1976 act. It stated that reevaluating and updating allocation factors would get priority attention.

#### INCENTIVE PER DIEM

In 1966 the Congress authorized the Commission to set a higher per-diem rate for freight cars in short supply. In 1970, the Commission established incentive per diem for plain boxcars, hoping to help alleviate the national boxcar shortage.

The Commission did not establish criteria for measuring whether the incentive program did what it was supposed to do. Boxcar use has not improved and the size and capacity of the national fleet has decreased. The last national shortage of any size boxcar was in 1974; in 1976 the average daily surplus was 12,849 40-foot cars and 2,933 50-foot cars.

Despite indications that incentive per diem has had little success, Commission officials said

that the program should continue because railroads need assurance of a continuing program before they invest in additional boxcars. The Commission recognizes that it lacks data on the effects of incentive-per-diem payments. It is studying the area.

The incentive program caused a transfer of funds among railroads. To a large extent, bankrupt northeastern railroads have paid incentive per diem to solvent railroads. These railroads have not been able to spend a large part of the funds because of a Commission requirement. This produced more than \$37 million of unspent incentive funds--almost one-third of available funds. In January and July 1977 the Commission took actions to correct this problem, but it is too soon to evaluate the results. (see p. 29.)

#### RECOMMENDATIONS

The Commission should:

- Discontinue the incentive-per-diem program for plain boxcars.
- Amend its regulations to allow incentive-per-diem funds currently being held to be spent for purposes that promote sound car-service practices, including the efficient utilization and distribution of cars.  
(See p. 36.)

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ABBREVIATIONS

CAO           General Accounting Office  
ICC           Interstate Commerce Commission

## CHAPTER 1

### INTRODUCTION

The Nation has periodically faced freight-car shortages--times when railroads cannot meet shippers' demands either in a geographic area or for a certain type of freight car. The Congress has often declared its intent to encourage the railroads to purchase, acquire, and efficiently use freight cars.

When freight cars are shipped from one railroad's lines to another the user pays the owner a rental fee called per diem. The Interstate Commerce Commission (ICC) establishes procedures to determine the per-diem rates, which are calculated on a per-day and per-mile basis. Per diem applies to all freight cars except cabooses, leased cars, and some specialized equipment (e.g., refrigerated and tank cars).

In February 1976 the Congress passed the Railroad Revitalization and Regulatory Reform Act of 1976 (Public Law 94-210) that requires ICC to revise its rules, regulations, and practices, for compensation paid (per diem) for freight-car use by August 1977. The Congress directed that per diem

"\* \* \* shall be fixed on the basis of the elements of ownership expense involved in owning and maintaining each type of freight car (giving due consideration to current costs of capital, repairs, materials, parts and labor.) Such compensation may be increased by any incentive element which will in the judgment of the Commission, provide just and reasonable compensation of freight car owners, contribute to sound car services practices (including efficient utilization and distribution of cars), and encourage the acquisition and maintenance of a car supply adequate to meet the needs of commerce and the national defense."

ICC issued a report revising its per-diem rules in August 1977. 1/

### RAIL TRANSPORTATION AND FREIGHT-CAR SHORTAGES

The Nation's rail transportation system involves numerous railroad companies that own their own equipment and tracks;

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1/Ex Parte No. 334, report of Aug. 1, 1977, served on Aug. 10, 1977.

but they operate on interconnecting rail lines. Freight cars from one company commonly cross onto other companies' lines--this is called off-line shipping. This would not create an imbalance in freight-car ownership if a railroad received as many cars belonging to other railroads (called "foreign cars") as it shipped out. An imbalance, however, does exist because railroads in the western "raw material" regions typically ship more carloads than they receive. As a result, in recent years western railroads have found that they need more freight cars than they have on line and eastern railroads have more foreign cars on line than their own cars.

### Freight-car shortages

Nationwide, freight-car shortages that were critical in the 1960s and early 1970s have been followed by a general surplus since 1974 because of a downturn in the Nation's economy and resulting decreased freight-car demand. Some freight car types, however, are still in short supply and the Nation still experiences some geographic and seasonal shortages.

### Geographic imbalance

There has been extensive discussion in congressional and other publications on the freight-car imbalance between eastern and western railroads which available statistics confirm. The Association of American Railroads' data shows over the last 10 years eastern railroads have consistently had 10- to 20-percent more boxcars on their lines than they owned while the northwestern railroads have consistently had fewer boxcars on line than they owned.

Date (July 1)	Eastern			Northwestern		
	owned	on line	percent on line/owned	owned	on line	percent on line/owned
	(000 omitted)			(000 omitted)		
1967	187	219	116.9	103	90	87.6
1968	177	207	116.8	102	78	76.3
1969	169	197	117.0	101	76	75.2
1970	166	200	120.1	118	81	68.5
1971	160	182	114.1	114	99	87.5
1972	157	190	120.9	113	104	92.1
1973	153	175	114.7	108	98	90.8
1974	149	178	119.8	105	99	94.7
1975	141	158	112.2	98	97	99.1
1976	129	154	119.4	95	93	97.5

## SCOPE OF REVIEW

We made our review at ICC headquarters in Washington, D.C.; and to a limited extent in four regions. We reviewed (1) ICC proceedings on freight-car compensation, (2) pertinent congressional hearings and other literature on freight-car shortages and per diem, and (3) applicable laws and regulations. We also interviewed ICC and various railroad officials.

## CHAPTER 2

### BACKGROUND ON PER DIEM

Per diem has a complex background that dates back to the 1800s and involves not only the railroads, the Association of American Railroads, and ICC, but also the courts and the Congress.

### SETTING PER DIEM

Basic per diem is established to reimburse freight-car owners at rates equivalent to the average nationwide costs of owning a freight car. Effective in 1970 ICC established criteria for setting per-diem rates and the procedures for subsequent changes. Previously, rates were set by the Association of American Railroads with the agreement of the railroads.

### History

In the 1800s the railroads based compensation for freight-car use on miles traveled. For example, in the late 1860s rates were generally 3/4 to 1 cent per mile. Mileage rates were abandoned in 1902 when a 20-cent flat daily rate became effective. This rose to \$1 per day by 1920, to \$1.50 per day by 1947, and to \$2.88 per day in 1959. In 1964, the railroads replaced the flat daily rate with a multilevel rate based on car costs as shown below:

<u>Car-cost brackets</u>	<u>Daily rate</u>
\$ 1,000 and less	\$2.16
1,001 to 5,000	2.79
5,001 to 10,000	3.58
10,001 to 15,000	4.50
15,001 to 20,000	6.15
over 20,000	7.74

In April 1965 the over-\$20,000 car-cost bracket was subdivided as follows and remained in effect until 1970.

<u>Car-cost brackets</u>	<u>Daily rate</u>
\$20,000.01 to 25,000	\$ 7.11
25,000.01 to 30,000	9.00
30,000.01 to 35,000	10.18
35,000.01 and over	12.18

ICC has had the authority to set per diem since 1917 but seldom used it until 1970 when ICC rates were put into effect. These rates, established by a 1968 ICC decision, <sup>1/</sup> resulted from railroad complaints in 1953 questioning whether per-diem charges were just, reasonable, and lawful. The 1968 decision established specific criteria on which per-diem rates were to be based. Under the new system, the Association of American Railroads and the railroads determine the need for a rate change and make the necessary calculations for developing a proposed rate. ICC then audits and approves or disapproves the rates.

ICC's criteria (1) added mileage rates to daily rates, (2) established categories by car age, and (3) expanded the number of car-cost brackets from 9 to 21. ICC has increased rates and added cost brackets several times since 1970.

### CONGRESSIONAL ACTIONS

Since 1950, congressional committees have held several hearings on shipper complaints that freight cars were in short supply, particularly in the western United States and during the peak grain-harvesting season.

As a result of its hearings on freight-car shortages, the Congress focused on per diem as a major factor in freight-car shortages. The Congress decided per diem was probably set too low and that as a result railroads where the shipment terminated kept cars for their own use and paid per diem on the cars because they were less expensive than purchasing an adequate number of the railroad's own freight cars. This was believed to contribute to a national shortage. ICC supported the position that higher per-diem rates (called incentive per diem) would help to alleviate the shortage. Consequently, in May 1966 the Congress amended section 1(14)(a) of the Interstate Commerce Act (49 U.S.C. 1 et seq.) to authorize charging incentive per diem. (See ch. 5.)

### 1960 COST STUDIES TO DETERMINE PER-DIEM CHARGES

In 1958 a Federal district court held that ICC had not adequately considered several factors involved in the per-diem computation. These factors included (1) a more accurate breakdown of freight-car costs, (2) an alternative

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1/Chicago, Burlington, and Quincy Railroad Co. v. New York, Susquehanna, and Western Railroad Co., 332 ICC 176 (1968).

method of freight-car depreciation, and (3) the effect of car miles upon freight-car costs. As a result, ICC undertook cost studies in 1959-60, to determine (1) what proportion of freight-car costs were applicable to investment in the car (ownership costs) as distinct from expenses of operating the car (other costs), (2) how the costs could be further allocated between time and mileage, and (3) whether original cost or reproduction cost should be used to compute return on investment.

In 1968 these studies became the basis for Rate Table C and supporting cost allocations. (See p. 7.) Except for one minor change (because ICC shifted some categories in its uniform system of accounts) the 1960 cost relationships are still used for setting per-diem rates.

An ICC cost analyst testified during an ICC hearing in 1963 that the 1960 allocation percentages would need to be revised regularly or at least whenever a change in the economy dictated change. There have been significant shifts in the Nation's economy that affect freight operations since 1960, as well as important changes in the railroad industry itself. Per-diem rates for 1977, however, are based on 1973-75 costs allocated according to 1960 cost relationships. (See ch. 4.)

#### COST PRINCIPLES ESTABLISHED IN 1968

According to ICC's 1968 decision (effective 1970) basic per diem was to be computed solely on the basis of elements of ownership expense involved in owning and maintaining the cars, including a fair return on value.

#### Rate of return on investment

ICC allowed a rate of return to be applied to the undepreciated balance of the railroads' freight-car investment to provide compensation for interest that might have been earned on that amount in an alternative investment. When railroads buy freight cars, they usually invest some of their own funds and borrow the rest. ICC allowed railroads to earn a 9-percent annual return before taxes on their own funds, and a 4-percent annual return on the borrowed funds (4 percent approximated the rate on outstanding railroad-equipment obligations). A weighted average of these two rates provided an overall 6-percent allowable annual return on investment in freight cars.

## Addition of mileage charges

Starting in 1970, mileage charges were added to the daily per-diem charges for the first time since 1902. ICC decided that charges based on time alone did not adequately account for mileage differences--particularly since western railroads tend to put more miles per day on foreign cars than eastern railroads.

ICC concluded that repair and maintenance costs should be distributed equally between time and mileage and that freight-car depreciation costs should be allocated 40 percent to mileage and 60 percent to time. Numerous cost assumptions were necessary to support this decision. For example, ICC estimated that (1) freight cars would be depreciated over 30 years at 3 percent per year, leaving a 10-percent salvage value, and (2) repair costs would be an average for both new and old cars since ICC did not have conclusive evidence that repair costs increased as cars aged.

## Rate Table C

These and other cost principles provided the basis for a summary rate table the railroads use when charging per diem. This table, called Rate Table C, 1/ shows mileage and time charges by freight-car cost and age.

Line No.	Cost bracket	Mileage charges Charge per line-haul mile (cents)	Daily time charges by age of car						
			0-5 years	6-10 years	11-15 years	16-20 years	21-25 years	26-30 years	Over 30 years
1	\$0-1,000	1.47	\$ 0.85	\$0.82	\$0.79	\$0.75	\$0.72	\$0.69	\$0.63
2	1-3,000	1.55	1.09	1.03	0.96	0.90	0.84	0.78	0.65
3	3-5,000	1.71	1.57	1.45	1.32	1.20	1.08	0.96	0.69
4	5-7,000	1.87	2.05	1.86	1.68	1.50	1.32	1.13	0.73
5	7-9,000	2.03	2.43	2.28	2.04	1.80	1.55	1.31	0.77
6	9-11,000	2.19	3.01	2.70	2.40	2.09	1.79	1.49	0.81
7	11-13,000	2.35	3.49	3.12	2.76	2.39	2.03	1.66	0.85
8	13-15,000	2.51	3.97	3.54	3.12	2.69	2.26	1.84	0.89
9	15-17,000	2.67	4.45	3.96	3.48	2.99	2.50	2.01	0.93
10	17-19,000	2.83	4.93	4.38	3.83	3.29	2.74	2.19	0.97
11	19-21,000	2.99	5.41	4.80	4.19	3.58	2.97	2.37	1.01
12	21-23,000	3.15	5.89	5.22	4.55	3.88	3.21	2.54	1.05
13	23-25,000	3.31	6.37	5.64	4.91	4.18	3.45	2.72	1.09
14	25-27,000	3.47	6.85	6.06	5.27	4.48	3.69	2.89	1.13
15	27-29,000	3.68	7.34	6.48	5.63	4.77	3.92	3.07	1.17
16	29-31,000	3.80	7.82	6.90	5.99	5.07	4.16	3.24	1.22
17	31-33,000	3.95	8.30	7.32	6.35	5.37	4.39	3.42	1.26
18	33-35,000	4.11	8.78	7.74	6.70	5.67	4.63	3.60	1.30
19	35-37,000	4.27	9.26	8.16	7.06	5.97	4.87	3.77	1.34
20	37-39,000	4.43	9.74	8.58	7.42	6.26	5.11	3.95	1.38
21	39-41,000	4.60	10.22	9.00	7.78	6.56	5.34	4.12	1.42

1/This table was effective in 1970 and has been changed a number of times since then. It is used here only for illustrative purposes.

## COST PRINCIPLES ESTABLISHED IN 1977

The Railroad Revitalization and Regulatory Reform Act of 1976 required that ICC revise its rules, regulations, and practices on per diem. In response to that requirement ICC changed the computation formula and rate table used to set per diem. The changes include:

- Increasing the number of freight-car categories to 15.
- Reducing car-cost brackets to \$1,000 and age brackets to 1 year.
- Revising depreciation to base it on the average service lives and salvage values determined from national railroad data.
- Using a 3-year moving average for repair costs, indexed to current costs to correct for inflation.
- Using a discounted cash-flow method to compute the current capital cost.
- Relating compensation to the transportation use of each car by incorporating in the formula car-day and car-mile divisors.

ICC chose not to revise the 1960 cost relationships used to allocate costs to ownership and operating expense, although ICC recognized the need to do so.

## PROVISIONS FOR FUTURE RATE REVISIONS

ICC's 1968 decision (revised by the 1977 report) established the basic cost principles and criteria for computing per diem. ICC doesn't initiate a rate change, but when freight-car costs have changed sufficiently to warrant a per-diem change, it is the railroad's responsibility, working through the Association of American Railroads (1) to agree on the need for a per-diem change, (2) to compute the new per diem according to ICC criteria, and (3) to petition ICC for approval. Since 1970 railroads have petitioned ICC and received approval for several increased rates. These petitions involved updating Rate Table C and supporting cost documentation.

### Procedure for revising basic per diem

Each railroad uniformly reports its cost and operating data to both ICC and the Association of American Railroads.

After summarizing the data, the association petitions ICC for rate changes. First, however, the association must prepare the following:

- Rail Form H. This is a series of pro forma schedules for allocating costs between per-diem ownership and other costs. The prime criteria are the 1960 allocations discussed earlier.
- Table A Composite of Statistical and Repair Summary. This brings together average repair costs and operating data for a 3-year period, applying the assumptions in the 1968 decision.
- Table B Summary of Repair Costs per \$1,000 Original Cost. These costs relate to a specific car investment, as opposed to Table A data that relates to averages for all cars.
- Table C Car-Hire Rate Tables. This is a schedule of time and mileage rates calculated by applying the data in Tables A and B to the formula contained in the 1968 decision.

After this data has been prepared, it is reviewed by the association's Car Ownership Committee and board of directors. If approved, the tables and supporting documentation are sent to ICC as a petition to update car-hire rates. ICC audits the proposal and can hold hearings. If ICC grants the petition, the rates are put into effect. Since 1970, when ICC established criteria for setting rates, every association petition has been approved by ICC.

#### Example of a rate computation

The following chart shows how per-diem mileage rates are computed. Repair costs for all per-diem freight cars are averaged and divided equally between mileage and time rates. The mileage portion is then assumed to have been incurred equally by all per-diem cars in service. Forty percent of normal depreciation is added to the average repair cost to yield a mileage rate as function of a car's original cost.

EXAMPLE OF COMPUTING MILEAGE PER-DIEM RATE

	<u>1971</u>	<u>1972</u>	<u>1973</u>
	----- (000 omitted) -----		
<u>Repair costs</u>			
Freight-car repairs	\$858,075	\$890,024	\$ 962,658
Depreciation of repair facilities	9,533	9,106	9,190
Property tax on repair facilities	3,664	3,784	3,825
Payroll taxes	48,373	52,995	68,629
Return on investment of repair facilities	11,903	12,063	12,587
Return on working capital	<u>4,553</u>	<u>4,380</u>	<u>4,541</u>
Total	<u>\$936,101</u>	<u>\$972,381</u>	<u>\$1,061,430</u>
Mileage portion = 50% of total	468,051	486,176	530,715
Average number of per-diem cars in service	1,401	1,384	1,359
Average repair cost per car 3-year average \$358.62 (rounded to \$359)	\$333.99	\$351.35	\$390.53

Investment costs

Original cost  
 Less 10% salvage value  
 - 30-year life = annual depreciation at 3%  
 40% of depreciation attributable to mileage (60% to time)

Derivation of mileage per-diem rate (Car assumed to originally cost \$8,000)

Line haul car-miles  
 per car 16,588 17,348 18,227  
 3-year average 17,388

Mileage rate = industrywide average repair cost per car plus depreciation based on original cost of a car, all divided by industry average line-haul car miles  
 = 359 (rounded) + (.40)(.03)(8000) / 17,388  
 = 359 + 96. / 17,388  
 = \$.0262 per mile

Daily per-diem rates are computed by adding (1) the remaining 50 percent of repair costs, (2) the remaining 60 percent of normal depreciation, (3) property taxes, and (4) an opportunity cost on the undepreciated portion of the original investment (the composite interest rate reflecting both equity and debt financing).

The net result of these computations is Rate Table C which, as of early 1977, included 7 age categories and 80 cost categories yielding 560 separate daily rates. There was one rate in 1963 and as late as 1970 (prior to implementation of the 1968 decision) there were only nine. ICC's new tables, established in August 1977, separately consider 15 types of rail cars and an expanded number of cost brackets and age categories. As a result there are about 30,000 different daily rates.

## CHAPTER 3

### ECONOMIC ROLE OF PER DIEM

This chapter highlights some economic issues underlying the railroads' freight-car rental rates. Although we make some general comparisons between regulated and unregulated markets our intention is not to suggest which market would be better but to point out principles involved in setting rates within the existing regulatory structure.

Per-diem rates are rentals by railroads to one another--the car rental (per-diem) market deals with the price, supply, and demand for freight cars among railroads. The rates (tariffs) shippers pay to railroads for transporting goods are set by an entirely different process than per-diem rates. We are mainly interested in car rental rates where economic effects are limited mainly to the railroad companies themselves. Car rental rates can influence:

- The railroads' willingness to exchange cars with one another freely.
- The manner that freight cars are allocated among renters and owners.
- The railroads' willingness to invest in and maintain an adequate quantity of freight cars in the system.

Economic effects of per diem on railroads are different when considered from (1) the short-run viewpoint (in a given year) or (2) the long-run viewpoint (from year to year). A freight car represents a capital investment with a long-term life of 10-40 years, and a long leadtime construction period.

#### SHORT RUN

In the short run, railroads cannot increase the number of cars to respond to an appreciable increase in demand because of the long leadtime for construction. Thus, in the short run the number of cars is essentially fixed and changes in demand cause greater (or lesser) utilization of existing cars. Freight cars are subject to fluctuations in seasonal demands, particularly for grains and other foodstuffs.

Figure 1 illustrates the short-run car supply problems among railroads resulting from an administratively imposed per-diem rate that does not respond to seasonal fluctuations

in demand. A fixed supply is shown by the vertical line  $Q_2$ . Two levels of demand are shown--peak demand (for example, the freight-car demand that might occur in the grain harvest season) and off-peak demand. Price is fixed by the basic per-diem rate represented by line  $R$ .

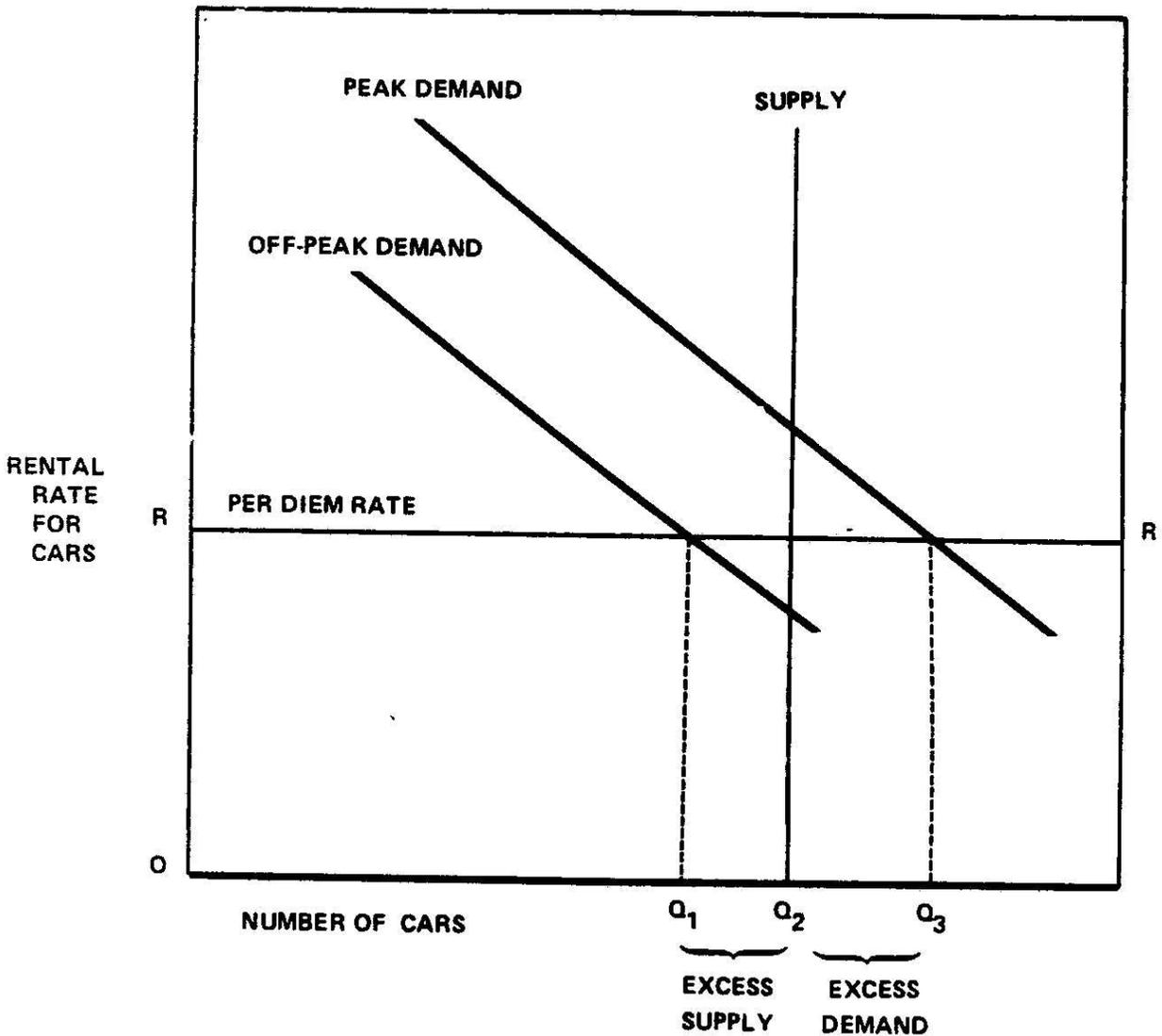


FIG. 1. THE EFFECT OF PER DIEM (SHORT-RUN)

During the peak period the quantity of freight cars demanded at the fixed per-diem rate is shown by Q3--this exceeds the fixed supply and means that more cars are demanded than railroads are willing to supply at the fixed per-diem price. Operationally, this means that railroads with foreign cars on their lines will have revenue-producing loads with values that exceed the per-diem payment to the owning railroads. Therefore, the railroads will want to hold foreign cars and use them for their purposes. At the same time, the owning railroads will want their cars returned because their shipments are waiting and have a higher value than the per-diem payments being received. The owners lose revenues if they do not get their cars back.

When demand falls in the off-peak season, the number of cars available at the per-diem rate is greater than the number of cars demanded by railroads. This is because the car rental price is greater than its worth to the railroads. In this case the owning railroads want other railroads to pay per diem for the use of their cars and renting railroads want to return foreign cars as rapidly as possible because per-diem costs exceed revenues that can be earned. Freight cars thus become "hot potatoes," nobody wants them, and an excess supply exists as shown in figure 1.

### LONG RUN

In the long run (multiyear), an administratively determined per-diem rate could be set too low and produce inadequate freight-car construction and long-run shortages. ICC has recognized that per diem had probably been too low:

"This policy in practice discourages construction of new freight cars, and in effect, places a premium upon inadequate car ownership and will continue to do so as long as it is cheaper to rent a car than it is to own one."

Figure 2 illustrates the long-run situation. The supply of freight cars is not fixed as in the short run but varies in response to the car rental rate--the higher the rate the more cars railroads would want to purchase. The market rate is established by freight-car supply and demand.

However, since the rental rate is administratively set it might not equal the rate needed to assure an adequate freight-car supply. For example, if per diem is

set as shown, the number of freight cars demanded ( $Q_2$ ) is greater than the number of freight cars railroads are willing to supply ( $Q_1$ ) because the railroads feel the rate of return is too low. A freight-car shortage is the probable result.

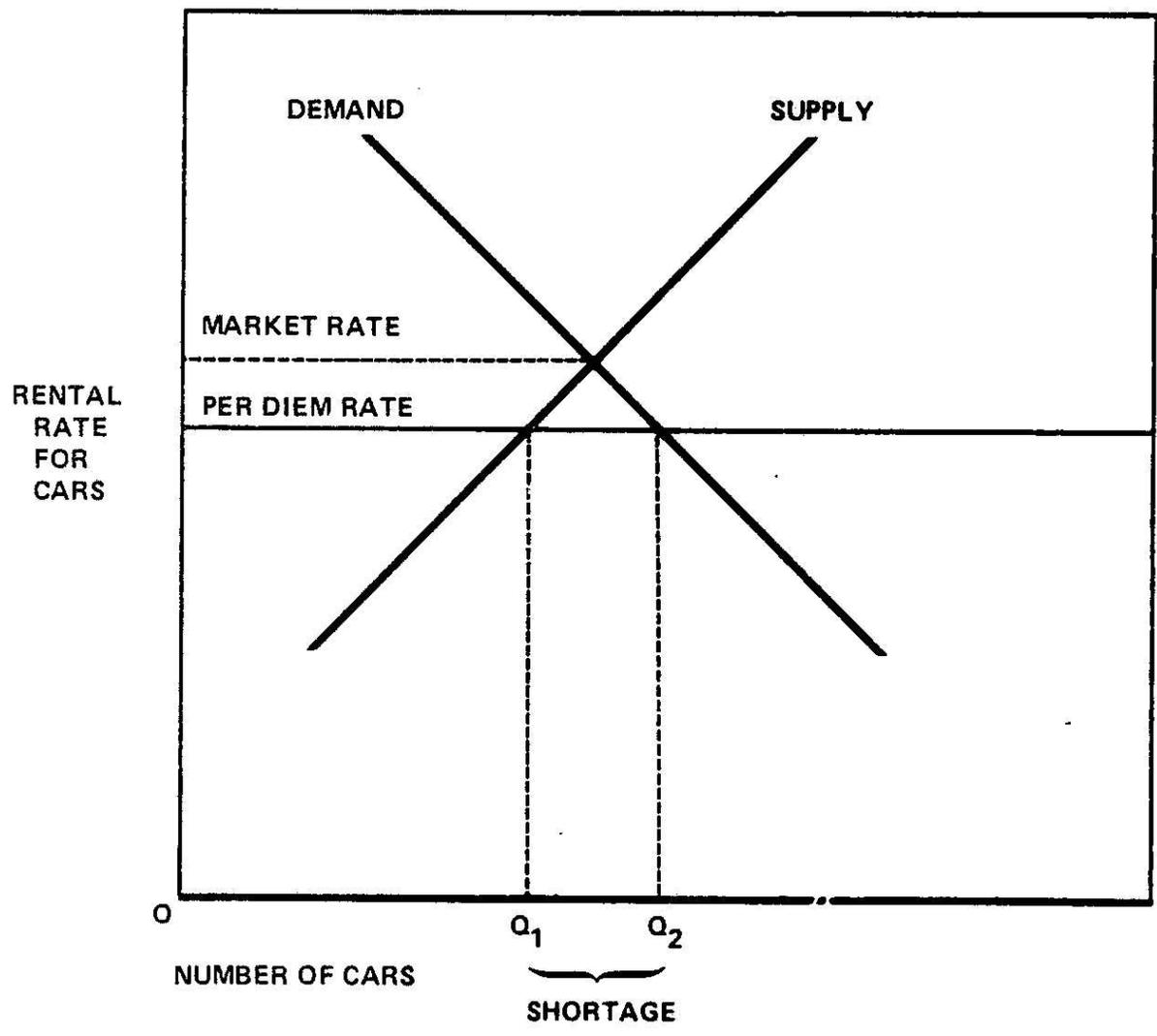


FIG. 2. THE EFFECT OF PER DIEM (LONG-RUN)

EFFECT OF RAIL TARIFFS

The above discussion shows the effects of car-rental rates without considering the rates shippers pay railroads for transporting goods. These rates (tariffs) are regulated by ICC and are determined by the type of commodity and the trip's length and direction. To the extent that the rates cannot be quickly changed they inhibit shippers' ability

to influence the distribution of railcars. For example, freight cars may be needed by grain shippers in the peak season, but such shippers cannot express this need for cars by the usual economic bidding process of offering railroads a higher price for rail transportation than other shippers are willing to pay. When serious car shortages occur (as often happens in a grain harvest season) ICC uses such methods as car-service orders and demurrage charges to influence car distribution.

In responding to the Railroad Revitalization and Regulatory Reform Act of 1976, ICC has established procedures that would help remedy car shortages through changes in shipping rates. On January 28, 1977, ICC implemented standards and expeditious procedures for establishing rail tariffs based on seasonal, regional, or peak period demands for rail services. 1/

As of October 1977 railroads made three applications to establish peak, seasonal, or regional rates, and ICC approved all three. The first two applications were rate decreases aimed at improving car supply. The third application would have established a 20-percent seasonal premium on certain regional grain movements between September 5, 1977, and December 15, 1977. Although ICC approved the third application it was never implemented because of a stay issued by a U.S. court of appeals. ICC has opposed the stay, but as of October 1977 it was still in effect.

The effect of rail tariffs is recognized in this review but is not explicitly evaluated since this report's focus is the effects of basic and incentive per diem.

If per-diem rates were not fixed, railroads with lower-than-average operating costs or railroads with strong seasonal demands for cars may be willing to pay other railroads higher-than-average rentals for cars. But we believe that the railroads would be unlikely to respond as quickly or efficiently in providing cars to shippers as they would if shippers were able to pay a higher price for rail service during heavy demand periods.

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1/Ex Parte No. 324, report of Jan. 28, 1977, served on Feb. 4, 1977.

## ECONOMIC PRINCIPLES SHOULD BE CONSIDERED

The preceding discussion is simplified and ignores many factors inherent in railroad decisions about freight-car purchase and use. However, it does illustrate important principles that could be used to assure that per diem has the desired effect.

First, if cars are to be freely exchanged among railroads, then the car-hire rate should be reasonably close to that level where car owners are as satisfied with the rental payment as they are with using the car on their own lines. This requires that the rate-setting procedure be updated, reasonably accurate, and reflect both demand and supply changes.

Second, if an adequate freight-car supply is to be maintained the car-hire rate must be set at a level that makes investment in freight cars attractive to railroads.

Third, some flexibility in tariffs and car-rental rates to reflect changes in demand could encourage better freight-car allocation during peak and slack seasons.

Present car-hire rates and procedures apparently do not perform these functions very well. There are frequent car allocation problems among the railroads that necessitate car service orders and other remedial measures. Seasonal car shortages have been common over the years and chronic shortages of some freight-car types have also been a problem. Car-hire rates are neither the sole cause nor cure for these problems but do contribute to them and, to the extent possible, should be used to minimize undesirable effects.

## CHAPTER 4

### EFFECT OF TIME LAGS AND

#### COST ALLOCATIONS ON PER DIEM

The per-diem setting procedures ICC established in 1968 had some shortcomings. Two identified in this report were (1) several years of delay between the time increased costs were incurred and the per-diem rate was increased to cover costs and (2) the factors used to prorate costs between ownership and expense were outdated and may no longer represent current railroad cost relationships. As shown in chapter 3, a per-diem rate that is consistently below the rate that would equate supply and demand can cause both long- and short-run freight-car shortages.

ICC's response to requirements of the Railroad Revitalization and Regulatory Reform Act of 1976 addressed the first problem, and changed the methods of computing several cost categories to correct it. ICC also recognized that the percentages used to prorate costs should be restudied but believed that there was insufficient time to do so under the legislative mandate. ICC plans to update these allocation percentages.

#### EFFECT OF TIME LAGS

ICC's past procedure for setting per-diem rates caused up to 4 years of delay between the time costs were incurred and rates were adjusted to cover costs because

--3-year cost averages were used for most cost items;

--the railroads needed time after the end of the calendar year to summarize their data; and

--it usually took the Association of American Railroads several months to summarize data, evaluate results, approve a per-diem rate increase, and petition ICC for a change, and for ICC to review and audit the petition, issue an order, and make it effective.

For example, per-diem rates effective August 1974 were based on average costs incurred for the 1970-72 period. Average freight-car repair costs, the largest single cost component in per diem, increased by over 50 percent from 1970

to 1974, yet the outdated 1970-72 cost experience became the basis for the 1974 per-diem rate without any adjustment for inflation.

To measure how time lag effected the per-diem level, we computed a hypothetical per-diem rate based on costs that were current from 1970 to 1974 and compared this "derived" rate with actual per-diem rates used during that period. This was to show the difference between the per-diem rates used and the actual costs of owning the freight car.

The derived rate was computed for an average freight car in the 1970-74 period (i.e., about 19 years old with an original cost of about \$8,000) and also for cars the same age costing \$2,000 and \$40,000 to represent high and low extremes. The results are shown in the following table.

Percentage That Derived Per Diem  
Exceeded Actual Per Diem

<u>Car cost</u>	<u>Year</u>				
	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>
	----- (percent) -----				
\$ 2,000	28	43	46	28	29
8,000	17	27	29	14	17
40,000	8	12	12	3	3

For the average car, derived per diem exceeded actual per diem by 14 to 29 percent, primarily due to the failure of actual per-diem rates to keep pace with inflation.

ICC ACTIONS

ICC has decided to change the computation of several main per-diem component costs including repair costs, depreciation, and composite interest. For example, a 3-year moving average of repair costs will be adjusted to current levels by using the Association of American Railroads' quarterly indexes of repair labor and material costs. ICC's changeover to the new computation methods cannot be completed for several years because another Railroad Revitalization and Regulatory Reform Act requirement resulted in a revision of the uniform system of accounts used by railroads to report data to ICC. ICC's revised methods will be a substantial improvement.

SENSITIVITY OF PER DIEM TO  
CHANGES IN COMPONENT COSTS

It is difficult to estimate how well per diem reimburses railroads for their actual freight-car ownership costs because of (1) the multiplicity of charges in Rate Table C, (2) the complexity of computational mechanics involved in Rail Form H and supporting schedules, and (3) the generally unverified and complex nature of per-diem assumptions.

Some component costs used to determine per diem are important to the final rates set by ICC and others are not. To determine the final rates' sensitivity to changes in its cost components, we changed only one cost at a time and re-computed the final rate. Our analysis shows the potential change in the per-diem rate resulting from a change in one cost element and/or a change in the percentage of the cost on which per diem is computed.

Our analysis considered three types of freight cars:

--Average; 19-years old (16 to 20-year-old category) costing \$8,000.

--Older; 25 to 30 years old costing \$4,000.

--Newer; 1 to 5 years old costing \$18,000.

Major car-ownership cost categories identified in ICC's 1968 decision were (1) depreciation, (2) repair costs, (3) interest on undepreciated car cost (composite of debt and equity), and (4) property taxes. Since these four categories were not shown by car cost and age on Rate table C, we had to use ICC assumptions to compute the percent of each in the per-diem rate.

Our results for 1974 are shown below:

	"Older" \$4,000 cost <u>24-30 years</u>	"Average" \$8,000 cost <u>16 to 20 years</u>	"Newer" \$18,000 cost <u>1 to 5 years</u>
----- (percent) -----			
Repair costs	83.4	61.6	31.1
Depreciation	10.9	16.0	18.3
Composite interest	4.9	19.4	43.9
Property taxes	<u>.8</u>	<u>3.0</u>	<u>6.7</u>
Total	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

For the average car in 1974, repair costs represented about 62 percent of total costs--greater than the other three cost categories combined. A smaller percentage category such as property taxes (3 percent) would have to increase greatly to have any important influence on total cost and, thus, per diem. In other words, the per-diem rate for an average car is much more sensitive to a percentage change in repair costs than it is to an equal percentage change in depreciation, interest, or taxes.

The same is true, but to a more pronounced extent, for the older car, where repair costs were 83 percent of the total. For the newer car, however, where most of a car's value lies in its future usage, composite interest on the undepreciated balance was 44 percent of cost compared to 31 percent for repair costs. Thus, the newer car is slightly more sensitive to a percentage change in interest than to a comparable percentage change in repair costs.

Because repair costs have such an important influence on per diem, we further analyzed its component costs. The major factor in repair costs is direct labor and material--called account 314. Other costs consist of a variety of indirect repair expenses such as depreciation on facilities, payroll taxes, return on investment in repair facilities, and fringe benefits to employees.

The amount of account 314 that is considered in computing per diem is determined by ICC's 1960 cost study (except for a slight alteration in the handling of train-yard inspection costs since that study.) Ownership costs are included in per-diem computations and other costs are not. In 1977, even though ICC's study was almost 17 years old, the allocations were still carried out to the thousands of a percent, with 79.138 percent of account 314 allocated to ownership costs and 20.862 percent to user costs. The allocation to ownership represented 58 percent of total repair costs considered in calculating per diem.

There have been substantial changes in the Nation's railroads since the 1960 study. They have deteriorated due to worsening financial conditions, their operations have changed to accommodate unit trains and piggyback shipping, and the numbers and types of special-purpose freight cars have increased. In addition to these changing conditions within the industry the Nation's economy has tripled in dollar size and many economic shifts have affected the railroads including, most recently, the energy

shortage and the Russian wheat sale. These changes make the validity of 1960 freight-car cost allocations questionable in 1977.

#### Changes in account 314 could change per diem

Changes in account 314 could substantially affect the per-diem rate. For example, if the ownership cost allocation of account 314 were increased by 10 percent (from 79 percent to 89 percent) per-diem costs for the average car would increase by 7 percent for the mileage portion and 4 percent for the time portion, for a composite per-diem increase of about 5.1 percent. Thus a change in the allocation for only this account--the direct cost of repairs--has such a strong influence in the final per-diem rate that for the average car about half of an increase in the percentage allocated to ownership becomes an increase in the per-diem rate.

The effect is even greater for older cars--60 percent of an allocation increase passes through to the per-diem rate. For newer cars, the effect is less pronounced but still important--20 percent of an increase passes through to the per-diem rate.

Therefore the per-diem rate's sensitivity to changes in account 314 is great for average-age or older cars. The sensitivity to changes in other smaller accounts is much less.

#### ICC ACTIONS

ICC has recognized the importance of repair costs in arriving at adequate per-diem rates and agrees that a review of allocation factors is needed. However, ICC stated that it was not possible to do the studies required to re-evaluate the allocation factors within the time requirements imposed by the Railroad Revitalization and Regulatory Reform Act. ICC stated that reevaluating and updating the allocation factors would receive substantial priority.

## CHAPTER 5

### EFFECTS OF INCENTIVE PER DIEM

Incentive per diem was authorized by the Congress and implemented by ICC to reduce both short-run and long-run shortages of plain boxcars (a type of freight car). ICC believed that higher daily boxcar rental costs would bring about more efficient use of existing cars because railroads would return the cars to their owners faster. Incentive per diem also provided funds to boxcar owners to be used only to purchase additional new boxcars. Although it described incentive per diem as an experiment, ICC did not establish specific results the program was intended to achieve or criteria for measuring whether the incentive program was effective.

We used several indicators suggested by ICC and others and found that since the start of incentive per diem the number of boxcars and the capacity of the national boxcar fleet have declined and boxcar use has not improved.

Shipper demand for boxcars, however, probably decreased because of the Nation's recessionary conditions of 1974. Therefore, it is unknown whether the indicators of boxcar utilization and acquisition may have been worse without the incentive program. Whether or not the incentive program had an effect, there is now a large boxcar surplus.

As of December 1975 more than \$37 million (about 30 percent of incentive-per-diem funds available to acquire boxcars at that time) remained unspent because of an administrative problem that ICC has taken action to solve.

### HOW INCENTIVE PER DIEM CAME TO BE

In 1966 the Congress passed Public Law 89-430 to amend the Interstate Commerce Act and give ICC authority to establish incentive-car-hire rates in addition to normal hire rates. ICC asked for this authority because it thought that incentive rates would promote efficient car use and distribution and encourage acquisition and maintenance of an adequate car supply. The law provided that ICC could not apply an incentive rate to a type of freight car it finds in adequate supply. ICC requires that funds earned on freight cars to which per diem was applied could be used only to acquire more of the same kind of freight cars.

In June 1966 ICC began an incentive-per-diem proceeding to formally investigate, collect data, and hold hearings on a

potential incentive program. 1/ In October 1967 ICC discontinued the proceeding because reliable data was not available and began another proceeding in December 1967 to gather the necessary information. 2/ Two years later (December 1969) ICC concluded that the plain unequipped boxcar was usually in short supply during the 6 months of September through February and should be subject to an incentive per diem during that time. ICC emphasized the experimental nature of the program and said that it could not be certain incentive per diem would increase the boxcar fleet by a substantial number or alleviate the car shortage.

Incentive per diem adds a 6-percent annual return on investment in addition to the basic hire rates. 3/ ICC believed that this would be enough to encourage railroads to increase the national boxcar supply.

ICC has occasionally modified the program to better achieve its purpose. For example, because of severe boxcar shortages resulting mostly from the sale of wheat to Russia, ICC extended the incentive program to the full year (starting March 1973), providing boxcar owners an estimated 18-percent annual return on investment in plain boxcars. The program was returned to its original 6-month on-off status in September 1975 and as of September 1977 this status was still in effect.

#### USE HAS NOT IMPROVED

ICC believed incentive per diem would alleviate boxcar shortages by encouraging railroads to return cars to their owners more quickly to avoid the higher rate. We cannot find any data that shows boxcar use has improved as a result of incentive per diem.

There is no one specific index or statistic for measuring freight-car utilization, but ICC and railroad officials use several measures in combination to evaluate utilization (two measures are the turnaround time and the number of trips per

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1/Ex Parte No. 252, 332 ICC 11.

2/Ex Parte No. 252, sub no. 1, 337 ICC 183.

3/To provide the additional 6-percent return for the full year, ICC provides an additional 12-percent return for 6 months. Thus, a railroad earns 18 percent on its boxcars during the 6 months incentive per diem is effect and 6 percent during the other 6 months, averaging out to a 12-percent annual return.

year). Turnaround time is the time between car loadings; determined by dividing the number of serviceable car-days (average number of serviceable cars multiplied by number of days in the period) on a railroad line in a given period by the total car loadings for the period. The number of trips per year is the turnaround time divided into 365 days. As shown below these indices have not improved--plain boxcars have made fewer trips per year and have been held for longer periods between trips.

<u>Fiscal year</u>	<u>Turnaround time (days)</u>	<u>Trips per year</u>
Incentive per diem not in effect:		
1969	20.92	17.4
1970	21.07	17.3
Incentive per diem in effect:		
1971	23.66	15.4
1972	23.56	15.5
1973	22.78	16.0
1974	25.40	14.4
1975	32.13	11.4

ICC's Bureau of Investigation and Enforcement has also stated, apparently based on observing boxcar use, that incentive per diem alone provides little stimulus for the boxcar's prompt return to its owners.

#### EFFECT ON NUMBER OF BOXCARS

Another objective of the incentive-per-diem program was to increase the size of the national boxcar fleet. Through December 1975, about 8,300 boxcars were purchased with the incentive funds. Statistics show, however, that the number of plain boxcars and the boxcar fleet's capacity has continued to decrease.

As shown below for fiscal years 1965-69 (the 5-year period prior to incentive per diem) the size of the plain boxcar fleet decreased by 26,000 cars per year. Since fiscal year 1970 through fiscal year 1975 the decline slowed to an annual decrease of 13,000. The decline since 1970, however, still represented a 19-percent decrease in the plain boxcar fleet compared to only a 6-1/2-percent decrease in the total freight-car fleet. The tonnage capacity of the boxcar fleet also decreased.

SIZE OF PLAIN BOXCAR FLEET'S OF CLASS I RAILROADS  
FOR FISCAL YEARS 1965-75 (note a)

<u>Fiscal year</u>	<u>Number of boxcars at beginning of year</u>	<u>Number installed</u>	<u>Number retired</u>	<u>Net reduction in fleet size</u>	<u>Number of boxcars at year end</u>	<u>Capacity in tons</u>
						(000 omitted)
1965	522,454	8,565	35,912	27,347	495,107	25,584
1966	495,107	8,763	37,565	b/28,802	464,282	24,021
1967	464,282	14,086	33,913	19,827	444,455	23,377
1968	444,455	9,254	38,559	29,305	415,150	22,246
1969	415,150	7,293	30,546	23,253	391,897	21,334
Average 1965-69		9,592	35,299	25,706		
1970 (note c)	391,897	6,816	18,486	11,670	380,227	20,720
1971	380,227	6,993	28,333	21,340	358,887	20,096
1972	358,887	9,287	22,456	13,169	345,718	19,283
1973	345,718	7,037	25,172	b/17,865	327,853	18,647
1974	327,853	8,504	13,440	4,936	322,917	18,662
1975	322,917	7,980	15,891	7,911	315,006	not available
Average 1970-75		7,769	20,630	12,815		

a/A class I railroad is one with \$5 million or more in annual revenues. Capacity is shown for calendar year.

b/The 1966 and 1973 reduction figures do not reconcile with the beginning and ending balance. The differences could not be reconciled from Commission records.

c/ICC officials said that the sudden decrease in retirement during fiscal year 1970 was caused by the increased boxcar demand resulting from the Soviet wheat sale of 1972.

While the rate of decrease did diminish in recent years, it was not because more new boxcars were purchased. As the schedule shows, installations (purchases and rentals) did not fluctuate much before or during incentive per diem. Actually, the average number of boxcars installed decreased from 9,600 to 7,800 per year.

Retirements, however, decreased significantly. Prior to incentive per diem, retirements averaged about 35,000 boxcars per year, but have since decreased to an average of 21,000 per year. An ICC official said that this was caused in part by the Soviet wheat sale of 1972, which forced railroads to continue using retireable cars to meet abnormally high demands.

ICC officials also said that a decrease in boxcars was not a true indication of incentive-per-diem's effectiveness because the fleet's capacity has increased as 50-foot boxcars were purchased to replace the older 40-foot size. The schedule shows, however, that the fleet's capacity has continued to decrease, indicating that replacement with 50-foot cars has not increased capacity sufficiently to offset 40-foot car retirements.

#### BOXCAR SHORTAGES NO LONGER EXIST

ICC hoped that the incentive-per-diem program would help alleviate the national boxcar shortage by increasing the size and use of the boxcar fleet. As shown below, there has not been a plain boxcar shortage since June 1974--in 1976 the average daily surplus ranged from 6,600 to over 30,000 plain boxcars and averaged about 15,800.

#### Average Daily Balance of Plain Unequipped Boxcars as of December 31, 1976

<u>Year</u>	<u>Net shortage</u>	<u>Net surplus</u>
1965	2,706	
1966	5,553	
1967		2,267
1968	1,421	
1969	5,002	
1970	4,097	
1971		1,716
1972		3,592
1973	14,615	
1974 (Jan. - June)	8,681	
1974 (July - Dec.)		7,797
1975		22,891
1976		15,782

ICC officials said that the figures above may be misleading because, while the older 40-foot boxcar is in surplus, there is a shortage of the 50-foot boxcar. The Association of American Railroads' latest statistics, however, show that since 1974 there has been a surplus of both size boxcars. In 1976 the average daily surplus was 12,849 40-foot boxcars and 2,933 50-foot boxcars.

Although the shortage no longer exists, the shortage has appeared to diminish because of decreased demand, not because of incentive per diem. One demand indicator, the number of ton miles carried by class I railroads, remained level in 1973 and 1974 and decreased by almost 12 percent during 1975.

In August 1974 24 railroads filed a petition asking ICC to discontinue incentive per diem because boxcars were no longer in short supply. They pointed out that the law authorized incentive per diem only when the supply of a freight car was inadequate.

In February 1975 ICC denied the petition because it felt the petitioners failed to

"\* \* \* take into account the state of the economy, the seasonal differential in boxcar loadings, and the effect of extraordinary events, and therefore, is insufficient to show that conditions have changed substantially to produce an adequate supply of boxcars obviating a continuing need for the incentive per diem program \* \* \*"

Over 2 years later, however, the boxcar surplus still exists and ICC has maintained the incentive-per-diem program. ICC officials said that the program should continue because railroads need to be assured of a continuing program before they will invest in additional boxcars.

In its 1977 report on per diem, mandated by the Railroad Revitalization and Regulatory Reform Act, ICC took the position that incentive per diem was not an issue but did state that if the revised basic per-diem formula provides sufficient incentive to encourage purchase, acquisition, and efficient use of freight cars, the railroads can request a review of the incentive-per-diem program.

#### INCENTIVE-PER-DIEM FUNDS REMAIN UNSPENT

In its decision to establish incentive per diem, ICC also established procedures to assure that railroads used incentive-per-diem funds only to acquire additional plain,

unequipped boxcars. A railroad with a net credit balance, that is, one that received more incentive per diem than it paid out, would have funds available for acquiring boxcars. 1/ Railroads were not allowed to mingle incentive funds with general funds, or use incentive funds for purposes other than acquiring boxcars. Balances of incentive funds were invested in Government bonds or other temporary interest-bearing securities, with the interest earned also available for acquiring boxcars.

Incentive per diem was intended to encourage boxcar acquisition but not to be substituted for what the railroads would otherwise have spent on boxcar acquisition. Therefore, ICC required that each railroad acquire a "normal" number of boxcars before using incentive-per-diem funds. The normal number was defined as the average number the railroad purchased, built, or rebuilt from 1964 to 1968. A railroad could not use incentive-per-diem funds until it had acquired its normal number of boxcars for each year after incentive per diem went into effect. This caused a problem.

Funds remain unspent

Through December 1975 creditor railroads earned about \$164.3 million in incentive-per-diem credits and earned interest of \$7.1 million--bringing the total available for acquiring boxcars to \$171.4 million.

<u>Year</u>	<u>Net incentive per diem received (before taxes and income)</u>	<u>Income on incentive-per-diem investments</u>
1970	\$ 6,229,678	\$ 4,169
1971	19,558,157	237,181
1972	19,019,241	586,027
1973	22,166,379	1,252,160
1974	59,342,784	2,881,670
1975	<u>37,934,650</u>	<u>2,177,572</u>
Total	<u>\$164,250,889</u>	<u>\$7,138,779</u>

1/Railroads usually both own and rent freight cars. Therefore, railroads that receive more incentive funds than they pay are creditor railroads, and those that pay more than they receive are debtor railroads.

From this amount railroads paid about \$33.7 million in estimated Federal and State income taxes. The largest single creditor railroad, Union Pacific, has deferred payment of any taxes pending an Internal Revenue Service ruling on whether it can legally defer taxes until incentive-per-diem funds are actually spent. Therefore, funds available less a \$13.5 million contingency for Union Pacific taxes amounted to more than \$124.2 million.

Through December 1975 the railroads used more than \$87 million to acquire 8,296 general-purpose boxcars. More than \$37 million, or 30 percent of the incentive-credit balances, remained unspent.

Railroads Holding Largest Incentive-Per-Diem  
Credit Balance as of 12/31/75

<u>Railroad</u>	<u>Unspent balance</u>	<u>Percent</u>
Union Pacific	\$13,527,794	36.2
Burlington Northern	4,305,540	11.5
Canadian Pacific	3,735,832	10.0
Central Vermont	3,383,205	9.0
Canadian Limited	3,263,672	8.7
Deluth, Winnepeg & Pacific	2,045,086	5.5
Bangor & Aroostook	<u>1,633,854</u>	<u>4.4</u>
Subtotal	\$31,894,983	85.3
Other railroads	<u>5,505,057</u>	<u>14.7</u>
Total	<u>\$37,400,040</u>	<u>100.0</u>

These funds were not used mainly because of ICC's restriction that normal purchases first be met. For example, Union Pacific's boxcar purchases during the test period for normal purchases were abnormally high so that the company has not routinely purchased enough boxcars to allow it to use its incentive-per-diem funds.

Although Union Pacific had only about 4 percent of the national boxcar fleet, it installed about 30 percent of all

new boxcars acquired by all railroads during ICC's test period. As of July 1974 Union Pacific calculated it would have had to spend about \$80 million of its own general funds to acquire boxcars before it could use its incentive-per-diem funds. Since Union Pacific did no boxcar rebuilding during the test period, all its incentive-per-diem funds are available for rebuilding. Union Pacific, however, stated that its policy was never to rebuild boxcars. (Union Pacific subsequently changed its policy, see p. 34.)

In March 1973 ICC tried to solve test-period inequities by issuing an order to allow modification of the test-period average for individual railroads that could prove their need. There were several objections to the order and it was canceled.

Another example of the inequity of the "normal purchases" requirement is the Pickens Railroad. Pickens' experience has been widely publicized because the incentive program has allowed it to own more boxcars than it can physically have on its track at any one time. Since Pickens came into business after the incentive program was started, it did not have to meet any normal purchase requirements. Instead, all incentive per diem earned was immediately available to acquire additional boxcars.

#### ICC ruling that funds can only be used for boxcars

Some creditor railroads have suggested allowing incentive-per-diem funds to be used to acquire freight cars other than boxcars. The western railroads, most of which earn more incentive per diem than they pay, say they are converting most of their grain-hauling fleet from boxcars to covered hoppers. Therefore, they no longer need as many boxcars.

ICC has interpreted the law to require that incentive-per-diem funds earned on plain boxcars may only be used to acquire more plain boxcars, not other freight-car types (49 C.F.R. 1036.1, 1036.4). This interpretation was upheld by a 1973 court case <sup>1/</sup> and by an administrative law judge ruling in March 1975. <sup>2/</sup>

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<sup>1/</sup>Florida East Coast Railway Co. v. United States, 368 F. Supp. 1009, 1017 (N.D. Fla. 1973).

<sup>2/</sup> Ex Parte No. 252, sub no. 1, 349 ICC 303.

ICC believes that covered hoppers are not in short supply and that incentive per diem is not needed to encourage covered-hopper purchases. The covered-hopper fleet size has increased while the plain boxcar fleet has decreased. ICC also noted that although covered hoppers and boxcars are interchangeable for grain shipments, they are not interchangeable for many of the other goods carried by railroads. Therefore the use of covered hoppers by western railroads to ship grain east would not solve the eastern railroads' need for boxcars for westbound shipments.

#### Payments by debtor railroads

The incentive program produced a transfer of funds between railroads--as shown on the next page, debtor railroads have paid out almost \$161 million in incentive per diem since 1970. The largest debtor railroad, Penn Central (now part of Conrail), was supported by the Government and paid \$48 million, about 30 percent of this amount. Along with Penn Central three other large bankrupt debtor railroads were incorporated into the Consolidated Rail Corporation (Conrail), a Government-backed corporation started in April 1976.

Incentive-Per-Diem Payments by the Largest Debtor  
Railroads, September 1, 1970 to December 30, 1975

<u>Railroad</u>	<u>Amount</u> (millions)	<u>Percent of total</u>
Large bankrupt railroads included in Conrail:		
Penn Central	\$ 47.9	29.8
Erie Lackawanna	7.3	4.6
Reading	3.8	2.4
Lehigh Valley	<u>3.6</u>	<u>2.2</u>
Subtotal	\$ <u>62.6</u>	<u>39.0</u>
Other large debtor bankrupt railroads:		
Chicago, Rock Island & Pacific	6.3	3.9
Boston & Maine	2.6	1.6
Other railroads:		
Norfolk & Western	9.0	5.6
Baltimore & Ohio	8.8	5.5
Louisville & Nashville	6.7	4.2
Chesapeake & Ohio	5.0	3.1
Grand Trunk Western	4.6	2.9
St. Louis - San Francisco	3.2	2.0
Kansas City Southern	<u>2.7</u>	<u>1.7</u>
Subtotal	\$ <u>48.9</u>	<u>30.5</u>
All other railroads	<u>49.1</u>	<u>30.5</u>
Total	<u>\$160.6</u>	<u>100.0</u>

## ICC actions

ICC has been examining the problems of the test-period requirement since February 1976. <sup>1/</sup> In January 1977 ICC amended its requirements by allowing railroads to either continue to meet the test-period requirement or match proposed expenditures from their incentive-per-diem credit balances with their general corporate funds. In other words, boxcars could be purchased 50 percent with incentive funds and 50 percent with general railroad funds as an alternative to meeting the test-period requirements and purchasing boxcars with all incentive-per-diem funds.

The Association of American Railroads believed that this change was useful but cautioned that the change would be of little help to a railroad that had a large balance of incentive funds but not enough general funds to match proposed expenditures for boxcars.

ICC again modified its regulations in July 1977, stating that it recognized that the accumulation of incentive funds in no way accomplished the purpose of incentive per diem--to acquire boxcars. <sup>2/</sup>

This change allowed railroads the

"\* \* \* alternative of a single 1964-68 test period average for all types of boxcar transactions, a matching requirement, or the previous separate test period averages, and to allow carriers to draw down incentive per diem funds for purchasing, leasing, and nonequity leasing of rebuilt as well as new box cars \* \* \*"

Commenting on this proposal, Union Pacific stated that it was undertaking a program to rebuild 910 boxcars with incentive funds.

These actions by ICC should help the accumulated funds problem but it is too soon to evaluate the effects of the changes.

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<sup>1/</sup>Ex Parte No. 252, sub no. 1, 353 ICC 336.

<sup>2/</sup>Ex Parte No. 252, sub no. 1, report of July 18, 1977, served on July 25, 1977.

## CHAPTER 6

### CONCLUSIONS AND RECOMMENDATIONS

#### PER-DIEM ASSUMPTIONS AND PROCEDURES

Generally, ICC assumptions underlying the basic per-diem rate derive from and are consistent with the principle that per diem is to be computed solely by elements of ownership expense involved in owning and maintaining the cars, including a fair return on value. The assumptions used included (1) a 30-year freight-car life, (2) the interest rate for debt and equity funds, (3) the allocations for separating freight-car ownership cost from total railroad costs, and (4) repair costs not increasing with freight-car age.

Some of these assumptions, developed by ICC in 1968, were based on the premise that additional data may show that the assumptions were invalid or could be improved.

The time lag involved in developing tables of basic per diem rates has resulted in rates that consistently understate actual car costs. For an average valued car in the 1970 to 1974 period, actual car costs consistently exceeded the per diem rate by 14 to 29 percent due to the failure of per diem procedures to account for cost inflation. In its August 1977 report, ICC established revised procedures for weighting and indexing car costs to make per diem rates more current. This should reduce the impact of time lags on the per diem rate.

Another area ICC should reconsider is the percentage of costs allocated to owning a freight car and therefore included in computing per diem. This allocation is based on a 17-year-old study, even though the railroad industry has changed substantially and freight cars have been improved. We found that the calculation of the per-diem rate is sensitive to changes in these allocation percentages.

ICC has recognized this problem and in its August 1977 per-diem report said that it plans to restudy the allocation percentages.

#### INCENTIVE PER DIEM

Because ICC did not explicitly define its objectives for incentive per diem, it is difficult to effectively measure or evaluate program results. For example, ICC had not defined what would constitute a boxcar shortage, what kind of change it was seeking in the boxcar fleet, what measures of utilization it would rely on to indicate whether the program was

having any effect, or when or how the program's results would be measured. As a result, ICC does not know what the incentive-per-diem program is actually accomplishing. In a report to the President, ICC's Chairman recently recognized that ICC has been seriously hurt by a lack of clearly defined, objective-oriented management goals.

About 8,300 boxcars have been purchased with incentive funds, but boxcar utilization has not improved--this could have been partly caused by the decreased demand resulting from the Nation's worsened economy. Likewise, the number of boxcars and the capacity of the Nation's boxcar fleet have decreased.

Even though the number of cars and the carrying capacity of the Nation's boxcar fleet has decreased, there is no longer a national boxcar shortage. Instead, large surpluses exist, probably because of decreased shipper demand. The law authorizing incentive per diem states that it should only apply to car types that ICC found in short supply. Therefore, it seems inappropriate to continue incentive per diem for boxcars, and many railroads have suggested that the program be discontinued. ICC officials said that they have an internal evaluation of incentive per diem underway to determine whether it is effective and whether recommendations might be considered to eliminate, improve, or strengthen the program.

ICC's requirement that railroads' historical boxcar purchases be met before incentive funds can be used caused more than \$37 million of incentive funds to remain unspent as of December 1975. In January and July 1977 ICC took action that should help to solve this problem, but it is too soon to evaluate the results.

#### RECOMMENDATIONS

We recommend that ICC:

- Discontinue the incentive-per-diem program for plain boxcars.
- Amend its regulations to allow the remaining incentive-per-diem funds to be spent for purposes that promote sound car-service practices, including the efficient utilization and distribution of cars.