V. RATE REFORM

All, or nearly all, of the current proposals for rate reform provide for some measure of deregulation. Therefore, the following discussion will assume that rate reform will take that direction.

The most important factors determining the revenue effects of deregulation on the viability of the rail industry are discussed below. These factors can generally be categorized as (i) remaining regulatory constraints; (ii) deregulation and opportunities for market exploitation; and (iii) public policy toward other modes. It should be noted that because of the short time allocated for the task of analyzing the effect of deregulation of rail rates and services, only the most tentative estimates have been made.

A. Remaining Regulatory Constraints

The nature of current deregulatory proposals must be viewed in light of the historical record of rail regulation and the regulation of other modes.

The regulation of railroad industry rates has historically had five basic objectives:

(i) To limit the railroads from exploiting their dominance over some transportation markets. (Section 1 of the Interstate Commerce Act)

(ii) To prevent discrimination among shippers in like circumstances. (Section 2 of the Interstate Commerce Act)

(iii) To prevent undue discrimination among places and commodities. (Sections 3 and 4 of the Interstate Commerce Act)

(iv) To adjust rates so that commodities might move freely. (Hoch-Smith Resolution)

(v) To restrict the power of the railroads to nullify the benefits flowing from public expenditures on other modes of transportation. (National Transportation Policy)

1. The Form and Character of Proposed Deregulation

Most of the rate reform proposals currently being set forth are aimed at (i) softening Section 1 of the Interstate Commerce Act; (ii) de facto repeal of the Hoch-Smith Resolution; and (iii) modifying National Transportation Policy. None of them propose any changes in Sections 2, 3, and 4 of the Act.

It might be useful to briefly review the significance of each of the objectives of rate regulation and how they may be affected by deregulation. It is probably important to recognize that while each of the statutory provisions intended to carry out an objective has its own body of Commission and court interpretation, they are all interrelated--for example, increased flexibility in ratemaking hinges on Sections 3 and 4 as well as on Section 1. Thus, restraint removed in one provision or set of provisions may bring into force another element of regulation, thereby limiting the revenue effects that might be expected.

2. Limiting Monopolistic Dominance

Section 1 of the Interstate Commerce Act has generally provided relief to shippers and others from unjust and unreasonable treatment by a rail carrier(s). The fundamental idea behind Section 1 is that the rail carriers, by reason of greater or lesser market control, have the power to be unreasonable and unjust, and that it is in the public interest for the use of such power to be controlled.

The concept of justness and reasonableness held by the Commission and the court has evolved over a long period of time, since the advent of federal regulation. It is probably fair to say that the Commission has tended to hold a proposed rate to be unreasonable and unjust under Section 1 if (i) it marked too large a break with an existing rate or (ii) it was inconsistent with other rates on the same commodity or like commodities. The Commission has sometimes, but by no means as a regular policy, declared a rate unreasonably low because it was below variable cost, or unreasonably high because it greatly exceeded full cost. Further, in order to reinforce its holding, the Commission has very frequently under Section 1 invoked the Rule of Ratemaking [Section 15(a)], National Transportation Policy, or the Hoch-Smith Resolution.

Most of the deregulatory proposals currently being discussed would make cost the prime if not the sole measure of justness and reasonableness under Section 1. Reflecting the preoccupation of economists with marginal cost pricing, no rate could be held unjustly or unreasonably low if it equaled or exceeded variable cost. There does not appear to be a similar concern with the

high side, although some bills would limit annual increases to some percentage figure, or would have the Commission ascertain market dominance and protect shippers against its exercise by a dominating carrier or carriers. Less concern with the high side doubtless owes to the belief that competition, in most circumstances, will protect shippers from unreasonably high rates. It should be noted that none of the current bills requires the Commission to evaluate the relationships of all existing rates to cost. Furthermore, in the absence of protest or Commission action, a rail carrier may set rates below variable cost.

The rationale for changes in Section 1 is proclaimed to be prevention of the recurrence of instances where the Commission has required rates below variable cost (cross subsidy), or has held rates above variable cost (to protect transportation revenues). The Administration, in particular, believes that cross subsidy by the railroads is not currently justified, and that modes other than rail should not be protected where the effect is to limit the railroads' share of the market.

Presumably, relief from below-cost rates and freedom to reduce rates to divert traffic from other modes would bolster the rail industry's financial position. Because of the asserted existence of pervasive intermodal competition, the Administration purports not to fear that the railroads could push rates to unreasonably high levels. This would be especially true if the powers of rate associations to engage in collusive pricing were curtailed, as the Administration proposes. However, some bills proposed by others would retain controls on the freedom of the railroads to raise rates.

3. Rate Discrimination

Section 2 of the Interstate Commerce Act does not permit the railroads to differentiate among shippers in like circumstances. While the Commission and the courts have given this statutory provision fairly restricted interpretation, it has, nevertheless, forced the carriers to price and to provide services on a quite uniform basis. For example, carriers are not permitted to favor particular shippers in the supply of freight cars. It is probably accurate to say, however, that Section 2 would not pose a serious barrier to an increase in rate flexibility. No bills propose any changes in Section 2.

4. Place and Commodity Discrimination

Sections 3 and 4 are among the most treasured sections of the Interstate Commerce Act. Section 3 restricts each rail carrier from differentiating, or participating in differentiating, in rates among commodities and places. Section 4 contains a flat prohibition against higher rates for shorter hauls than

longer ones on the same line, and also against the sum of short-haul rates being less than a long-haul rate when all are on line. Local interests all over the country and port complexes would vigorously oppose tampering with Section 3. In the past the Rocky Mountain states have prevented repeal of Section 4. No bill seriously being considered would change Sections 3 and 4 in any respect. The question is: Would the two sections significantly hinder the railroads in exercising rate flexibility ? The answer is almost certainly yes. How much, however, is unclear.

The evolution of regulatory policy and interpretation has been steadily toward equal rates for equal transportation services regardless of the associated cost circumstances. Local interests have been impatient at being served by weak, high-cost rail carriers, or at being off the main line of heavy traffic flows. When pressed by these interests, the Commission has tended to grant rate parities (as in the case of port competition) or to require mileage scales. In neither instance are differences in particular costs of service important considerations. A rail carrier will often find it necessary to extend a reduced rate beyond the desired application or face the prospects of its being canceled by the Commission. The Commission has found it especially difficult to deal with rate differentials caused by the unevenness of water competition. A significant proportion of recent Commission orders for cancellation have been under Section 3.

It is not certain what results would derive from a weakened Section 1, with the language of Section 3 being retained in its present form. It should be noted that proposals for the modification of Section 1 do not declare rates below variable cost to be ipso facto unlawful. In order to avoid violation of Section 3, a carrier may choose to maintain below-cost rates, unless there is complaint. However, because compliance with Section 3 requires only that rate differences be removed, a carrier has the option of raising a rate that is already well above cost (low operating cost) in order to bring it to the level of a rate just covering variable cost (high operating cost). Under a weakened Section 1, the Commission would find it difficult to prevent such action. (This assumes that proposed legislation does not intend for variable cost to be defined as a system-wide average.)

On balance, Section 3 is likely to limit the downside flexibility of rail pricing. A carrier will be reluctant to lower a particular rate which could yield increased net revenues if a whole set of rates must also be reduced. Indeed, the combination of proscription of below-cost rates under Section 1 and undue discrimination under Section 3 may lead to rate increases which, under the present Section 1, would be disallowed. In short, Section 3 is not an impotent statutory provision nor is it likely to be revised in any important respect. All evidence is that local interests are too strong in its support.

Section 4 rules prohibiting higher rates for shorter hauls are widely regarded today as being toothless. So-called 4th Section relief is automatically granted by the Commission to rail carriers for operations on circuitous routes. Railroads are also frequently given relief where they are in competition with water carriers at end points, but not at intermediate points. The application of both Sections 3 and 4 can be set aside in order to permit a rail carrier to meet the competition of another rail carrier or another mode. That is, a rail carrier may differentiate in rates between localities if participation in the traffic of one transportation market depends on meeting competitive rates whereas in the other, it does not. Thus, as in the case of the Robinson-Patman Act, "making" competition can be held to be different from simply meeting it.

Today the operations of railroads are such that terminal costs tend to dominate the total cost picture. Differences in costs in different terminals may be more important than the distances between the terminals. This, of course, imposes strong pressures on the carriers to avoid application of the 4th Section. It is probably an open question, however, as to whether the Commission, with the present language of Section 4, could permit rail carriers, generally, to price themselves out of high-cost intermediate markets by granting 4th Section relief. If not, Section 4 would continue to be a prime constraint on pricing flexibility and the freedom of the carriers to get out of "loser" markets.

5. The "Free" Movement of Commodities

The Hoch-Smith Resolution and continuing pressures from all regions of the country to make transportation as ubiquitous and cheap as possible have resulted in low rates on a good many basic commodities and service at competitive rates to production areas which generate low densities of traffic and, therefore, are characterized by high costs of rail services. In many of these situations particular costs have not been covered, requiring internal or cross subsidy through the imposition of higher rates than costs on other commodities, between other pairs of points. Presumably, elasticities of demand for the transport of the lower paying commodities have been high, while they have been low for the higher paying commodities. This has allegedly resulted in the maximum possible movement of commodities and the highest possible national transportation benefits.

In order to assure revenues sufficient to support a pattern of rate uniformity and transportation ubiquity, requiring cross subsidy, the Commission has been compelled to curb intramodal and intermodal competition among the regulated carriers. (It has also led to hostility on the part of the Commission toward non-regulated carriers.) If competition were allowed to wash away surpluses above costs, the transportation "burden" (i. e. , cross subsidy) could not

be borne. The Commission has interpreted National Transportation Policy as forbidding competitive "dissipation" of high-profit revenues through rate reductions if the loss of those revenues would jeopardize cross-subsidized transport. [1]

For various reasons the Administration has asserted that deliberate cross subsidy cannot be tolerated and, therefore, that constraints on competition need no longer be imposed on the carriers. More important, perhaps, the Administration contends that the Commission should be enjoined from holding rates below variable cost. If the Administration's views find their way into legislation, below-cost rates might be raised by the carriers. Assuming that such rates are indeed demand elastic, transportation revenues would fall; profits, however, should rise. Whether the demand for shipment of basic commodities is rate elastic is a question that is discussed later. In any case, whether or not gross transportation revenues rise or fall, higher net to the carriers should result from raising below-cost rates. Congress will have to decide whether the effect on basic commodity flows, either in rates or volumes, is important.

In this regard, in a proceeding involving increases of rates on fresh fruits and vegetables from Western producing points, the ICC very recently held the increases as unjust and unreasonable, even though in many instances the existing rates failed to cover variable costs. The Commission based its decision, at least in part, on the adverse effects of higher rates on consumers. [2]

6. Public Benefits from "Non-Rail" Transportation

Over the years a great deal of public money--federal and local--has been spent on transportation. Some of it has been deliberately intended to provide competition to railroads; most of it has had that effect. In response, the railroads, to some extent, have reduced rates across the board or have been slower to raise them. Perhaps more often, however, the rail carriers have maintained and elevated their rates (namely, through successive rounds of general increases in recent years); have accepted declining revenues; and have allowed their facilities to deteriorate. Where they have reduced rates, the railroads have tended to do so on a selective basis, aimed directly at competition (carriers) from which traffic could be diverted. Quite naturally, competitive

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[1] For example, *309* ICC *347, 359 (1960)* .

[2] Investigation and Suspension Docket No. 8944, Fresh Fruits and Vegetables, Transcontinental & Western Points, December 30, 1974.

modes--mostly truckers and water carriers--have been offended by the rail carriers' sharply focused pricing tactics. Not surprisingly, either, local interests which have benefited by truck and water transportation services have supported their benefactors against the rail carriers.

In 1940 water-served geographic areas succeeded in inserting in National Transportation Policy a stricture on "unfair" and destructive competitive practices" and an admonishment that the Commission should "preserve the inherent advantages of each [mode]. " At that time Congress clearly had in mind the preservation of water transportation. This was balanced in the 1940 Act by amending the Rule of Ratemaking [Section 15a(2)] to provide that the Commission should "give due consideration, among other factors, to the effect of rates on the movement of traffic by the carrier or carriers for which the rates are prescribed. " Supposedly, this would limit to a single mode consideration of the justness and reasonableness of rates. In the years after World War II, however, when truck and water competition to railroads became exceedingly keen, the Commission frequently invoked the "unfair and destructive competitive practices" and the "inherent advantages" provisions of National Transportation Policy to head off rail rate reductions. (It should be noted at this point that the Commission seldom rejected rail reductions aimed at truck and water carriers that handled only exempt commodities since they were outside the regulated family.) Commission policy was hostile to rate cuts which would only redivide traffic among competing modes and produce lower total transportation revenues. In the Commission's view, this simply placed greater shares of the "transportation burden" on other traffic. The railroads sharply criticized the Commission, accusing it of unfairly protecting other modes at their expense. In 1958 Congress attempted to counter this criticism by further amending the Rule of Ratemaking [Section 15a(3)] to require that "Rates of a carrier shall not be held up to a particular level to protect the traffic of any other mode of transportation, giving due consideration to the objectives of the National Transportation Policy declared in this Act. " However, for some years after 1958 the Commission appeared to give greater heed to the latter part of the above-quoted amendment and thus the railroads continued to purport to be greatly dissatisfied with Commission rate policies.

The Administration's regulatory reform would attempt to dissuade the Commission from its protective views with respect to regulated carriers. A first step would be to eliminate cross subsidy and, therefore, the need to "support" the transportation burden. Hence, the Administration's bill would permit all rates to be raised at least to variable cost. Presumably this would free up the rail carriers to reduce other rates at w-ill, as long as they remained above variable cost. The extent of such reductions would depend on definitions of variable cost. If variable cost were interpreted to be a system-wide average variable, as it now is by the Commission, rate reductions would probably be moderate and widely

applicable. However, pricing at economists' long-run marginal cost (i. e., particular costs of particular movements) could result in substantial and highly selective rate cuts. Whether they would pass the test under Sections 3 and 4 would be a further question.

Depending on how variable cost is calculated, the Administration's proposed changes may be more apparent than real. In a recent speech the ICC'S general counsel contended that the Commission has not rejected a rate reduction in ten years on the grounds that it would constitute unfair and destructive competition to another mode.[1] That may only mean that the railroads have been willing to press the decision made in the Ingot Molds case[2] in 1965, a decision which denied a rate reduction request on those grounds.

7. Summary

From the above, it appears that the extent to which the financial circumstances of the railroads can be improved by changes in regulation will depend, as far as regulation is concerned, on (i) the rigor with which Sections 3 and 4 of the Interstate Commerce Act are applied to differentiation by the railroads in rates and (ii) definitions of variable cost. If Commission enforcement of Sections 3 and 4 were to be diffident, and if variable cost were equated to long-run marginal cost, the railroads would enjoy sufficient freedom to exploit many market situations. Only competition would constitute restraint. How much rat es would go up or down, and how much new net revenues would be brought in, would depend on cross elasticities and on own elasticities of demand for rail services. Rate and revenue changes would also depend on how much the rail carriers would want to exploit short-run inelasticities which, as a result of such exploitation, might turn elastic in the long run.

With regard to regulatory change, it should be noted that the Administration has announced its intention to propose some deregulation of truck transportation. Depending on the precise nature of such proposals, they might be expected to intensify competition between road and rail and, therefore, lessen the cross elasticities between the two modes. One study has predicted that up to 5 percent of 1985 rail traffic would be diverted to truck.[3] This topic requires a

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[1] "Deregulators Challenged by ICC Counsel, " press release, ICC.

[2] *323* ICC *758, 392* U.S. 571.

[3] Paul O. Roberts and James T. Kneafsey, " Energy Use Implications of Proposed Change in the Regulation of the Railroad and Motor Trucking Industries. " A study prepared for the Federal Energy Administration by the M. I. T. Center for Transportation Studies, October 1975.

more detailed discussion of truck markets, truck costs, and their competitive impact on the railroad, matters which can only be touched upon here.

B. Deregulation and Market 0pportunities for Railroads

Economists assert that sellers will try to maximize profit on each and every transaction, and that they will attempt to "discriminate" among buyers in order to get the most that each buyer is willing to pay. All of this, of course, is with an eye to the more or less long-run willingness of buyers to buy. Too much short-run exploitation may "kill the goose. "

The protections which buyers have against maximum exploitation (i. e. , total monopoly power) come from two sources: competition among sellers, and the law and its enforcement. The law may even be enforced in such a way that sellers derive negative profits from a given transaction or set of transactions, a situation which they will presumably accept only on condition of being protected from the law or from competition in the exploitation of other transactions.

The Administration contends that in todays transportation markets competition provides ample protection to buyers to permit retractions in the scope and application of the law. Administration spokesmen point to the presence of truckers, water carriers, pipelines, and even air carriers, as well as railroads, in many transportation markets. Implicit in the withdrawal of regulation is not only the removal of protection to carriers against competitive losses of cross-subsidizing revenues (umbrella rate making), but also the freedom for regulated carriers of all modes to rid themselves of negative profit transactions (cross subsidy).

Therefore, in anticipating the effects of deregulation, some rates can be expected to go up while others come down. Economically, whether or not they do depends on (i) an individual railroad's supply costs; (ii) perceived rate elasticities; and (iii) the disposition on the part of the railroads toward independent action on rates. Each of these is discussed below.

1. Railroad Supply Costs

Since 1920 regulation has encouraged collective action in pricing by the railroads. The rule of ratemaking adopted in that year directed the Commission to regulate rates to provide a fair return on fair value to groups of carriers or to the industry as a whole. While that particular version of the rule of ratemaking was in effect only until 1933, it has had an enormous impact on rate reg-

regulation. That, and a great national flow (as contrasted with regional) of commerce during and after World War I, emphasized ratemaking for the system (i. e. , all rail carriers) rather than by and for individual carriers. Costs tended to be cal - culated in the same way that rates were set for groups of carriers. For example, Rail Form A, the formula for rail cost-finding, is based on the cost relationships of all railroads (with some regional variations). Also, in the determination of costs in a particular rate situation, there is a strong tendency both on the part of the Commission and the carriers themselves to rely on averaging. As a result, in cases before the Commission ruling costs tend not to be those which economists would term long- run marginal but rather a statistical averaging acress a more or less wide range of supply situations. This is important with respect to whether, and by how much, the railroads will raise rates on movements on which they are, statistically at least, losing money. It may be noted that partly because of regulatory reemphasis on specific expense/revenue relationships, the carriers themselves have often been unsure about whether they were better off or worse off with a given category of traffic.

The movements which are regarded today as losers generally derive from three, or possibly four, different situations. One is the transcontinental flow of fresh fruits and vegetables. These rates reflect as much as any the Hoch-Smith admonition that rates on agricultural commodities should be kept low. They originally rose out of the efforts of all of the rail carriers participating in trans - continental traffic to encourage its growth. In those days the Western carriers, especial 1 y, had enormous amounts of unused capacity and, therefore, marginal costs were undoubtedly very low. Very important, too, the industry regarded it- self as being in a growth phase. Today the excess capacity is gone because of abandonments and plant wearout. Further, because of the high cost of capital, the railroads do not look very far ahead. Also, the transcontinental rates on which fresh fruits and vegetables move generally involve at 1east two carriers, and oft en several. Thus, inasmuch as one carrier may profit and another may lose on a given movement, the rate division question is relevant.

A second loser situation is the short haul of raw materials. Logs, butts, bolts, and sand and gravel have traditionally shown up in the ICC's burden studies as producing revenues far below variable cost. Rates on these commodities were generally set low in the days when the railroads had a headlock on the outbound flows of finished goods but where there was market competition for the inbound flows. Today the rail carriers share the outbound flows with the truckers. Important in the ratemaking question is the fact that to a very considerable extent these rates are local to individual carriers.

A third category of losers is branchlike traffic. Here the traffic flows taken as a whole simply do not cover their costs, at least on the originating or terminating carrier lines. The situation, of course, is aggravated if

the branchlike traffic is primarily in the first two categories noted above, as it often is. An important question here is whether the branchlike traffic is a system loser or only a loser for the branchlike carrier. As things are now, if traffic on a given branchlike loses money for the originating or terminating carrier, the line becomes a candidate for abandonment regardless of the system effect. This means that a carrier is able to take unilateral action on service (i.e. , abandonment) but not on rates, even though it may be preferable to raise rates rather than abandon service.

The fourth category of loser traffic is relatively new on the rail scene. It has derived from two situations: one is relatively high terminal costs; the other is the enormous increase in opportunity costs of rail use of urban land. Thus, individual carriers may lose on traffic originations or terminations in large metropolitan areas. The circumstances surrounding this traffic are not unlike those for branchlike traffic (i. e. , service provision lies in the hands of one carrier but the quotation of rates often does not).

In all four of these supply categories the question is whether the net cash flow of the railroads would be increased by raising rates. Interestingly enough, in the one category where single railroads both originate and terminate the traffic (i. e. , the local movement of raw materials), rates have not been raised substantially. Indeed, there is some evidence that they have been set to meet truck and water competition. This, of course, suggests that while revenues may not cover average variable costs, they are above out-of-pocket (marginal) costs.

Because of the lack of data, it is not possible here to go beyond ICC average supply costs for these categories of traffic to determine the extent to which actual costs vary from the average. However, within a class or categories there appears to be a great deal of variability on the test of net cash flow contribution to the system as a whole; therefore, a great deal of the traffic in each of the four categories discussed must produce positive results on cash flows, and a great deal negative. That is to say, by the measure of ICC variable cost, much traffic which shows up to be profitable, in fact, produces negative cash flows, and vice versa. This raises two important questions: one is whether the variable cost which is being referred to in almost all of the proposals for regulatory change has any consistent relationship to the real test of profitability--namely, net cash flow contribution; and two, how costs for joint rates will be determined. It is not likely that there is any close or consistent relationship between ICC variable cost and the true test of profitability for a railroad company.

a. Variable Cost. Opportunity cost, which is the true economic test of desirable resource allocation, and for which variable cost is a poor surrogate, varies greatly from railroad to railroad and from time to time. It is

also highly subjective in the sense that it represents the way in which the management of a company sees its opportunities. A management decision to devote company resources to a given activity will raise the opportunity costs of all other activities. This is especially true when a compmy is operating at or near capacity. Then an increase in one activity means a decrease in another, or, alternatively, it will require major outlays for additional capacity. Then, too, the owners (i. e. , investors) may simply have other uses for their money and may force Up the discount rate on future inflows of cash. This has, for examples counteracting influences on the cost of branchlike operations, none of which is recognized in the usual variable cost formula. The high cost of money spent on maintenance tends to drive actual maintenance expenditures down, yet the opportunity costs of not doing maintenance may be very high if services are to be continued.

The utilization of capacity on one line as compared to another, traffic densities, terminal capacities, back hauls, and many other factors all conspire to make cost in one situation different from another even though distances, lading weights, and commodities may be the same. To ignore these differences leads to departures from actual costs and concealment of the real effects on cash flows. In various studies done for the U.S. Railway Association, these submerged cost variations were reported to be as high as 600 percent. A further problem is that if rates give accord to cost economies of high-density flows, and diseconomies of low-density flows, the high densities will tend to get higher and the low densities lower. This will tend to have increasingly favorable effects on larger communities and increasingly adverse effects on smaller ones.

As a practical matter, the pure administrative problem of pricing and the negative goodwill created by differentiating markets precisely according to cost would indispose the carriers to a strictly literal policy of pricing according to the immediate effect on cash flows. Nevertheless, under rate deregulation the carriers, individually and some of them together, by incentive pricing would probably encourage traffic flows in a good many markets, at the same time deliberately pricing themselves out of other markets. But that disposition will be countervailed by remaining regulatory constraints, as suggested earlier. Therefore, all things considered, the railroads cannot be expected to respond to demand elasticities in the classic way of sellers. This, of course, makes the job of estimating the profit effects of regulatory change much more difficult. In addition, there is the complicating problem that most rates are published for the accounts of two or more carriers. Then, the cost conditions on two or more railroads must be considered in setting rates. This matter deserves more examination.

b. Joint Rates. The Interstate Commerce Act requires the railroads to publish joint rates with other rail carriers and also with water carriers. No one proposes to relieve them of that obligation. (Indeed, there is a great deal of opinion that a similar requirement should be imposed on regulated truckers

who are not now so burdened.) Also, for a great deal of rail traffic there are competitive routings with varying participations by many carriers. (Thirty - three percent of the Penn Central's traffic is interlined.) As of now, the decision as to what a rate shall be for pairs of points, each of which is on one ***or*** more different railroads, is a matter of negotiation among all of the participating carriers, some of which offer alternative routes. Thus, the varying costs of all of them must be taken into account. Obviously, then, an averaging process is involved. The Commission is often drawn into this process on the complaint of shippers.

For many years, particularly after 1920, collective ratemaking was practiced, although it was quite clearly illegal under the antitrust laws. In 1948 the Reed-Bulwinkle Act specifically exempted collective ratemaking from the scope of the antitrust laws, providing each rate bureau's procedures were sanc - tioned by the Commission. For all intents and purposes the carriers are allowed, as before, to collude in setting rates. It may be concluded that the necessity of obtaining consent or acquiescence from a number of carriers has not added to the flexibility of ratemaking.

The Administration and others now wish to reduce the extent of collective ratemaking. The proposals offered vary, but in the main they would limit joint ratemaking to those carriers participating in a single through route. Of course, some carriers such as the Penn Central participate in many competing through routes. The Penn Central might agree to a lower rate on one route than on another, but the Commission is not likely to permit it if there is discrimination in favor of one connecting carrier over another. However, assuming that there are separate routes which involve different carriers, the possibility exists for rate competition among railroads, something which, as a practical matter, has not existed for many years, and to which most of the industry would be adverse. However, if it could exist as a result of regulatory changes, then individual railroad supply costs would be of much greater sign if i cane e than they are now.

The matter is important. If the railroads continue with collective ratemaking, with or without regulatory sanction, changes in rates will be slow in coming and modest in their proportions. If there is real competition among railroads, rate changes may be frequent and sharp. However, whether they will be tolerated by the industry or by shippers is very uncertain. Recognizing that competition among the railroads must necessarily be extremely uneven, in the past communities have simply refused to accept the side differences in rates which would tend to result from this unevenness.

It is probable that if the railroads were really competing with each other, some rat es on manufactured goods would come down by 30 percent to 50

percent. [1] In the short run that would probably result in very much reduced revenues and profits to the railroads; in the long run (i.e. , 15 years) it might, because of high long-term elasticities, lead to enormously increased revenues and, possibly, much larger profits. Left to themselves or to their investors, the railroads will surely not be willing to accept short-run losses to achieve long-run gains. That raises the final point in this discussion about railroad supply costs.

The railroads' discount rate on the future is, generally, very high today, as it has been for some years now. This is partly attribuyable to high interest rates and inflation, but it is also due to the fact that rail investors as a whole see very gloomy long-run prospects for the industry. Thus income streams 15 to 20 years in the future have very little value to the railroads and their investors. This obviously affects railroad supply curves in that supply costs for the short run are relatively lower than for the long run, and the rail - roads are likely to respond more strongly to short-run demand conditions than to long-run expectations. This should be borne in mind when considering the market situations which the rail roads would face in deregulation.

2. Market Demands

There are really two questions which need to be asked about the response of the railroads to transportation market conditions: one is what the own elasticities and cross elasticities of demand are; the second is whether the railroads are already at rates yielding maximum profit. The second question, of course, involves the extent to which the rail carriers will change prices if they are granted some degree of deregulation.

a. Own Elasticities. The conventional wisdom among transportation people has been that the demand for agricultural commodities and raw materials transportation is quite elastic, while for manufactured goods it is not. The assignment of ratings in both the Uniform Freight and the National Motor Freight classifications represent this point of view. Raw materials get low ratings and manufactured goods tend to get high ones. Regulation has generally adopted and tended to support this structure. Of course, as discussed earlier, in efforts to exploit high elasticities, rates may have been pushed below costs, and once down, it is difficult to get them up again. This is because, at least in part, in many instances transportation demand which has been elastic to start with has turned inelastic as a result of inelasticities of supply in the producing industries. In the long run, the demand for some commodities, such as apples grown in the state

[1] See the 1969 burden study issued by the U.S. Department of Transportation.

of Washington, might be elastic, but producers, consumers, and politicians live in the short run. For this reason, and others, the Commission has been reluctant to allow rate increases on these commodities which, although they might increase rail revenues and profits, would be harsh to shippers.

As already noted, the railroads are likely to exploit short-run elasticities even at the expense of long-run profits. Thus, assuming low cross elasticities, rail rates on agricultural commodities and long-haul raw materials can be expected to rise, increasing both revenues and profits. The effects on net cash flow could be substantial. With deregulation, rates might increase 50 percent or more, revenues from those commodities might rise perhaps 30 percent, and profits might increase by more than either since present losses would be eliminated. It is a good prospect for the railroads. However, the effect of rate increases on consumers and producers might be quite adverse, perhaps justifiably so.

In this regard it should be pointed out that the Penn Central has done a special study on revenue-cost relationships reported on in the USRA's recently issued supplemental report. It stated that in the sample of traffic tested, 30 percent of the carloads did not generate revenues adequate to cover "short-run variable costs. " It can be speculated that a good deal of that losing traffic would be immune to cross elasticities, and that in the short run rate increases would generate added revenues and profits.

The short haul of raw materials does not offer a clear prospect for increased revenues or for increased profits, even assuming that many movements are now losing money. In the first place, the Commission has posed very little difficulty to the carriers in setting rates on these commodities at any level they found desirable, at least this has been true with respect to intermodal competition. Exempt carriers, which the Commission tends not to protect, handle this traffic. A great many movements are local to a single railroad, so there is no complication with respect to joint rate publication. It appears that this traffic contributes some positive net cash flow and that an increase in rates would shift traffic to competing modes and reduce net cash flow. Consequently, deregulation would probably make little difference. It needs to be said, however, that as roadways deteriorate, net cash flow will be threatened. Either the railroads must maintain their plants at satisfactory levels for operation or they must raise rates to simply get out of the business, whichever most favorably affects cash flow. That is not hampered much now by regulation, except possibly under Section 3.

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[1] A recent study prepared for the National Commission on Productivity shows that rail shares of fruit and vegetable traffic from West Coast producing points to Northeast Corridor markets are 75 percent or more.

On the basis of the 1972 ICC Rail Revenue Contribution statement, it is possible to determine the increase in net revenues which would result from eliminating by commodity classes the deficits below variable cost of movements over the United States as a whole. The 1972 contribution statement shows that 25 commodity classes did not yield revenues sufficient to cover ICC variable costs. The deficit was approximately $234 million. This is considered to be a minimum figure for the amount by which the railroads net cash flow would increase if they were permitted to extricate themselves from losing traffic. Remembering that actual costs may vary widely from the average, it is also true that rates vary widely from average revenues. Therefore, even though average revenue may cover average cost for a commodity class, thus showing no deficit for the class, many individual rates may be below average cost. Eliminating those deficits might produce another $200 million to $300 million. Relying on average variable costs as the true costs of individual movements, the elimination of rates below them might yield $500 million per year in net positive cash flow.

b. Cross Elasticities. A good deal of experience in the transportation industries suggests that cross elasticities are high for the transportation of manufactured goods, at least they have been from rail to truck. This view has been pretty much adopted by deregulatory proposals, especially those from the Administration. Also, as indicated above, own elasticities have been thought to be relatively low. (One may quarrel with the latter assumption for the long run where plant locations are variable.) Thus, it can be assumed that increases in rail revenues and profits must come about through diversions from competitive modes to rail caused by reductions in rail rates (i. e. , there will be little induced traffic). Also, increases in revenues and profits accruing to rail from rat e reductions must imply that other modes cannot meet the rail rate reductions. The latter, however, may be a difficult assumption to sustain. Indeed, if some deregulation of trucking is granted, as the Administration proposes, the diversion may well be from rail to truck. (It should perhaps be recalled that among the early justifications for truck regulation was the protection of the railroads.) Moreover, as discussed earlier, if intrarail competition is fostered by deregulation, the rail carriers may simply share the same traffic with each other at lower rates.

In order to enclose the universe of possible revenue increases from diversions of manufactured goods from other modes, the 1972 Census of Transportation, which covers only manufactured goods, has been used to assume the following:

(i) Freight shipments of 30,000 pounds or more shipped 500 miles or more constitute the traffic which is attractive to rail.

(ii) The average of revenues per 100 pounds, taken from the 1 percent waybill sample and adjusted from 1972 to 1975 rate levels for Eastern Territory to Western and reverse, represents the revenues which the railroads are now receiving from 30, 000-pound-plus shipments going over 500 miles.

(iii) Only annual volumes of 5 million tons or more comprise sufficient tonnages to be attractive to the railroads for diversion.

(iv) Rate reductions of 25 percent would divert traffic to rail.

(v) Net revenues over rail variable costs now average 50 percent.

Based on these assumptions, the amounts of tonnages which would be diverted if the railroads raised their existing national shares of these tonnages from the present shares to an arbitrary 75 percent were estimated. This, at revenues per ton adjusted as indicated above, would produce $1, 732.8 million in increased revenues, and net cash flows over operating costs of more than $575 million. Adjusting revenues for rate reductions, and assuming no induced traffic, revenues would then amount to $1, 299.6 million, and new net cash flows would be $144.0 million (see Exhibit V-l).

Despite the apparent attractiveness of the results of such an action, the likelihood of 75 percent of the tonnage shipped being diverted to rail appears low. An examination of Exhibit V-1 reveals that rail market share currently exceeds 75 percent for only one commodity: flour. Gasoline, for which rail holds a 1 percent market share; petrol residual, with 5.5 percent; and fuel oil, with 7.1 percent, are extremely unlikely to be captured, even with a 25 percent reduction in rates, since water and pipeline movements, with final local distribution by truck, are extremely competitive. On the other end of the scale, high-value goods such as textiles, with 8.5 percent rail share, and machinery, with 20.6 percent, are unlikely to divert substantially to rail from truck because of the importance of the high-quality service levels they receive by truck. The loss of these five commodities would reduce the total projected revenue increase by $649.1 million (with no rate reduction) to $1,083.7 million. After the rate reduction is taken into account, the revenue drops to $812.7 million and profits drop to $90.2 million.

Proposals for deregulation seem to assume that the railroads have not reduced rates on manufactures either generally or selectively because regulation prevents them from doing so. Contradicting that view is the fact that the railroads have requested and received round after round of general increases which have brought the index of freight rates in July 1975 to a level ten points above the wholesale price index, 1969 being 100 for both.

EXHIBIT V-1
ESTIMATES OF TRAFFIC Diversions

TCC	Commodity	Present Tonnage Shipped Over 30,000 lbs. Carried Over 500 mi. -All Modes-	Present % Carried by Rail	Present Tonnage Carried by Rail	Tonnage Carried if Rail % Increased to 75%	Increase in Tonnage if Rail % Increased to 75%	Revenue per Ton	Increase in Revenue if Railroads Carried 75%
20	Food	3.6	37.4	1.3	2.7	+ 1.4	31.91	44.7
2011	Meat	1.8	11.3	.2	1.4	+ 1.2	63.33	76.0
203	Canned & Pres Fruit . .	4.6	17.4	.8	3.5	+ 2.7	26.22	70.8
2033	Canned Fruit	1.5	33.1	.5	1.1	+ .6	22.43	13.5
204	Grain Mill Products . .	2.6	46.2	1.2	2.0	+ .8	27.20	21.8
2041	Flour	1.5	87.8				23.74	
208	Beverages	1.0	20.4	.2	.7	+ .5	30.59	15.3
209	Misc Food Preparations .	.3	33.4	.1	.2	+ .1	26.63	2.7
22	Textiles	1.8	8.5	.2	1.4	+ 1.2	62.40	74.9
24211	Lumber	3.6	46.3	1.7	2.7	+ 1.0	26.49	26.5
24311	Veneer&Plywood	1.8	60.6	1.1	1.4	+ .3	20.66	6.2
26	Pulp, Paper	1.5	52.1	.8	1.1	+ .3	28.37	8.5
2621	Paper	3.0	58.7	1.8	2.3	+ .5	27.90	14.0
26311	Paperboard, Pulpwood . .	3.6	72.0	2.6	2.7	+ .1	23.64	2.4
264	Converted Paper	1.5	51.3	.8	1.1	+ .3	35.68	10.7
28	Chemicals	3.6	42.0	1.5	2.7	+1.2	19.81	23.8
281	Indus Chemicals	15.4	56.1	9.2	12.4	+ 3.2	16.68	53.4
2818	Indus Organ Chemicals .	3.0	40.7	1.2	2.3	+ 1.1	33.89	37.3
2819	Indus Inorgan Chem . . .	2.4	42.6	1.0	1.8	+ .8	28.05	22.4
28211	Plastics	2.4	41.5	1.0	1.8	+ .8	29.86	23.9
28999	Chemical Products . . .	2.1	17.4	.4	1.6	+ 1.2	11.12	13.3
29	Petrol & Coal Prod . . .	4.2	11.5	.5	3.2	+2.7	21.88	59.1
29111	Gasoline	15.0	1.0	.2	11.3	+11.1	25.35	281.4
29113	Fuel Oil	8.7	7.1	.6	6.5	+5.9	25.35	149.6
29114	Petrol, Lubri Oil . . .	3.9	15.1	.6	2.9	+2.3	31.61	72.7
29116	Asphalt, Pitches	1.5	22.6	.3	1.2	+ .9	12.59	11.3
29117	Petrol Residual	2.7	5.5	.1	2.0	+ 1.9	20.74	39.4
29119	Petrol Refin Products .	4.2	14.5	.6	3.2	+ 2.6	25.35	65.9
30	Rubber	2.1	23.4	.5	1.6	+ 1.1	55.91	61.5
32	Stone, Clay, Glass . . .	2.4	21.3	.5	1.8	+ 1.3	29.12	37.9
3295	Non-petal & Mineral . .	1.5	69.2	1.0	1.1	+ .1	28.30	2.8
33	Prim Metal Products . .	2.7	42.1	1.1	2.0	+ .9	23.89	21.5
3312	Prim Iron & Steel . . .	4.2	44.0	1.8	3.0	+ 1.2	32.54	39.3
335	Non-ferrous Metal . . .	1.4	21.4	.3	1.1	+ .8	36.31	29.0
34	Fabricated Metals . . .	3.6	25.1	.9	2.7	+ 1.8	42.83	77.1
35	Machinery	3.0	20.6	.6	2.2	+ 1.6	64.86	103.9
36	Elec Machinery	2.1	30.3	.6	1.6	+ 1.0	58.62	58.6
3711	Motor Vehicles	5.4	57.9	3.1	4.1	+ 1.2	60.10	60.1
								(000,000)
						Total Revenue Increase (no rate reduction)		S1,732.8
							Profit	577.6
						Total Revenue Increase (2.5% rate reduction)		1,299.6
							Profit (unchanged costs)	144.4

A greater likelihood is that the carriers will cut rates selectively where they are now constrained from doing so and where actual costs are below ICC variable. How much this would affect the net cash flow of the industry as a whole is extremely difficult to estimate, bearing in mind that Sections 3 and 4 of the Interstate Commerce Act would still apply. It is apparent that few rail carriers will knowingly reduce rates if they anticipate that the truckers will competitively reduce theirs in response. Indeed, it is probable that the railroads are much more sensitive to the prospect of competitive interactions than are the truckers with whom they compete. (Theirs is a much more monolithic industry.) Also, the natural response of an industry in a state of secular decline, such as the railroads, is to reduce capacity and exploit inelastic demands. As a general proposition, the railroads, facing the high cost of capital, would be disinclined to reduce any rates which required new infrastructure capacity from which capital investment could be recovered only in the longer term. Therefore, one may anticipate that the carriers will make relatively few and small cuts on any rates. However, that does not argue against their being permitted to make increases on losing traffic.

In a recent study for the Federal Energy Administration, the M. I. T. Center for Transportation Studies examined the impact of the Administration's deregulation bills and concluded that (i) the competitive environment for full truckload trucking would be increased after passage of the bills and (ii) this would have negative competitive impacts on many rail commodities, with diversion from rail to truck. This finding was predicated on the ability of trucking, particularly irregular route common carriers and exempt haulers, to reduce rates more than rail and, as a consequence, to increase the ratio of rail to truck tariffs.

The key determinant is the existence of sectors of the trucking industry, such as those named above, which can make good use of independent truckers, the so-called owner operators. These individuals operate without terminals, with very little overhead expense, and generally at labor rates which are considerable y lower than those of unionized employees. They own their equipment and can offset depreciation against their income taxes. In addition, they can typically amortize the equipment expense over considerably more miles of utilization per year than most LTL common carriers. The result is operating costs which fall in the range of rail prices.

In contrast, the railroads face an extremely difficult period in the future which will make it difficult for their management to concentrate on the

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'Roberts and Kneafsey, op. cit.

complex marketing and ratesetting functions required. At a time when revenues do not equal expenses they must identify commodities whose rates can be lowered to be competitive with trucks, but not so much that there is a negative contribution. At the same time rates on rail inelastic commodities must be raised, while on "losers" they must be raised enough to rid themselves of the haul. The job is complex, to say the least. The conclusion of the M. I. T. study is that the deregulation bills alone will probably have a net impact which is negative and which will cause rail traffic to be diverted to truck.

c. Public Policy Toward Other Modes

It is obvious that public policy toward other modes has had an enormous adverse impact on the viability of the U.S. railroads. Whether public support for and stimulation of the other modes has produced benefits equal to or greater than the decline in railroad output capability is an interesting, but at this point a somewhat academic, question. What is important, however, is what public policy may be expected toward the other modes and how it will affect the viability of the railroads. If in the 1950's and the 1960's public expenditures on highways and waterways had been sharply curtailed, the demand for rail transportation would unquestionably have increased. It does not necessarily follow, however, that the increased net cash flows generated by higher damands and, presumably, higher rates would have been reinvested in rail facilities. The net result of the increase in profits might be an increase in the flow of rail capital funds out of the industry.

Another aspect of public policy is the regulation of modes other than rail. The regulation of both trucking and domestic water transport, at least in part, was i reposed at the federal level at the behest of the railroads on grounds of "fair and impartial regulation of all modes. " Following 1935 in the case of the truckers, and 1940 with the water carriers, the Commission imposed minimum rates on both modes which relieved the railroads of some competitive pressures. Unfortunately for the railroads, Congress exempted agricultural and bulk commodities from regulation and left private carriage largely uncircumscribed. Thus, the railroads have been unprotected by regulation in those transportation markets. As the market interests of the railroads, forced by their cost structures, have shifted more and more away from manufactures and less-than-carload shipments, the incursions of exempt and private carriage have become more and more important. The rail industry wearied early of attempting to limit the scope of exempt and private carriage, and turned to efforts to free the railroads from regulation in some measure. It should be noted, however, that the Commission began to extend its protective "umbrella" to the other modes. Thus, the railroads purported to be whiplashed by no regulation in one major segment

of their markets and by regulation devoted to the protection of other modes in another. Recognizing that about 40 percent to 50 percent of rail carloads centain commodities which are exempt either by truck or water, and that they compete with proprietary carriers as well as regulated carriers of other modes in the rest of their markets, the question is whether the railroads would gain or lose by across-the-board deregulation which might relieve proprietary carriers of present operational constraints. This question cannot be answered easily.

1. The Effects of Public Investment on Other Modes

Public investment in other modes obviously affects the railroads through the rates charged by competing modes which, in turn, depend on the costs of the other modes. Publicly paid for improvements which do not improve the competitive position of truckers and water carriers vis-a-vis the railroads do not have an adverse impact on the railroads. For example, "farm to market" roads have probably, if anything, benefited the rail carriers. However, those improvements which shorten truck running times between major traffic-generating points, or which permit higher loadings, tend to reduce operating costs and intensify competition with rail. The interstate system, of course, has done both of those things and has been responsible for an enormous diversion of traffic from rail to truck. The straightening and deepening of waterway channels have had similar effects.

Some may assume that since the interstate system is now three-quarters or more finished and most of the navigable waterways in the United States have been improved to permit barge tow operation, the railroads are not likely to feel much new and additional impact. Such a conclusion, however, ignores several probable developments. One is that the adverse impact of the interstate system is likely to continue for some time as shippers and even whole communities adjust to the availability of low-cost truck transportation. Exhibit V-2 shows recent traffic shifts from rail in commodities which not long ago were handled primarily by rail. The commodities in question are fresh fruits and vegetables raised in California and shipped to markets in the Midwest and the East. The erosion of traffic to trucks represents the continuing impact of the interstate highway system on rail traffic.

A second circumstance is that while the interstate system may be near completion, highway interests have indicated that the next target for improvement is the primary system. Because the primary system includes many heavily traveled truck routes, its improvement would probably cause further diversions from rail.

A third probable development is the continued relaxing of size and weight restrictions on trucks. Recently the gross weight limit on the interstate

EXIIIBIT V-2

FRESH FRUIT AND VEGETABLE UNLOADS FOR 41 CITIES ORIGINATING IN CALIFORNIA

1966 - 1974

(Thousands of Carlots and Carlot Equivalents)

MODE	Rail*						Truck**						TOTAL					
YEAR	1966	1968	1970	1972	1973	1974	1966	1968	1970	1972	1973	1974	1966	1968	1970	1972	1973	1974
COMMODITY																		
Grapes, Table	10.2	6.6	6.2	4.7	4.8	3.6	7.7	7.1	6.7	6.6	7.3	9.6	17.8	13.7	12.9	11.4	12.1	13.2
Grapes, Juice	1.8	1.4	1.0	.6	.6	.7	.04	.04	.03	.01	.02	.03	1.9	1.5	1.0	.6	.6	.8
Strawberries	.4	.3	.1	–	–	–	3.5	5.8	6.6	6.9	6.9	8.6	3.9	6.2	6.7	6.9	6.9	8.6
Cantaloupes	6.8	8.7	7.9	5.6	4.9	3.4	3.4	4.9	5.5	6.1	5.4	5.2	10.2	13.6	13.3	11.7	10.3	8.7
Carrots	3.1	2.5	2.5	3.0	2.8	3.1	6.1	6.2	5.3	5.1	5.0	5.6	9.1	8.8	7.8	8.0	7.8	8.7
Celery	6.7	6.9	6.7	5.8	5.5	6.1	5.9	5.9	8.1	8.9	8.9	9.4	12.6	12.8	14.7	14.7	14.4	15.6
Lettuce	21.9	22.5	24.3	22.1	17.9	17.9	24.0	25.9	24.8	29.1	31.9	33.8	45.8	68.4	49.1	51.2	49.9	51.7
Tomatoes	3.6	3.1	4.1	3.1	2.4	2.0	7.7	8.2	8.7	8.7	9.1	10.0	11.3	11.3	12.8	11.8	11.4	12.1
Subtotal	54.4	30.0	52.7	44.8	38.8	37.0	58.3	64.1	65.7	71.4	74.6	82.3	112.7	116.3	118.4	116.2	113.4	119.2
Other	36.5	37.8	31.6	24.2	20.1	20.3	65.0	63.0	66.3	66.9	65.2	72.0	101.5	98.6	98.0	91.1	85.3	92.4
Total	90.9	87.8	84.3	69.0	58.9	57.3	123.3	127.1	132.0	138.3	139.8	154.3	214.2	214.9	216.4	207.3	198.8	211.6
COMMODITY																		
Lemons	5.1	4.4	4.0	2.6	2.8	2.2	3.3	3.2	3.2	3.3	3.8	3.7	8.4	7.6	7.2	5.9	6.5	5.9
Oranges	16.2	8.4	14.6	13.0	8.2	9.8	10.5	7.5	13.2	18.9	14.5	17.3	26.7	18.0	27.8	29.8	22.7	26.9
Other	1.4	1.4	1.3	1.0	1.0	.7	2.7	3.3	2.6	2.7	2.3	2.8	4.1	4.7	4.0	3.7	3.4	3.3
Total	22.6	14.3	19.9	16.6	12.1	12.5	16.6	14.0	19.0	22.8	20.5	23.8	39.2	28.3	38.9	39.4	32.6	36.1

" Includes TOFC/CCFC movements.

" ● Estimated 75% to 95% complete for different cities.

Note: Due to rounding, numbers may not add to totals.

Source: Fresh Fruit and Vegetable I nload Totals, United States Department of Agriculture, Consumer Marketing Service.

Feasibility Study of Perishables Transportation, prepared for the National Commission on Productivity, October 1975, pp. ***42-43***

system was raised to 80, 000 pounds. On most of the tollway system between Boston and Chicago the gross limit is now 130,000 pounds in double-bottomed rigs. It is not impossible to imagine that such a limit could be extended over the whole interstate system, especially if it can be proved that it saves fuel.

A fourth prospect is that parts of the waterway system which have 9-foot channels will be deepened to 12 or 15 feet. The recent debate over the damage to Lock and Dam 26 on the Mississippi River is a case in point. The Corps of Engineers, which has operational responsibility, has recommended an increased size of lock and greater channel depths since it anticipates that in the future channels upstream will be deepened and the capacity of locks increased.

All of the above eventualities brought about by public policy would continue to encourage shifts of traffic from rail. Perhaps they are justified in terms of the public interest despite their adverse effects on the financial viability of the railroads. Instead of cutting back on public investment in other modes, it may be preferable to invest public funds in railroads. Whichever is done, however, it is reasonable to expect that it will follow a finding that net benefits to the economy as a whole would probably result.

2. Deregulation of Other Modes

A simple assumption might be that if water and truck regulations were modified to reduce regulation and make the modes more competitive, then their retraction would confront the railroads with more intense competition and shift more traffic away from them. The recent study for the Federal Energy Administration (FEA), cited earlier, has suggested such a consequence. The Administration has conveyed the impression, however, that the result of deregulation would be reductions in rail rates and increases in rail traffic. The question is: Which eventuality is more likely? It may be worthwhile to explore current regulatory conditions and how they impact this question.

As far as costs are concerned, and in other respects as well, truck operations divide into five categories of carriers: regular route regulated common, irregular rout e regulated common, for-hire exempt, contract, and proprietary (see Exhibit V-3). It is useful to examine these individually because each is quite different and offers a different competitive edge to the railroads. As will be seen, the LTL regular route common carrier is not the competitive threat to the railroads posed by the irregular route truckload carrier or a proprietary carrier which also holds licenses to operate contract trucking operations.

a. Regular Route Common Carriers. These carriers handle mainly less-than-truckload shipments and thus compete only with rail freight forwarder and rail shipper associations. The latter categories consist largely of truckload

EXHIBIT V-3
CHARACTERISTICS OF THE MARKETS FOR THE MODES OF
INTERCITY FREIGHT TRANSPORTATION

Pipelines (431)	Inland Waterway (Barge) (596)	Railroads (768)			Total Trucking * (412)				Air (3)
					Regulated Truck (170)		Private Truck (242)		
		Unit Train	Carload	TOFC	Contract	Common	Owner Operator	Private Fleet	
Bulk**	Bulk	Bulk	CL&Bulk	TL	TL	LTL	TL	LTL	LTL
All Distances**	All Distances	All Distances	>600	>600	<600	<600	X300	<600	<600
Petroleum**	Mining and Coal	Mining Coal Grains	Agriculture Lumber Food Manufacturing Chemicals	Agriculture Food Manufacturing	Agriculture Food Manufacturing Petroleum Chemicals	Manufacturing Food Other	Livestock Agriculture Food Metals Manufacturing	Manufacturing Food Metals Other Other	Manufacturing Food Other

*1970 ton miles (in billions).

** principal Categories:

Size of shipment: minimum shipment LTL TL/CL Bulk
Length of haul: intracity < 600 miles >600 miles
Competitive commodities: manufacturing, livestock, agriculture, coal, mining, lumber, petroleum, glass, chemicals, other.

Source: Paul O. Roberts, and James T. Kneafsey, "Energy Use Implications of Proposed Change in the Regulation of the Railroad and Motor Trucking Industries." A Study Prepared for the Federal Energy Administration by the M. I. T. Center for Transportation Studies, October 1975.

shipments which provide the railroads with head-to-head competition. Because of regulation, however, each of them suffers some disability in achieving the lowest possible costs for truck movement. Presumably, if this disability were removed, costs would descend further and, probable, rates as well.

b. Irregular Route Common Carriers. These carriers hold certificates from the ICC to handle commodities generally or specified commodities within specified geographic areas. The commodity authorization can be quite broad, as can be the geographic authorization. Irregular route carriers, which tend to be smaller and considerably more numerous than the regular route carriers, handle the truckload movements of non-exempt commodities in many instances, using owner operators (drivers who own their own tractors and trailers). In general, competition among them tends to be quite vigorous. Their common carrier service obligations as regulated carriers tend not to be onerous since truckload lots generally pay their own way. However, because of the limits on what many of them may carry, they tend in some measure to have unbalanced loads which inflate costs. These are filled by acquiring separate operating rights in the reverse direction. Given freedom from certificate constraints they could more easily obtain truckload movements in both directions. In that process rates would come down and the traffic on which the railroads now make relatively high profits would be adversely affected.

c. Exempt Operations. Anyone with a truck or barge can handle exempt commodities free of economic regulation. This includes regulated as well as proprietary carriers. Regulated carriers, however, may not mix exempt and regulated commodities on the same vehicle (barge); in that case, they all become regulated. [1]

The prime disability which truck carriers of exempt commodities endure is unbalanced hauls. Because exempt commodities are primarily agricultural, traffic tends to flow from rural to urban areas. The manufactured goods which move back to the rural areas cannot be handled by carriers that do not hold certificates. This, of course, is a boon to the regulated carriers which can have a regulated move in one direction and an exempt move in the other. However, it has a tendency to lessen competition for the transport of both exempt and regulated commodities. For those unregulated carriers which make the transport of exempt commodities a regular business, the disability of unbalanced loads is lessened by their freedom to trip-lease to regulated carriers for back hauls. If entry restrictions were eased and the ability to back haul regulated commodities granted or trip-leasing were more widely permitted, the dichotomy of exempt and regulated transportation would be lessened, thereby reducing the cost and the rate-inflating factor of empty or partial back hauls, and making them even more of a competitive threat than they are at present.

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[1] They may now be mixed on the same barge tow, but not in the same barge.

d. Proprietary Carriers. The law permits buyers and sellers of goods to truck them if they have title to them. Ownership, however, cannot be a subterfuge for entry into for-hire transportation. In this regard the "primary business" of the owner and transporter of goods must not be transportation. Because of this constraint, proprietary carriers tend to be afflicted with back-haul problems although the affliction is more acute for small shippers than for large multiplant concerns which have a greater opportunity for two-way traffic f lows, Also, proprietary carriers may transport exempt commodities freely. Recently, however, under limited circumstances, proprietary carriers have been able to get contract carrier permits. Where these have been granted, the problem of empty back hauls in private truck operations has been reduced, The easing of corporate haul restrictions to include subsidiaries, proposed in the Administration's truck bill, will also have a competitive impact.

e. Contract Carriers. Today contract carriers tend to be largely extensions of proprietary carriers; the Commission is seldom reluctant to grant contract carrier permits where the carrier essentially serves one shipper. In that situation the contract carriers labor under much the same constraints as the proprietary carriers.

Although the content of the Administrationfs proposals for the deregulation of trucking has not as yet gone to the Hill, indications are that these proposals will soften restrictions on both proprietary and contract carriers. This will put additional rate pressures on the railroads.

3. The Response of Rail Carriers to Competitive Pressures

Evidently the Administration's view is that increased competitive pressures on the railroads will result in lower rates all around which will redound to the benefit of the general public. This may result, although the distribution of benefits may be uneven--favoring urban areas more than rural areas insofar as reduced rates are associated with relatively high densities of traffic.

As far as the railroads are concerned, the effects of increased competition and lower rates may accelerate via a decline of their role in transportation. An important aspect of this is the willingness of existing railroads to react to competitive challenges with new investments in technological improvements. That, in turn, depends, at least in part, on the railroads being able to rid themselves of losing traffic. Freeing them of their losses, however, will not alone encourage them to make new investments unless they see the prospect of traffic growth and increased net cash flow. This question should be explored more fully in subsequent studies.

D. Summary and Observations

The observations arising out of this discussion are only tentative in terms of magnitude but the overall outline seems clear. If the railroads are to rid themselves of losing traffic (i.e. , traffic which does not make a contribution to overhead and profit), then upward rate flexibility must be a part of the new legislation. Conversely, competition with truckload traffic and inland waterways will require downside flexibility in rail pricing. Taking all factors into account, Section 3 of the Interstate Commerce Act is likely to limit such flexibility.

Competition with the truckers would inevitably be increased by passage of the Administration's truck bill, and unless other legislation increases user charges on the trucks and initiates them on waterways, the ability of the railroads to lower prices to capture new traffic appears to be limited. A key point here is the system nature of the rail ratemaking process and the necessity for two or more railroads to agree on relative elasticities. Even where cross-in-elasticities are low, as well as own elasticities as they are reputed to be in agriculture, it is doubtful whether the Commission will allow their exploitation through higher rates because of the repercussions of rate increases on producers and consumers.

Finally, investment policy for both highways and waterways is important to the railroads. New programs of infrastructure development in either can result in reductions in operating cost and increased competition to the railroads. Likewise, size-weight laws and the use of multi-unit combinations on the interstate system can have potentially negative impacts.