Economic Regulation of Oregon Intrastate Trucking: A Policy Evaluation

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The views expressed are those of the author and not necessarily those of the Public Utility Commission of Oregon or any of its members.

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I. INTRODUCTION

State trucking regulation began in Oregon in 1921—more than a decade before passage of the federal Motor Carrier Act of 1935.[1] Highways were poor and railroads were the dominant mode of transportation. Both state and federal trucking regulation were intended to protect the railroad industry from trucking competition.[2] The railroad industry has since been substantially deregulated by the Staggers Act of 1980.

Oregon, as in most states which regulate trucking, still patterns its regulatory policies after old federal trucking regulations which were extinguished by the Motor Carrier Act of 1980. That act virtually deregulated interstate trucking. Two states have never regulated trucking (Delaware and New Jersey) and eight others have since chosen to deregulate their trucking industries. California deregulated, regulated again, and began new deregulation hearings in late 1988. Both the California PUC staff[3] and California Legislative budget analyst[4] have recommended complete deregulation. The other states regulate with varying degrees of rigidity (see Table 1).

Economic regulation of the trucking industry has been questioned by economists almost from its very beginnings. It has been very difficult to find professional economists willing to support trucking regulation.[5] The California Trucking Association, for example, was apparently unable to find a professional economist to testify in favor of regulation during recent deregulation hearings before the California Public Utilities Commission. At the national level, only one economist with some prominence has risen to defend trucking regulation.[6]

There is virtually no professional economics literature which suggests that economic regulation of trucking is beneficial for consumers. An extensive search by this author found only one such attempt—a 1976 paper by the staff of the Interstate Commerce Commission (ICC) easily dis-

1. E. Bliler, Article on Public Utilities Commission of Oregon, undated mimeo in possession of author, at 4.

2. L. ROTHENBERG, THE POLITICS AND ECONOMICS OF REGULATION AND DEREGULATION: MOTOR FREIGHT TRANSPORTATION POLICY AT THE INTERSTATE COMMERCE COMMISSION, Ph.D. Dissertation, Stanford University 53, 62-63 (Sept. 1986).

3. California Public Utilities Commission, Division of Ratepayer Advocates, *Report on General Freight Regulation in California, and Program Proposals* 1 (Case I. 88-08-046) (Oct. 27, 1988).

4. California State Legislature, *The 1987-88 Budget: Perspective and Issues*, Report of the Legislative Analyst to the Joint Legislative Budget Committee, State of California, (1987) at 229.

5. M. DERTHICK & P. QUIRK, THE POLITICS OF DEREGULATION 121 (1985).

6. D. ROBYN, BRAKING THE SPECIAL INTERESTS: TRUCKING DEREGULATION AND THE POLITICS OF POLICY REFORM 83 (1987). Michael Evans has critiqued estimates of logistics cost savings from interstate deregulation. *See*, F. Beier & G. Stone, *Review of the Delaney—Evans Debate*, project memorandum, U.S. Dept. of Trans., March 1988.

missed as too "blatantly self-serving to be convincing or worthy of further notice."[7]

TABLE 1

1988 Summary of State Motor Carrier Regulation

States that regulate rates of carriers	States that apply liberal rate regulation	States that do not regulate carrier rates
Alabama	Arkansas	Alaska
California	Georgia	Arizona
Colorado	Illinois	Delaware
Connecticut	Iowa	Florida
Hawaii	Kansas	Indiana
Idaho	Maryland	Maine
Kentucky	Massachusetts	New Jersey
Louisiana	Michigan	Utah
Minnesota	Missouri	Vermont
Mississippi	Montana	Wisconsin
Nevada	Nebraska	
New Hampshire	New Mexico	
North Carolina	New York	
Ohio	North Dakota	
Oklahoma	Pennsylvania	
Oregon	South Carolina	
Rhode Island	South Dakota	
Texas	Tennessee	
Washington	Virginia	
West Virginia		
Wyoming		

Source: California Public Utilities Commission, Division of Ratepayer Advocates, "Report on General Freight Regulation in California, and Program Proposals," Case I.88-08-046, October 27, 1988, page 63. The table was amended to show that Utah now matches the federal trucking regulations—with no restrictions on entry and no limits on price reductions.

Economic regulation of trucking has experienced shrinking support by government agencies. During the recent deregulation hearings before the California PUC, for example, the Commission heard extensive testimony by its own staff favoring deregulation as well as pro-deregulation testimony by economists from three federal agencies—the U.S. Small Business Administration,[8] the U.S. Department of Transportation,[9] and

7. G.W. WILSON, ECONOMIC ANALYSIS OF INTERCITY FREIGHT TRANSPORTATION 248 (1980).

8. F. Swain, Chief Counsel for Advocacy, U.S. Small Business Administration (testimony before the California Public Utilities Commission) (case I. 88-08-046) (Nov. 15, 1988).

9. E. Rastatter, Chief, Regulatory Review and Planning Division, U.S. Department of Trans-

the Federal Trade Commission.[10] One consultant also testified that deregulation is urged by companies which control the operation of more than half of the trucks which utilize the interstate highway system, as well as by every national association of shippers and receivers.[11]

TABLE 2

	Carriers	Vehicles
State regulated	592	20,861
Partially state regulated	3,444	10,093
Private Intrastate	10,993	23,775
Other Intrastate	2,409	9,021
Interstate	16,445	156,791
Total	33,883	220,541

Source: Oregon Public Utility Commission Monthly Report of Weight-Mile Division, December 1988.

State regulation affects the operations of the entire Oregon trucking industry, although only a fraction of the industry is subject to full state regulation. There were nearly 34,000 carriers operating some 221,000 vehicles in Oregon at the close of 1988. Only about 592 of these carriers are subject to both state entry and rate regulation. These carriers generally are restricted in the markets they serve, the rates they charge, the commodities they carry, the origins and destinations they serve, and the routes over which they travel; there are even restrictions on shipment weights and frequency of service. An additional 3,444 log, sand, and gravel carriers (with 10,093 trucks) are subject to partial PUC regulation of entry, but not rates. The remaining 30,000 carriers (190,000 trucks) are not directly regulated. The Oregon Legislature, however, has enacted statutes, and the Commission has adopted regulations and policies consistent with those statutes, to ensure that these carriers do not directly compete with those who are regulated.

Oregon motor carrier regulation has evolved into a complex system requiring considerable resources on the part of state government and the carriers and shippers who must comply with the system. For example, the Oregon trucking industry is probably the only industry in the state in which prospective customers may have to appear at hearings before Ad-

portation, (testimony before the California Public Utilities Commission) (case I. 88-08-046) (Dec. 1988).

10. J. Lagenfield, Deputy Director for Antitrust, Federal Trade Commission, (testimony before the California Public Utilities Commission) (case I. 88-08-046) (Oct. 27, 1988).

11. R. Delaney, *Testimony Before the California Public Utilities Commission* 1 (case I. 88-08-046) (Oct. 27, 1988).

ministrative Law Judges and present statements of justification to gain authority for a prospective supplier to provide service to them.

Established carriers are notified in advance by Commission staff of their legal right to appear with their attorneys to object to future competition. In the face of such protests, which are often lodged routinely, the burden of proving worthiness is shifted to the applicant and to the applicant's prospective customers.

The Commission staff policy for many years was that established carriers are "entitled" to all the freight they can handle and that the adverse effect of new competition is cause for rejecting an application for new trucking authority. There is also a policy to eliminate even the *possibility* of future competition. Hence, the government-awarded right to engage in for-hire trucking becomes a valuable "property right." In fact, operating authorities to serve the public are bought and sold by the established "owners."

Even the proponents of trucking regulation must be troubled by examples of seemingly irrational government action. The Oregon Commission was compelled to hold four days of hearings on the "fitness" of one small carrier. Two dozen witnesses were called. Motions and counter motions were filed by attorneys. All of this fuss and expense for a company which had only four trucks and a total equity investment of $13,000.[12] Another Oregon carrier traveled widely throughout the state to deliver daily copies of the *Oregonian* newspaper. The carrier's 27 foot trailers were often partially empty, so it solicited freight from various shippers. Competing carriers objected, hearings were held, and eventually the Oregon Commission found the carrier guilty of providing "blatant" regular route service. A $1,000 fine was imposed.[13]

State trucking regulation also has the appearance of being distinctly unfair. The burden of proof in authority cases is always upon the applicant, even when shippers are dissatisfied with the current level of service. To conduct operations efficiently, a less than truckload ("LTL" or less than 10,000 pounds) carrier needs to have a network of related routes. It is difficult to build an efficient network when established carriers routinely lodge objections to any grants of additional authority.

One large and well-financed carrier, Viking Freight System, maintains a terminal at the Port of Portland, but lacks authority to serve Eugene, Oregon's second largest city. Viking estimates that it would need to spend at least $50,000 in legal fees alone to obtain approval to serve

12. Public Utility Commission of Oregon, *In re Application of Interior Motor Freight, Inc.*, Order No. 82-250, (Apr. 6, 1982).

13. Public Utility Commissioner of Oregon, *John J. Lobdell as FTL, Inc.*, Order No. 83-399 at 23, 28 (July 15, 1983).

Eugene, with only a 50 percent chance for approval.[14] The owner of a much smaller firm considers it to be "unfair, unjust, and wrong" for the Oregon Commission to allow someone "whose father was granted authority in 1945," to block his chances for business expansion.[15]

Both shippers and carriers have ample opportunity to evade state regulation. Shippers may choose to buy or rent, and then operate their own trucks. Large shippers may negotiate for "commodity" rate concessions. Regulated trucking companies, who in theory must provide service upon demand, in practice have the opportunity to discourage unprofitable freight through "negative selling"[16] or by simply refusing to provide service.[17]

State trucking regulation also cannot overcome the fact that Oregon is part of the national and international economic community. One enterprising carrier located in Vancouver, Washington, collected freight in neighboring Portland, drove it across the river to his terminal in Vancouver, and then back across the river 100 miles south to Eugene, Oregon. The carrier charged rates lower than Oregon carriers and argued that the freight was interstate and not subject to Oregon Commission regulation. The Ninth Circuit Court of Appeals found that the Vancouver carrier, Southwest Delivery, was providing interstate service and was therefore exempt from Oregon economic regulation.[18]

State regulators must rely upon information supplied by carriers who have no incentive to understate their costs. The carriers may allocate the costs of unregulated affiliates to their regulated trucking operations. Since many intrastate carriers also provide interstate service, there is further opportunity to allocate costs so as to make the regulated intrastate service appear more expensive.

The Oregon Commission's enforcement system depends upon anonymous complaints by one or more carriers that another carrier is "illegally" charging lower rates or providing unauthorized service. Such complaints lead to Commission investigation, and possible assessment of

14. Letter from David Hess, Viking Freight System, to OPUC Assistant Commissioner David Astle (March 22, 1988).

15. G. Etchinson, President of Vail Northwest, Inc., statement before the Public Utility Commission of Oregon (July 29, 1988).

16. A. LAMOND, COMPETITION IN THE GENERAL-FREIGHT MOTOR-CARRIER INDUSTRY 85 (1980).

17. Allen, *The Nature, Effectiveness, and Importance of Motor Carrier Common Service Obligations*, AM. ECON. REV. 111 (May 1981).

18. Gauntt, *Southwest Delivery Hauls in Regulatory Victory*, The Business Journal, Dec. 28, 1987, at 6. (Referring to Ninth Circuit Court of Appeals, CA86-7086 and CA86-7522 (Dec. 8, 1987) (unpublished decision) which appealed an ICC decision, MC-C10932). An industry spokesman was quoted as saying that interstate rates were 10 percent below Oregon intrastate rates for comparable movements.

monetary penalties ($441,000 in 1987).[19]

The actual extent of violation of state economic regulations is unknown. Commission staff inspected 262 trucks during a five day inspection period in 1986 (out of some 11,500 trucks which passed the inspection stations). One-third of the inspected trucks were found to be carrying "unauthorized" freight. Since these trucks were not selected by means of a random selection process, however, the number of violations which were found is not necessarily indicative of the total amount of violations. These results, nevertheless, suggest that some carriers may break the rules to be competitive with others who also break the rules. Clearly, economic regulation of trucking is at best a clumsy instrument of public policy, and at worst, an encouragement to engage in illegal activity.

Our economy is largely organized to promote free market competition. Government regulation or ownership of production is rare and usually confined to situations in which monopoly seems readily apparent (gas, electric, and telephone utilities) or where there are substantial societal benefits, as in sanitation, public education, or national defense. Competition is relied upon in most situations because it generally promotes an efficient allocation of production and distribution. We have laws which encourage competition. Monetary penalties and even prison sentences are imposed upon those who illegally seek to thwart competition. Comprehensive programs of entry restrictions and pricing regulation are an exception to the free market rule.

This suggests a need to carefully evaluate the public policy objectives sought by state legislatures which require economic regulation of their state trucking industries.

Oregon Revised Statutes 767.020(1) lists the "Oregon transportation goals" as follows:

> (a) Promote safe, adequate, economical, and efficient service and to promote the conservation of energy.
>
> (b) Foster sound, economic conditions in transportation.
>
> (c) Encourage the establishment and maintenance of reasonable rates for transportation services, without unjust discriminations, undue preferences or unfair or destructive competitive practices.
>
> (d) Provide specific state action immunity against all antitrust claims and prosecution in those instances when carriers lawfully develop, publish, and charge rates and provide services specifically prescribed by the commission and in those instances when carriers lawfully engage in prior consultation for purposes described in this paragraph.

Since free market competition is the predominant way in which our society has chosen to organize the production and distribution of eco-

19. Public Utility Commission of Oregon, *1987 Motor Carrier Statistics*, at 3.

nomic goods and services, an implicit assumption of Oregon trucking regulation is that one or more of the above goals would not be attained without economic regulation of trucking. Hence, the above goals may be evaluated as arguments against trucking deregulation.

II. Arguments Against Deregulation

The Oregon legislative goals may be expressed as: (a) prevention of monopolistic pricing, (b) prevention of destructive competition, (c) prevention of unjust discrimination, (d) promotion of small community service, and (e) promotion of safe trucking practices. Proponents of continued state trucking regulation often argue that economic regulation is needed to achieve these goals.

A. Natural Monopoly

The natural monopoly argument is that big companies have intrinsic cost advantages and a tendency to get bigger and bigger. Without regulation, it is argued, there would be only one or a few trucking companies surviving in each market, thus exposing shippers to monopolistic pricing.

The evidence is overwhelming that the trucking industry is not a natural monopoly, such as the gas, electric, or telephone utilities. Shippers and receivers would have the most to lose from deregulation if trucking were monopolistic. Yet these groups most often favor deregulation. Many studies support the belief, expressed by shippers and receivers, that state and interstate deregulation has lowered freight rates and improved the quality and availability of trucking service.

Trucking is regarded by informed experts as one of the most competitive industries in the United States. Entry barriers are very low; unregulated or exempt trucking companies have virtually no ability to hold their prices above their costs. State regulation acts to hamper interstate carriers which seek to establish a least cost network linking Oregon to the rest of the national economy. If there is any monopoly tendency in trucking at all, and the evidence indicates that there is none, it would be in the nationwide less-than-truckload (LTL) part of the business. Yet a small state such as Oregon clearly has little ability to regulate these large multi-state carriers.

The existence of a monopoly typically requires a high level of fixed costs, dedicated plant that cannot be shifted easily to other markets, significant barriers to entry, closely held information about production processes, and significant economies associated with larger and larger amounts of production. All these characteristics are generally lacking in the trucking industry. Asset lives are relatively short. Most costs are variable, consisting of fuel, labor expense, and highway use taxes. Start-up

costs are small and the highways are freely available. Many shippers and receivers buy, lease, and operate their own trucks.

Monopoly cost conditions seldom occur in American industry. Studies by economists indicate that most industries have "constant returns to scale," which means that expansions or contractions of output tend to leave per unit costs unchanged.[20] Studies of the motor carrier industry, particularly recent studies, have also found that the motor carrier industry generally has constant returns to scale.[21]

The need for economic regulation typically arises only when firms are able to exercise "market power" by maintaining rates above their costs. Market power is not likely to exist in an unregulated trucking market—even in small towns which can be profitably served by only one carrier. The one truck/one town carrier has no market power because there are no appreciable entry or exit barriers in the trucking industry. A potential competitor can exit without losing much of his investment. The *threat* of new competition eliminates any need for economic regulation.[22]

Even if the ability to concentrate shipments gives larger firms a cost advantage on certain routes or in certain areas, these firms cannot raise prices much above costs without risking that their customers would be approached by trucking companies which serve adjacent areas. It would be relatively easy for firms which serve contiguous areas to extend their operations or for large national firms to enter new territories.

It is hard to imagine an industry more flexible and versatile than trucking. Tractors and trailers have a variety of uses and can easily be sold. They can be quickly moved from one market to the next on short notice as demand conditions change in order to pick up almost any kind of freight.

Much of the trucking industry is *capable* of carrying a wide variety of freight. An ICC survey, cited by Boyer, showed that about 50 percent of trucks were standard vans, 16 percent were refrigerated vans which can also carry other types of freight, and 18 percent were flats or lowboys. The remaining 17 percent were tank trucks or other specialized vehicles.[23]

For most "truckload" (TL) carriers, the economies of scale are very small compared to the size of the market. The most efficient size of operation may be very close to a one truck/one person owner-operator firm.

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20. Frank, *When Are Pricing Differentials Discriminatory?* J. OF POL'Y ANALYSIS & MGMT. 239 (Winter 1983).

21. Winston, *Conceptual Developments in the Economics of Transportation: An Interpretive Survey*, J. ECON. LITERATURE 67 (Mar. 1985).

22. Bailey & Baumol, *Deregulation and the Theory of Contestable Markets*, 1 YALE J. ON REG. 111, 133-34 (1984).

23. Boyer, *Equalizing Discrimination and Cartel Pricing in Transport Rate Regulation*, J. POL. ECON. (April 1981), at 176.

Before ICC interstate deregulation, large TL carriers were better able to take advantage of network economies since they could route shipments more directly and provide more balanced service to shippers. These large carriers held this advantage because they had more ICC route authorities.[24] Current studies of the TL segment of the trucking industry show that there is little danger of monopolization even on low density routes.[25]

For the less than truckload (LTL) segment of the trucking industry, there are larger investments which must be made in terminal networks, sophisticated management information systems, and rolling stock. Even here, however, the economies are modest compared to the size of the market. Some of the earlier cost studies, using poorer data and less sophisticated research techniques, found some evidence of economies of scale in the LTL sector. These apparent economies largely disappear when shipment characteristics are taken into account. Pre-reform ICC regulation sheltered at least some relatively large LTL carriers from competition by smaller and more efficient firms.[26]

Even assuming the presence of some economies of scale does not necessarily make a case for entry and price regulation. There are some economies of scale in many unregulated industries. For example, large supermarket grocery chains probably operate at per unit costs lower than "Ma and Pa" neighborhood markets. Yet government does not impose economic regulation on the grocery industry.

Efficient trucking requires a knowledge of markets and development of an efficient network system. For many years truck brokers have supplied these informational services for exempt carriers of interstate agricultural commodities—there were perhaps 1,000 such unregulated brokers operating in the U.S. as of late 1979.[27]

In the general commodities industry, in contrast, there were less than 100 brokers operating in the U.S. by the late 1970's, as a result of restrictive ICC regulation. Following interstate deregulation, the general commodities freight brokerage industry experienced a spectacular revival. The number of general commodities brokers has risen to about 6,000. The growth of the freight brokerage industry helped new small TL trucking companies compete with larger established carriers. One study com-

24. Chiang & Friedlaender, *Output Aggregation, Network Effects, and the Measurement of Trucking Technology*, REV. OF ECON. & STATISTICS (May 1984), at 275-76.

25. L. Christensen & J. Huston, *A Reexamination of the Cost Structure for Specialized Motor Carriers, Logistics & Transportation Review* (Dec. 1987), at 345.

26. Chiang & Friedlaender, *Truck Technology and Efficient Market Structure*, REV. OF ECON. & STATISTICS (May 1985), at 252-257.

27. Taff, *A Study of Truck Brokers of Agricultural Commodities Exempt from Economic Regulation*, TRANSP. J. (Spring 1979), at 6.

pared the costs of 78 TL firms in pre-reform 1977 to the costs of 72 firms in post-reform 1983. Average costs fell by about one-third after interstate deregulation.[28]

TABLE 3

Trucking Revenue per Ton-Mile
(cents per ton-mile, 1986 dollars)

	1970	1975	1978	1980	1981	1982	1983	1984
Common Carriers	20.34	17.71	16.76	17.25	17.03	16.13	14.93	14.46
Contract Carriers	18.70	15.16	16.65	15.74	14.04	13.77	12.57	12.26

Source: Rose, Nancy T. "An Economic Assessment of Surface Freight Transportation Deregulation," Massachusetts Institute of Technology, Cambridge, Massachusetts, M.I.T. Working Paper, No. 1684-85, page 6.

Another study reported declines in real revenue per ton mile for both common carriers (both TL and LTL) and contract carriers (TL) between 1978 and 1984. The decline was 14 percent for common carriers and 24 percent for contract carriers. (See Table 3). If the natural monopoly argument had any validity, trucking companies would *raise* their prices just as soon as they are set free from regulation. Yet, there is no evidence that truckers have responded to interstate or state deregulation with *effective* price increases. Widespread discounting began—for the first time ever—after passage of the Motor Carrier Act of 1980. The published interstate tariffs no longer provide a reliable indication of the rates which are actually charged. Discounts of 30 percent to 50 percent off published interstate tariffs are common. There is abundant evidence that effective rates have generally decreased and service has improved.

If there were any danger that deregulation would bring a drift toward monopoly, one would expect to find carriers actually earning monopoly profits. But nearly one decade after the beginnings of regulatory reform, there is no evidence of monopoly profit taking. *Value Line* monitors about one dozen large carriers which have publicly traded securities. These carriers have "betas" (a risk measurement) ranging from 1.0 to 1.3, indicating that their securities are slightly more risky than the market as a whole (the overall market risk is 1.0). Regulated gas, electric and telephone monopolies typically have betas of 0.6 to 0.7, indicating significantly less risk. *Value Line* expects that these large trucking companies in 1991-93 will earn equity returns appropriate to their risk levels—ranging from 11.5% on equity to 16%, excluding the lowest (8.0%) and highest (22.0%) expected equity returns. Similarly, the Interstate Commerce Commission staff monitors the investment performance of 100 large Class

28. McMullen, *The Impact of Regulatory Reform on U.S. Motor Carriers*, J. TRANSP. ECON. & POL'Y (Sept. 1987), at 317.

1 carriers, which earned an average of 11.32% on equity in 1986 and 13.49% in 1987.[29]

When government controls are removed on trucking, competition has flourished with substantial benefits to consumers and shippers. The extensive literature is summarized in Appendix A. By all accounts, the trucking industry "largely matches the classic requirements for pure competition."[30]

B. "DESTRUCTIVE" COMPETITION

The destructive competition argument is the assertion that deregulation would become "too competitive" for the public. This argument is in direct contradiction with the previous monopoly argument that deregulation would bring less and less competition, but both arguments are commonly cited by the same opponents.

The fear of "destructive competition" appears to be the primary basis for minimum rate regulation. The perceived need to preserve a system of minimum rates is, in turn, the primary basis for entry regulation. Entry must be tightly controlled to prevent downward pressure on rates.

There simply is no evidence of any propensity for "destructive" trucking competition harmful for consumers. The very notion of "destructive" competition would probably be considered laughable by those shippers and receivers who must rely upon for-hire trucking, yet are not themselves sheltered from price and service competition. The "destructive" argument is usually advanced from the point of view of the established trucking companies, and not from the point of view of the *consumers* who are the intended beneficiaries of regulation. Healthy competition, beneficial for consumers, has been the outcome from state, interstate, and foreign trucking deregulation. The American economy is organized to promote competition because competition usually encourages efficient production and results in lower costs for consumers, competitive wages and normal profits for efficient producers. Most markets and industries work efficiently without regulated pricing. Blind and frenzied entry and exit occur rarely, if ever.

Competition is usually considered to be beneficial for consumers because competition increases the number of products and services and eliminates inefficient firms. Competition can be "destructive" for firms which cannot compete effectively due to inefficient operations, poor marketing strategies, dated techniques, or inability to respond to changes in

29. *Value Line*, Dec. 30, 1988; I.C.C. Office of Transp., *Highlights of Activity in the Property Motor Carrier Industry*, Staff Rpt. No. 11, (Aug. 1987).

30. R. CAVES, AMERICAN INDUSTRY: STRUCTURE, CONDUCT, PERFORMANCE, (5th ed., 1982), at 110.

consumer demands. There is no public outcry when a restaurant goes out of business, and many do. Why should there be a public outcry over trucking bankruptcies?

Sometimes the "destructive" competition argument is supported by references to The Great Depression. Unemployment reached nearly 25 % of the civilian labor force during the 1930's, when federal trucking regulation was introduced. Wage levels declined, for those fortunate to have a job, and trucking equipment could be purchased very cheaply. Workers in the trucking industry today, however, benefit from minimum wage laws, unemployment compensation, and social security. A reasonably healthy economy provides jobs in other industries and a market for used trucking equipment.

The destructive competition argument is particularly weak in an industry such as trucking. Unlike other regulated industries (such as gas, electric, or telephone utilities), the trucking industry does not require vast investments in fixed and immobile capital. Capital equipment in trucking have relatively short lives, can be added in small increments, and can easily be shifted to other markets. Highway use taxes must be paid only when highways are actually used. Variable costs for labor, fuel, taxes, and maintenance are relatively high in the trucking industry—perhaps 90 percent or more—and no rational businessman will operate at prices below his variable costs. It would be more profitable for him to seek other employment or quit and go fishing.

Closely related to the "destructive competition" argument are two parallel arguments that either carriers or shippers, without regulation, would be able to practice unfair pricing strategies.

The carrier argument is that dominant carriers, absent the watchful eye of government, would engage in pricing strategies designed to intentionally eliminate smaller competitors. In order for this to be a profitable business strategy, however, (a) the predator must sustain losses until his competitors are driven from the market, and (b) the successful predator must also be able to prevent new competitors from entering the market in order to recover the losses he sustained in seeking to eliminate competition. Since there would be no barriers to entry or exit in a deregulated motor carrier market, any attempt to set prices above costs would attract new entry into the industry. The predator would be unable to prevent new competition and thus be unable to recover his previous losses. Dominant carriers have incentives to expand their market coverage and provide "one carrier" service, but these carriers rarely have any financial incentive to seek intentionally to drive out smaller competing trucking

companies.[31]

The shipper argument is that, without regulation, large shippers would somehow be able to squeeze below-cost rate concessions. But carriers generally do not have durable, immobile, or specialized assets which give rise to "sunk" costs capable of serving only the dominant shipper. Carriers in a deregulated market could respond to shipper pressure by dropping that shipper and freely entering other markets. General freight carriers are used by thousands of manufacturers, wholesalers, and retailers. The fragmentary data that are available on shipper freight expenditures show that even very large shippers account for rather insignificant shares of total general-freight carrier services. If a shipper attempted to extract rate discounts that pushed rates below a competitive level, carriers in the less regulated market could quickly react by seeking new accounts and by reassigning trucks to other routes. "Given competition among shippers for trucking service, one would expect rates to be remunerative."[32] To the extent that regulation *prevents* small truckers from serving other markets, one might argue that regulation *exposes* small carriers to economic pressure by large shippers.

Shippers are unlikely to have the ability to exert pressure on truckers who have access to other markets, because most trucking costs are variable and a prudent trucker will never operate at rates below his own variable costs. Buyer pressure on sellers is likely to be a problem only when sellers have high levels of fixed cost, or when the cost of the purchased product or service is relatively large.[33] None of these characteristics are present in the trucking industry.

Predatory pricing is not a rational strategy. There has been no proven instance of predatory pricing as a result of interstate deregulation. Two formal complaints of predatory pricing were dismissed by the ICC for lack of evidence. The U.S. General Accounting Office (GAO) found no recent court cases which even alleged that predatory pricing had occurred.[34]

Concentration ratios have increased in LTL markets; however, these ratios are still about the same or below those of most U.S. manufacturing industries.[35] New LTL entry has generally not occurred since the Motor Carrier Act of 1980. However, a great many carriers were able to secure

31. Ericson & Winston, *Predatory Capacity Expansion in a Deregulated Motor Carrier Industry*, 1 RES. TRANSP. ECON. 219, 220 (1983).

32. Breen, *Antitrust and Price Competition in the Trucking Industry*, ANTITRUST BULL., Spring 1983, at 219-20.

33. Cowley, *Business and Margins and Buyer/Seller Power*, REV. ECON. & STATISTICS (May 1986), at 336-37.

34. U.S. General Accounting Office, *Trucking Regulation: Price Competition and Market Structure in the Trucking Industry* (Feb. 1987), at 10-11.

35. *Id.* at 11.

48-state ICC authority. One study found that competition had increased on 179 of 248 major routes, and that rates had declined by almost 10 percent.[36] Large LTL carriers expanded by increasing terminals and areas served, rather than by increasing concentration in markets already served.

One type of predation which *is* practiced under *regulation* is "predation by abuse of government processes."[37] Established carriers routinely lodge objections to increases in motor carrier authority to prevent competition. This tactic can raise rivals' costs without necessarily causing a loss of profits for the predators.[38]

TABLE 4

Carriers Reporting to the ICC, 1980-1987

	Class I	Class II	Class III
1980	947	2,164	14,610
1981	1,031	2,293	18,563
1982	1,144	2,139	22,059
1983	1,139	1,631	24,411
1984	1,088	1,154	27,370
1985	1,013	1,489	30,337
1986	947	1,387	33,903
1987	956	1,266	35,505

Source: Congress of the United States, Office of Technology Assessment, *Gearing Up For Safety: Motor Carrier Safety In A Competitive Environment*, Washington D.C.: U.S. Government Printing Office, Sept., 1988, at 43.

Small trucking companies have benefited from interstate trucking deregulation. Between 1982 and 1983, new business starts in trucking and warehousing rose at twice the rate of increase in the general economy (21.8 percent vs. 11.1 percent). Between 1980 and 1982, large trucking firms (over 500 employees), lost 74,812 employees while small firms (under 20 employees) *gained* 61,334 employees.[39]

Table 4 shows that the number of ICC Class III carriers (revenues less than $1 million) greatly increased after interstate deregulation.

A survey of Class III carriers found only 74, out of 1,325 respondents, who reported that they had left the industry. The number who left was

36. Breen, *Market Structure and Competition in Trucking*, Bureau of Economics, Federal Trade Commission, (Sept. 1984), at 21, 48.

37. R. BORK, THE ANTITRUST PARADOX: A POLICY AT WAR WITH ITSELF 347-348 (1978).

38. S. SALOP & D. SCHEFFMAN, *Raising Rivals' Costs*, in AMERICAN ECONOMIC ASSOCIATION: PAPERS AND PROCEEDINGS 267 (1983).

39. Phillips, *The Effect of Industry Deregulation on the Small Business Sector*, *Bus. Econ.*, (Jan. 1985), at 30.

more than offset by those who grew to become Class II or I carriers.[40] Bankruptcy rates have not been relatively higher for small trucking companies.[41]

TABLE 5

Local Trucking Company Compared to Intercity Trucking Company Failure Indices, 1971-84 (1978 = 100)

Year	Local Unregulated* (SIC 4212)	Intercity** (SIC 4213)
1971	208	218
1972	143	121
1973	135	98
1974	144	132
1975	127	166
1976	180	146
1977	119	102
1978	100	100
1979	104	120
1980	237	223
1981	380	345
1982	627	523
1983	614	816
1984	795	980
1985	760	1280

* not affected by regulatory reform
** affected by regulatory reform
Source: Dun and Bradstreet, cited by McMullen & Miklius, *Measuring the Impact of Regulatory Reform on Firm Bankruptcies: The U.S. Motor Carrier Industry*, INT'L. J. TRANSP. ECON. (June 1987) at 184.

Changes in economic conditions probably best explain changes in trucking bankruptcy rates. One study compared unregulated local pickup and delivery carriers to previously regulated intercity carriers—which were affected by regulatory reform. The failure indices for both groups were highly correlated, suggesting that the recession of the early 1980's was the primary reason for the increase in the failure rate.[42]

40. Mandex, Inc., *A Survey of Class III Motor Carriers of Property* (prepared for the U.S. Department of Transportation) (July 31, 1984), at 2, 11.

41. Boisjoly & Corsi, *Shifts in Indicators of Motor Carrier Bankruptcies: Before and After the Motor Carrier Act*, 25 PROCEEDINGS OF THE TRANSPORTATION RESEARCH FORUM 460-462 (1984).

42. Klein, M., *Five Years After the Motor Carrier Act of 1980: Motor Carrier Failures and Successes*, (prepared for the U.S. Department of Transportation) (Sept. 1985), at 11. It should be noted that although reliable statistics on bankruptcies are provided by Dun and Bradstreet, it

As shown in Table 5, the failure rate for intercity trucking companies did not rise until the early 1980's. After 1980, there was an increase both in the number of intercity trucking companies and in the number of intercity trucking bankruptcies. There was also an almost equivalent increase in the overall business failure rate index per 10,000 firms. The failure rate index for intercity trucking firms (SIC 4213) rose from 100 in 1980 to 443 in 1983, compared to an increase from 100 to 458 in the overall business failure index covering the same time period. The overall business failures reported by Dun and Bradstreet after 1983 are not comparable with earlier statistics. A study of economic variables suggested that changes in overall economic conditions provide the best explanation for changes in both trucking and overall business failures. Hence, "the claim that regulatory reform caused the increase in truck failures is not substantiated."[43]

Proponents of continued state trucking regulation often depict a seemingly alarming increase in the number of trucking company failures and in the failure rate index per 10,000 carriers. What they fail to note is that the relative number of failures is comparatively low both before and *after* federal regulatory reform. For example, in 1986 there were 1,561 failures and 85,024 carriers, the failure index per 10,000 carriers would be 183.6, meaning *less than two percent* failed.

The best evidence that trucking competition is beneficial for consumers comes from the large number of studies of trucking competition in (a) exempt unprocessed agricultural commodities, which have never been subject to ICC economic regulation; (b) intrastate and interstate trucking markets after deregulation; and (c) foreign regulated and deregulated markets. Many of these studies are listed and summarized in the Appendix. None give any support to the fear that deregulation would expose consumers either to monopolistic pricing or its polar opposite, destructive competition.

C. *Unjust Discrimination*

Proponents of trucking regulation contend that deregulation would create rates which are unjust, unfair, or discriminatory. To evaluate this argument, it is necessary to ask (1) in what sense does economic regulation result in rates which are fair, just, and nondiscriminatory; (2) what should constitute the basis for deciding whether a rate is unjust or discriminatory; and (3) would a deregulated motor carrier industry charge rates any less fair than those now charged by the regulated industry?

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is difficult to obtain an accurate estimate of the number of carriers since estimates of the number of owner-operators vary widely. This means that bankruptcy *rates* (number of bankruptcies divided by number of carriers) are not very reliable.

43. McMullen & Starr, *Measuring the Impact of Regulatory Reform on Firm Bankruptcies: The U.S. Motor Carrier Industry*, 14 INT'L. J. TRANSP. ECON. 181, 184, 186 (1987).

Government action to prevent "unjust discrimination" is usually appropriate only when consumers are unable to defend themselves—when they lack reasonable access to competitive alternatives. But it is government itself which has created this problem in intrastate trucking, since state regulation greatly reduces the number of actual and potential competitive alternatives. Oregon and perhaps two dozen other states also grant antitrust immunity for collusive ratemaking in the trucking industry—sanctioning a business practice that would be illegal in almost all other American industries. This special privilege further reduces the defenses which would ordinarily be available to consumers.

Discrimination is difficult for government officials to define and enforce in ways that do not end up doing more harm than good. Government regulation of competitive industries, such as trucking, is likely to increase costs both for those who use for-hire trucking as well as for those who are restricted in their ability to fully utilize their own private trucking fleets.

Price discrimination may be defined as the sale of a good or service by a seller to two (or more) buyers at prices which do not reflect differences in cost. Thus, price discrimination occurs when *different* prices are charged when costs are equal, *or* when the *same* price is charged when costs are *unequal*. Price discrimination can be successful only when the seller possesses market power—an ability to hold price above costs. This will occur only when there is a barrier to entry in the market that is being discriminated against. Since there are no barriers to entry in trucking, other than those imposed by restrictive regulation, successful price discrimination in an unregulated trucking industry is unlikely to occur.[44]

Much of the rationale behind rate regulation is the fear that firms with monopoly power would provide one customer with a competitive advantage which is not enjoyed by another customer. There is a feeling that "similarly situated customers" should not pay different rates for the same product.[45] It is clear that rates must not be based solely upon personal favoritism; but, otherwise it is not clear what forms of discrimination would be "undue." Hence, the prohibition against "undue discrimination" rests upon a "murky theoretical foundation" interpreted only with difficulty by regulatory agencies and the courts.[46]

The regulated segment of the Oregon trucking industry is organized into three rate bureaus, and most fully regulated carriers belong to one of these bureaus. The basic purpose of these rate bureaus is to eliminate price competition, by means of common agreement among competing

44. E. Seiden, Remarks before the Federal Bar Assoc. (Impact of Antitrust Law and Competition Policy on Pricing in the Trucking Industry) (May 18, 1984), at 78-80.

45. E. GELLHORN & R. PIERCE, JR., REGULATED INDUSTRIES 173 (1987).

46. *Id.* at 180-81.

carriers. The rate bureaus have regular meetings for the purpose of allowing carriers to agree on rate changes.

Rate changes approved by the Commission apply to all carriers that are members of the rate bureau and, in the case of a general rate increase, to all carriers with annual intrastate revenues of $250,000 from regulated traffic.

The anti-competitive influence of rate bureaus has weakened in recent years. Formerly, the initiative for rate changes came almost entirely from rate bureaus—prompted by submissions from individual trucking companies. In recent years, however, more rate proposals are being made "independently" without the concurrence of competing trucking companies.

A rate bureau is a "cartel," defined as a group of otherwise competitive firms who seek to limit competition and increase their collective profits. Cartels tend to be highly unstable because they are made up of inherently competitive firms, each of which is tempted to increase sales and profits by means of secret price concessions or by encroachment upon another member's market. For this reason, government action is usually required to sustain a cartel by establishing and enforcing market quotas and minimum rate levels.[47]

The information gathering and dissemination activities of regulatory commissions also help to keep trucking cartels intact. Competitors gain information about each others' market shares, revenues, and profits. Regulatory commissions notify cartel members of proposed rate changes, thereby allowing other competitors to match proposed rate reductions (and reducing the incentives for rate reductions). Entry restrictions foster mutual cooperation among firms that are already in the market.

Rate bureau published tariffs are seldom relied upon by shippers—perhaps because of their historic complexity. An Oregon Commission staff survey of paint manufacturers found that most regarded the regulated rate structure as so complex that they were unable to make informed choices about their shipping alternatives.[48] Similarly, an ICC survey of 1,200 randomly selected small shippers in rural communities, found that less than 5 percent actually used the rate bureau published rates.[49]

The foundation for the motor carrier rate structure is a densely

47. C. FERGUSON, MICROECONOMIC THEORY 355-360 (1972).

48. Public Utility Commissioner of Oregon, Staff Comments in MO 31, *Investigation of Intrastate Motor Carrier Rates for Transport of Paint* 3 (Aug. 1985).

49. Motor Carrier Ratemaking Study Commission, *Collective Ratemaking in the Trucking Industry*, A Report to the President and the Congress of the United States (June 1, 1983), at 62 (hereinafter M.C.R.S.C.).

printed two-inch thick National Motor Freight Classification (NMFC) manual. In theory, all the various commodities are classified with reference to four basic transportation characteristics (density, stowability, handling and liability) and then placed into rate-related classes, with Class 100 being the designated reference point. A Class 80 rating for a specific type of commodity, for example, would mean that it would move at a rate which is 80 percent of the Class 100 rate applying to shipments of the same weight moving the same distance.

Two loopholes undermine any argument that the regulated rate structure "protects" small shippers. Although as much as 90 percent of all LTL shipments may be carried under class rates, there are two avenues of escape for shippers who can credibly threaten to buy or lease and operate their own trucks: (a) *Exception rates* substitute different, and usually lower, classification ratings for a particular commodity than those assigned by the NMFC. Where an exception rate is in effect, charges are calculated in the same way but using a *lower* classification rating. (b) *Commodity rates* bypass the class rate structure entirely. They are established for a specific commodity or group of commodities moving between specific points under specific weight restrictions. Commodity rates are usually much lower than applicable class rates.[50]

Regulated motor carrier tariffs sometimes contain incentives for shippers to report that a shipment is *heavier* than its actual weight. One economist found, for example, that for a hypothetical household goods shipment weighing 7,000 pounds, it would actually be cheaper to pay for 8,000 pounds![51] This strange result occurs because motor carrier rates do not vary continuously with distance, but instead take on several discrete values depending on the weight bracket. Apparently, the use of bill weights which are *higher* than actual weights is an accepted industry practice in order to obtain a lower freight rate.[52]

It would seem very reasonable to base rates upon the actual costs incurred in providing service. But how should those costs be calculated? Historically, transportation regulators have tended to insist that trucking and railroad rates should reflect "fully allocated" (average) costs, calculated so that the sum of all costs equals the company's total revenue requirement. If average costs are not recovered, the company will not earn a profit. This makes administrative sense; but it does not make economic sense.

The overwhelming majority of professional economists say that it

50. U.S. Sen. Comm. on the Judiciary, *Federal Restraints on Competition in the Trucking Industry: Antitrust Immunity and Economic Regulation*, 96th Cong., 2nd Sess., 76-77 (1980).

51. Breen, *Regulation and Household Moving Costs*, in REGULATION, 53 (Sep./Oct. 1978).

52. Policy Management Associates, Inc., *Regulatory Reform and Motor Carrier Staff Complexity*, (prepared for DOT) (1981), at II-9, II-10.

makes no sense whatsoever to base *any* prices, including transportation rates, on measurements of "fully allocated" costs. This point is demonstrated repeatedly in economics textbooks. Economists instead believe that prices (rates) should reflect marginal costs (defined below) adjusted to reflect customer demand for the product. This economic teaching is well understood by progressive trucking companies, which seek to calculate marginal cost in order to enhance their overall profitability.[53]

A rate which makes economic sense is one which reflects the costs which *change* as a result of decisions to produce more or less. These costs are called "marginal costs." Marginal costs are defined to include all the additional costs, both public and private, which are needed to bring an additional product or service to market, including the additional costs borne by society. Trucking marginal costs can be difficult to measure, because costs vary along several dimensions, including (but not limited to) weight, distance, volume, perishability, and many other factors.

The complexity of trucking costs may be illustrated by the "backhaul problem." Suppose that a truck travels from point A to B and back again. There will be little additional cost if the truck returns fully loaded instead of empty. The additional costs of returning fully loaded—the additional fuel and labor—are called the "separable marginal costs" and normally these costs will be low.

The economically efficient set of fronthaul and backhaul rates would maximize the freight that is carried in both directions as long as the combined revenue for both segments of the trip equals the round trip marginal costs, and as long as each segment of the trip recovers its separable marginal costs.

Depending on the demand for trucking services, the appropriate set of truck rates could result in equal sharing (50-50) of the joint costs between both the fronthaul and the backhaul; or, if demand for trucking services is very, very low at point B, the appropriate level of backhaul rates could be equal to little more than the additional gas and oil consumed by returning full rather than empty. Any backhaul rate just slightly above the separable marginal costs makes some contribution to the total joint costs of the round trip and thereby benefits the fronthaul shippers. If a trucking company tried to set the backhaul rates too high, it might lose the traffic altogether which would either reduce profits or cause an increase in the fronthaul rates. Hence, an economically efficient set of fronthaul and backhaul rates must reflect demand characteristics in each market. The situation becomes even more complicated when a carrier

53. Ross, *Deregulation and the Freight Industry: How the Carriers are Coping*, J. OF ACCOUNTANCY (Jan. 1986), at 118-121.

has an opportunity to return by way of point C, etc.[54]

Regulation imposes inflexible prices and restrictive operating conditions. Carriers are limited in their ability to change prices in response to changing market opportunities, and they are confined to particular markets and commodities. This leads to emptier trailers and higher average costs for shippers and receivers. Substantial cost savings can occur when carriers are free to choose different routes and commodities. In response to interstate deregulation, for example, several shippers were able to reduce their freight costs by 25 to 60 percent solely by means of creative traffic planning to take advantage of backhaul opportunities.[55]

It is difficult to see how any government agency could prescribe economically efficient trucking rates. "Markets generate and use enormous quantities of specialized information that is extremely difficult and costly for government officials to obtain."[56] Knowledge of trucking marginal costs is difficult to ascertain. Knowledge of demand conditions is available only in very general terms to experienced traffic managers. Both costs and demand conditions are apt to change on a daily basis.

D. Small Community Service

Proponents of continued trucking regulation contend that service to small communities is more costly and that the current rate structure does not compensate for these additional costs. The proponents claim that regulation holds prices above costs in some markets, thus generating extra profits which can be used to "subsidize" small community service. It is argued that deregulation would cause small communities to suffer rate increases and/or deterioration in service.

This argument is regarded as "totally fraudulent," by America's best known scholar of regulation.[57] Economic regulation is not needed to sustain service to small communities. There is no evidence that small community service is "subsidized" by consumers in large urban communities. Truckers are independent business persons who do not voluntarily serve unprofitable locations, and there is no evidence that rural service is unprofitable at current rates. At its very heart, state trucking regulation means government action to greatly *reduce* the number of actual and potential competitors available in *all* communities—both urban and rural. It is difficult to see how such restrictions could be of *any* possible benefit to

54. 2 A. KAHN, THE ECONOMICS OF REGULATION: PRINCIPLES AND INSTITUTIONS 183-184 (1988).

55. Mentzer, *Determining Motor Carrier Backhaul Markets*, 15 INDUS. MARKETING MGMT. 242-43 (1986).

56. *Economic Report of the President*, Washington, D.C., (Feb. 1986), at 159.

57. A. KAHN, *supra* note 54, at xxi.

small communities. Surveys have shown time and again that deregulation has not changed or has improved service to small communities.

Regulators are powerless to prevent withdrawal of service to small communities. If regulators actually did prevent withdrawal of small community service, such restrictions would strongly *discourage* small community service from being provided in the first place. A trucker who began small community service would know that he might be stuck with potentially unprofitable service and could extricate himself only with difficulty.

The term "cross subsidy" has a specific meaning in economics. Rural service is subsidized by urban customers only when rural service imposes a *burden* upon urban customers. The question to be asked is: would urban customers be *better off* if rural service were not provided? The limited information which is available suggests that while rural service probably is more costly, these cost differences are already reflected in the motor rate structure.[58]

Truckers can make small community service profitable by increasing revenues and by reducing costs. Revenues may be increased by means of (a) *minimum charges*—defined as the lowest rate which a trucker will accept, or by imposing (b) *arbitraries*—"add ons" to the class rate, designed to make the shipment compensatory, imposed regardless of freight classification or shipment weight.

Costs may be reduced by means of (a) *multiple tender discounts*—which encourage shippers to consolidate two or more shipments and tender these to a carrier at one stop, or by (b) *peddle runs*—on which trucks call on a relatively long list of shippers or receivers with infrequent trips to terminals. The frequency of service can be reduced to ensure that trucks will be profitably loaded. Lower traffic congestion and flexible employee work practices also help to reduce costs in small communities.

Small trucking companies, which specialize in small community service, are not likely to subsidize small communities since there is no one to which to charge the subsidy. These small companies seem to be able to continue in business and remain profitable, which suggests that there is no subsidy.

A dozen or more small Oregon trucking companies specialized in small community service in 1985, and seemed to be able to recover their costs of service without subsidy from urban shippers. Shown below are the "operating ratios" (expenses divided by revenues) of these small Oregon trucking companies.

58. M.C.R.S.C., *supra* note 49 at 287, 326.

TABLE 6

Small Oregon Trucking Companies

	Operating Ratio	
	1985	1984
Flatts Truck Service	102.0	103.8
Fourier Truck Service	97.2	84.5
L.C. Halls Truck Line	86.8	82.2
Pendleton Heppner Freight Line	107.4	100.8
Pendleton Pilot Rock Stage Line	67.5*	53.3*
Pine Eagle Freightlines	93.3	100.0
Pro Truck Lines, Inc.	101.0	102.3
Quimby Trucking Lines	103.6	97.7
R.B. Freight Service	99.5	102.0
S & M Truck Line	91.8	83.0
T.P. Freightline	98.3	99.5
Stewart Stiles Truck Line	98.8	99.1

*Excludes owner/officer salaries.

Table 6 might suggest that two-thirds of the above carriers either operated at a loss or at a break-even point, since a 96 percent operating ratio is "marginal;" however, motor carriers often furnish unreliable financial reports. Varying levels of management compensation can distort the apparent financial picture. Many small companies also lease their equipment and engage in transactions with nonregulated affiliates. Levels of investment can vary widely but are not reflected in the operating ratio. The operating ratio does not show return on investment and may have been employed historically by regulators who sought to *conceal* high rates of return from the public.[59]

R.L. Banks and Associates conducted a more careful examination of nine carriers which specialize in small community service in various parts of the United States. The Banks study concluded that small carriers were often better able to monitor changing market conditions, provide individual service to customers and maintain control over costs.[60]

A study of the prices paid for operating certificates from 1972 to 1977 also suggested that small community service can be profitable; and that ICC regulation was ineffective in causing small community service to

59. California Public Utilities Commission, Strategic Planning Division, *California's Trucking Industry: A Review of Regulatory Policies and Objectives*, Feb. 1988, at 25. *See also*, GELLHORN AND PIERCE, *supra* note 45, at 306.

60. R.L. Banks and Associates, *Service to Small Communities*, in REGULATION OF ENTRY AND PRICING IN TRUCK TRANSPORTATION (P. MacAvoy & J. Snow eds. 1977), at 141.

be either initiated or maintained.[61] Certificates to provide intrastate trucking service to small Oregon communities are also offered for sale, and purchased in the expectation of future profitable operations.

Large multi-state trucking companies have no financial incentive to subsidize small communities. The collective ratemaking process does not contain any mechanism for compensating a firm losing money in one market with excessive profits from another market. There is also no mechanism by which a firm which experiences overall net losses, because it specializes in carrying freight to small communities, would be compensated by other firms which specialize in traffic to high-density urban areas.

There was no change in rate differentials in either Arizona or Florida following state deregulation. Changes in rate differentials for urban and rural service suggest that, if anything, rural service subsidized urban service. Rates generally declined, service quality was maintained, and there was no evidence of instability.[62] Viking, a large regional carrier, responded to Arizona deregulation by expanding its Arizona service from 67 points in 1982 to 147 points by 1988.[63]

Studies have often found scant reliance by rural shippers and receivers upon regulated trucking companies. The issue of small community service was hotly debated before Congress passed the Motor Carrier Act of 1980.

> Deregulation advocates were able to argue that the presumed benefits of regulation for small communities were, for the most part, pious fictions. . . . the [U.S.] Department of Transportation offered to survey shippers in two communities in any state represented on the committee, at the request of the respective senator. . . . In one New Mexico community, selected for Senator Schmitt by the ATA [American Trucking Association], it turned out that no regulated company was providing service . . .[64]

Most of the freight needs of small communities are met by private carriage, United Parcel Service (UPS), bus package express, and a variety of informal arrangements. Many small communities have shippers or receivers that are tied in with the large traffic departments of a chain or franchise, or that receive prepaid freight routed by someone else. Local Western Auto outlets, or General Electric appliance distributors, for example, may benefit by being part of a large, professionally managed distribu-

61. Pustay & Frew, *Motor Carrier Regulation and Service to Small Communities*, GROWTH AND CHANGE 7-8 (July 1982).

62. Beilock & Freeman, *The Effect of Rate Levels and Structures of Removing Entry and Rate Controls on Motor Carriers*, J. OF TRANSP. ECON. & POL. (MAY 1987), at 179-83.

63. Testimony before the California Public Utilities Commission by Pete Van Biene, Viking Freight System, (Docket I. 88-080-046) (Oct. 27, 1988), at 5.

64. DERTHICK AND QUIRK, *supra* note 5, at 126 and 128.

tion network.[65]

One pre-reform study examined trucking service to 128 rural communities in Eastern Oregon, Washington, Idaho, Montana, and Utah. No evidence was found to suggest that these communities were being subsidized by regular route common carriers. Although carriers "must hold themselves out to serve" up to the limits of their operating authorities, "much managerial discretion is permitted with respect to the *quantity* and *quality* of service." [Emphasis in original.] Carriers apparently were able to abandon unprofitable or relatively less profitable markets. Garrett Freightlines, for example, served Pendleton, Baker, John Day, and Burns, Oregon, as authorized by its ICC certificate, but had abandoned service to sparsely populated Izee, Mt. Vernon, and Dayville, Oregon, which were also authorized on its ICC operating certificate. The smaller the community, the less likely that it would receive regular route common carrier service. Since the ICC did not force these carriers to serve all points on their operating certificates, there was no *possibility* that service to the abandoned communities would become worse after interstate deregulation.[66]

The Oregon Commission staff conducted a survey of truck service to Maupin, Madras, Prineville, Mitchell, John Day/Canyon City, and Burns/Hines. The staff found that it was virtually impossible to obtain information about capacity, frequency, or routes of travel of private or exempt carriers. Several of the large interstate carriers were taking forest products and agricultural commodities as backhaul tonnage for eastbound movements. Some irregular route carriers were (illegally?) providing service which was very similar to regular route service.[67]

Five carriers had made informal arrangements to overcome PUC restrictions, since none were authorized to serve all six communities. Garrett Freightlines, for example, was authorized to serve John Day/Canyon City but *not* from Portland; so it made a deal with John Day Auto Freight. Similarly, although Interior Motor Freight was authorized to serve Madras from The Dalles; in practice, however, traffic from Portland to Maupin was handled by Silver Wheels from Portland to The Dalles, unloaded, and then loaded on the truck of another carrier for delivery to Maupin.[68]

Still another study, conducted by this author in 1986, found that the smaller Oregon communities are less likely to have both authorized and "available" service.

The official Oregon Highway Map suggests that about 14 percent of

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65. M.C.R.S.C., *supra* note 49, at 316-19.

66. Breen & Allen, *Common Carrier Obligations and the Provision of Motor Carrier Service to Small Rural Communities*, Q. REV. OF ECON. & BUS., Winter 1980, at 87, 90, 96, and 104.

67. Public Utility Commission of Oregon, *Transportation of Property in Selected Small Communities Within Oregon*, (unpublished study of the Motor Program Staff) 1981 (not paginated).

68. *Id.* (not paginated).

Oregon's population live in 220 towns with populations of less than 10,000 persons. Virtually all of these communities are "authorized" destinations for at least one carrier, according to records maintained by Commission staff. The route operating certificates were then compared to yellow page directory advertising listings as a measure of the degree of *actual* service availability. Advertised regular route interstate trucking service was available to 58 percent of the small Oregon communities.

TABLE 7A

Truck Service Availability to Small Oregon Communities

Population Size	Number of Communities	"Served" Communities*	Percent
0- 499	61	21	34%
500- 999	52	29	56
1,000-1,999	49	33	67
2,000-4,999	38	29	76
5,000-9,999	20	16	80
TOTAL	220	128	58

*Authorized and (yellow page) advertised regular route general commodity service.

TABLE 7B

Population Size	"Served" Communities	Authorized		Advertised	
		Carriers	Average	Carriers	Average
0- 499	21	82	3.9	30	1.4
500- 999	29	104	3.6	49	1.7
1,000-1,999	33	133	4.0	60	1.8
2,000-4,999	29	113	3.9	69	2.4
5,000-9,999	16	80	5.0	38	2.4

There is great variation within each size group. Astoria, with a population of 9,950, was an authorized destination for *only one* carrier. Dallas, population 8,770, was authorized for three carriers, but only two advertised their availability. Oregon Freightways advertised, but its service was restricted to northbound shipments of nuts, fresh and dried fruit, and cement.

The Oregon Department of Transportation conducted a study of eight small Oregon communities in 1981-1982 to determine the usage of package service provided by the intercity bus operator.[69] Four

69. Interstate bus service was deregulated by the Bus Regulatory Reform Act of 1982. As of September 1983, bus companies had eliminated or were proposing to eliminate service to 776 U.S. nonmetropolitan communities. A 1984 ICC study found that half of 1 percent of the U.S.

communities (John Day, Lakeview, Gold Beach, and Arlington) heavily used the package service. The other four communities (Condon, Heppner, Vernonia, and Canyon City) did not have bus service; however, the residents generally did not identify the lack of bus package service as a problem. There was a strong sense of "community" and self-reliance. Informal systems had been established to meet local needs. There was heavy reliance on United Parcel Service (UPS). Sometimes token payments would be made to neighbors or regular payments to drivers of private delivery trucks. Because of regulatory restrictions on the size and weight of UPS packages, and the absence of UPS weekend delivery, farmers who lacked a critical equipment part were apt to make a long trip by automobile or plane.[70]

A 1981 survey by the U.S. Department of Transportation of shippers and receivers in three small Oregon towns (Enterprise, Tillamook, and Vernonia) found that the common carrier obligation did not effectively guarantee that service would be provided. Even without regular interstate service, shippers/receivers were able to secure adequate freight services "due to the variety of freight transportation options available and their own resourcefulness."[71] The 27 Oregon business-persons interviewed were satisfied with the trucking service available to them. Small package specialists and private carriage were used to a great degree. Only 18.5 percent of the surveyed businesses primarily relied upon regulated LTL service (zero percent in Vernonia, 16.7 percent in Enterprise and 27.3 percent in Tillamook). Fifty-six percent of the respondents said that they primarily use small package specialists, and 26 percent said that they primarily use private carriage. ICC-regulated general freight common carrier service had not deteriorated in the past few years.[72]

After state deregulation in Florida, three economists conducted a detailed analysis of over 27,000 shipments made by ten major Florida intrastate carriers. Small shippers in rural areas were found to have benefited from state deregulation, although the price decrease was larger in the larger markets. The study concluded that that "there are no apparent losers" and that state deregulation was a "solid success." Rates fell by 12 to 16 percent.[73]

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population lived in those communities, some of which were suburbs of larger cities or close to communities which have bus service. The number of persons who actually used the bus service in these communities was, of course, much smaller than half of 1 percent. *See*, Pinkston, REGULATION (Sept./Dec. 1984) at 52.

70. Stevens & Norris, *The Role of the Intercity Bus Industry in Isolated Rural Regions of Oregon*, 24 PROC. OF THE TRANSP. RES. F., (1983), at 540.

71. K. Borlaug, A ONE-YEAR ASSESSMENT OF THE MOTOR CARRIER ACT OF 1980: SMALL COMMUNITY SERVICE IN NEVADA AND OREGON, 63 (1981).

72. *Id.* at 39.

73. Blair, Kasserman & McClave, *Competition on Trial: Florida Deregulation Trucking*,

Another study compared four states with strict regulation (Texas, Ohio, Minnesota, and New Mexico) with four others which have deregulated or have loose regulation (South Dakota, Florida, Maine, and Wisconsin). The study examined 50 small communities (less than 2,000 persons) in 1976, 1982, and 1984 to detect changes in the availability of trucking service. While service was found to have improved in all eight states, more improvement was found in those which had liberalized or eliminated intrastate regulation. Florida, for example, experienced major improvements in small community service after intrastate deregulation. Small community service in Ohio had also improved, since the Ohio PUC had begun to grant state-wide radial authority to truckers, thus liberalizing entry into small Ohio trucking markets.[74]

Kidder surveyed rural shippers in three northern and in three southern states. She found that very few rural shippers and receivers have experienced declines in trucking service in North Carolina, South Carolina, Georgia, Maine, New York, or Pennsylvania. More firms reported *increases* in the number of competing carriers. Three times as many firms reported an increase in trucking competition (compared to those who reported decreases). Increased competition resulted in new service options, restraint on rate increases, and widespread ability to deliver to and from most rural destinations. Motor carrier service improved for the majority of respondents in rural areas, both large and small.

> Service quality and quantity has not diminished with deregulation for the vast majority of shippers and receivers in rural areas. . . . For most shippers, very little has changed since the first study in 1978-79: a heavy dependence upon UPS for small package shipments; considerable use of private carriage; and generally acceptable levels of freight service available from an array of certificated common carriers. . . . Service quality (timeliness and security) and interstate competition is higher on the whole. Most of the respondents conclude that, on balance, regulatory reform has not resulted in adverse shipping conditions. Indeed, a growing number of rural firms are willing to attribute some of their recent improvements to regulatory changes.[75]

All of the Syracuse University surveys concluded that interstate deregulation benefited a broad cross section of firms in rural communities.

Rural communities have also benefited from the growth of the interstate freight brokerage industry, according to a survey of the brokerage

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CHALLENGE (Sept./Oct. 1987), at 60-64. *See also*, Blair, Kasserman & McClave *Motor Carrier Deregulation: The Florida Experiment*, REV. OF ECON. & STATISTICS (Feb. 1986).

74. Pustay, *The Small Community Service Issue: The Impact of State and Federal Regulation*, 24 PROC. OF THE TRANSP. RES. F. (1985), at 350-54.

75. Kidder, *Fourth Follow-up Study of Shipper/Receiver Mode Choice in Selected Rural Communities, 1984-1985* (prepared by Syracuse University for DOT) (Aug. 1985), at 29-30.

industry. Nearly half of the broker respondents said that they provide extensive service to small isolated communities. The respondents said they primarily serve small shippers and handle a substantial amount of LTL traffic.[76] These results suggest that rural Oregon communities may be poorly served by current restrictions on entry into intrastate freight brokerage.

A study of deregulated British trucking companies found that there were substantial economies related to vehicle size, and that smaller operators tended to use smaller trucks.[77] This finding also implies that Oregon trucking regulation may result in unnecessarily high cost service to rural areas, since state regulation prevents new entry and confines certificated truckers to limited market areas.

E. Trucking Safety

The proponents of continued economic regulation allege that deregulation has had a disastrous effect on safety. They also argue that economic regulation leads to higher profits and that this money is spent in improved driver training, better maintenance, or new equipment.

There is no evidence, however, of a systematic relationship between economic regulation and trucking safety. Economic regulation could not possibly be an effective way to improve trucking safety, since most of the industry is not subject to *any* form of state economic regulation. National accident, injury, and fatality rates per vehicle mile have all declined over the past 10 years—a period of interstate and growing state deregulation. Regulated Oregon intrastate carriers of general commodities have accident rates which are higher than the Oregon accident rates of comparable interstate carriers which are no longer subject to economic regulation. More than 80 percent of Oregon truck accidents are attributed to driver error. Direct inspection and enforcement is the best way to improve driver performance.

Government does not respond to other safety issues by comprehensive programs of entry and rate regulation. For example, the profits of chemical companies are not intentionally fattened by restricting entry and by maintaining minimum price controls in the hope that the chemical companies will "do something" about toxic wastes.

Safe service is reliable service. Shippers are willing to pay more for reliable service. Cutting back on safety does not necessarily improve profits. The few carriers subject to state economic regulation are not

76. Crum, *The Expanded Role of Motor Freight Brokers in the Wake of Regulatory Reform*, Transp. J. (Summer 1985), at 13-14.

77. Bayliss, *The Structure of the Road Haulage Industry in the United Kingdom, and Optimum Scale*, J. Transport Econ. & Pol'y (May 1986), at 169.

obliged to spend excess profits on safety improvements. Economic regulation would, therefore, be at best only a very clumsy and indirect tool by which to improve truck safety.

Truck accident statistics suffer from at least two deficiencies. The first is that they depend upon voluntary reporting by carriers, and may be underreported by as much as 40 percent.[78] An apparent increase in accidents may therefore reflect nothing more than improved reporting by carriers. Furthermore, there have been increases in the permissible length, width and weight of tractor trailers. Probably nothing can be done to remedy these deficiencies in the historical data.

The second defect is that only accidents above a certain dollar threshold are reported. The threshold was $2,000 from 1973 through 1985—which means that inflationary increases in repair costs would show up in the statistics as an *apparent* increase in the number of accidents. This defect can be partially remedied. When the historical accident data are adjusted to remove effects of inflation, it is evident that safety performance has significantly *improved* since 1978. See Table 8.

Oregon accident statistics also do not support the claim that interstate deregulation was followed by a deterioration in trucking safety. The Oregon Commission obtains accident information directly from the Oregon State Police, county, and city police departments. This data, however, is still subject to error. Not all accidents get reported. Many carriers haul both regulated intrastate freight as well as (deregulated) interstate freight, and sometimes carry freight in still a third category. Accidents, however, are reflected in only *one* category, which may make statistical comparisons meaningless.

Yet, if there is a relationship between economic regulation and trucking safety, it is still not one which is apparent from Oregon statistics. Oregon regulated intrastate general commodities carriers have had accident rates *higher* than the deregulated interstate general commodities carriers. The year 1985 was the only year in which the state-regulated carriers had a lower accident rate. See Table 9.

Some proponents of economic regulation still cite the views of the late D. Wyckoff, a former trucking company executive who taught at Harvard Business School.[79] Wyckoff conducted a nationwide survey which seemed to indicate that unregulated owner-operators had an accident rate substantially higher than did the drivers of regulated common carriers. His research was widely publicized and was cited by an Oregon legislative report on trucking regulation.

78. U.S. DEPARTMENT OF TRANSPORTATION, *Safety Review Taskforce Report on the Federal Highway Administration's Motor Carrier Safety Program* (Sept. 1986), at 6.

79. D. WYCKOFF, TRUCK DRIVERS IN AMERICA (1979).

Wyckoff computed accident rates by giving the same weight to all drivers, regardless of differences in the mileages driven. For example, if one driver drove 50,000 miles and had one accident, Wyckoff would treat this driver as if he had two accidents per 100,000 miles.[80] This method of averaging might be acceptable for some applications. Wyckoff's sample

TABLE 8

Motor Carrier Accident Rates, 1976-87
(accidents per 100 million vehicle miles traveled)

Year	Self-Reported Accidents[1]	Fatal Accidents[2]	Fatalities[2]
1978	50.9	6.45	7.66
1979	48.2	6.43	7.68
1980	41.1	5.43	6.51
1981	40.2	5.59	6.65
1982	40.5	5.28	6.34
1983	37.3	5.23	6.26
1984	38.2	5.05	5.95
1985	36.5	4.89	5.85
1986	31.7	4.67	5.49
1987	30.2	4.33	5.10

[1]Federal Highway Administration, Office of Motor Carriers, reports from Interstate carriers. Adjusted to exclude accidents that would not have been reportable if the minimum damages threshold had been adjusted for inflation.

[2]National Highway Transportation Safety Administration, reports of highway fatalities involving combination vehicles.

Source: U.S. Dept. of Commerce, 1989, U.S. Industrial Outlook, pages 52-58; Rastatter, *supra* note 9, at 13.

TABLE 9

Oregon Truck Accident Rates
Intrastate vs. Interstate General Commodities Carriers
(Accidents Per Million Miles)
1980-1987

CLASS	1980	1981	1982	1983	1984	1985	1986	1987
Intrastate	1.33	1.47	1.28	1.50	1.42	1.26	1.56	1.13
Interstate	0.99	1.17	0.74	0.94	1.41	1.40	1.39	1.05

Source: Oregon Public Utility Commission, 1987 Truck Inspections and Truck Accidents in Oregon: Statistics and Summary.

80. T. Domencich, M. Gottleib, & S. Sobotka, *The Relationship Between Motor Carrier Economic Regulation and Highway Safety* (prepared for U.S. Department of Transportation) (Sept. 1981), at 13-14.

for unregulated owner-operators, however, was relatively small and contained an extreme observation. *One* driver had an accident and drove only 2,000 miles. The averaging method chosen by Wyckoff resulted in this driver being treated as if he had 50 accidents per 100,000 miles! The entire difference between the published accident rate for the exempt owner-operator category and the published rates for the other categories is attributable to this *single* unusual observation.[81] When the Wyckoff data is corrected, the apparent relationship between economic regulation and trucking safety disappears.[82]

TABLE 10

Wyckoff's Reported and Corrected Truck Accident Data

	Reportable Accidents/ 100,000 Miles Per Year	
Type of Operation	Original Wyckoff Data*	Corrected Wyckoff Data**
Exempt, Owner-Operator	0.70	0.184
Contract, Owner-Operator	0.33	0.299
Common, Owner-Operator	0.31	0.287
Contract, Company	0.26	0.183
Exempt, Company	0.24	0.230
Private	0.24	0.205
Common, Company	0.19	0.140

*Cited by Oregon Senate Interim Task Force Report on Regulation of the Motor Carrier Industry, January 1980, page 68.

**Domencich, Gottleib, and Sobotka, 1980, page 16.

An examination of audit data from the Bureau of Motor Carrier Safety (BMCS) also showed that the estimated accident rates were the same (to two significant digits) for exempt, contract, and common carriers.[83]

Finally, an independent survey was made of drivers at 18 different truck stops in the U.S. Drivers' mileage and accidents were classified into unambiguous non-overlapping regulatory and employment status categories. Accident rate estimates in all categories were found to be basically identical. The researchers concluded that "there is no systematic relationship between economic regulation and accident rates."[84]

A number of media articles or statements from industry representatives are sometimes cited in an attempt to "prove" that there is a mean-

81. *Id.* at 14-15.
82. *Id.* at 48.
83. *Id.* at 29.
84. *Id.* at 48.

ingful relationship between economic regulation and trucking safety. Several of these claims were carefully reviewed by a California Public Utilities Commission/California Highway Patrol joint task force (1987) and found to be inconclusive, or misleading. Based upon its own research and literature review, the task force also found no apparent relationship between economic regulation and trucking safety.[85]

A study of accidents from 298 carriers found that "a carrier's legal classification as a contract or private carrier, in contrast to a common carrier, is not associated with a significantly different carrier accident rate." Furthermore, "changes in a carrier's net operating income are not linked statistically with changes in accident rates."[86]

A more recent study found "no worsening of safety performance among the established carriers during the 1977 to 1984 transition." However, firms operating "in a precarious financial situation have significantly higher accident rates than do those not in financial distress." Owner-operators appeared to have a somewhat higher accident rate, both before deregulation and afterwards. These findings suggest that safety enforcement programs should place more emphasis on new entrants and on firms in financial distress.[87]

Another researcher used three alternative econometric models to analyze possible safety effects from passage of the Motor Carrier Act of 1980. The accident rate, the injury rate, and the fatality rate per vehicle mile traveled have all declined since 1980. The analysis concluded that "there is no relationship between economic regulation and truck safety performance."[88]

A recent report by the Office of Technology Assessment also concluded that "no clear link can be established between changes in economic regulation and motor carrier safety."[89] Data from the deregulated Australian,[90] British,[91] and New Zealand[92] trucking industries also sug-

85. California Public Utilities Commission, Joint Legislative Report with California Highway Patrol, *AB 2678 Report on Truck Safety* (Nov. 1987), at 39-53.

86. Corsi, Fanara, & Roberts, *Linkages Between Motor Carrier Accidents and Safety Regulation*, LOGISTICS & TRANSP. REV. (June 1984), at 157-58.

87. Corsi, Fanara, & Jarrell, *Safety Performance of Pre-MCA Motor Carriers, 1977 versus 1984*, TRANSP. J. (Spring 1988), at 34-36.

88. R. Cherry, *Did Regulatory Reform Reduce Truck Safety?* (Americans for Safe and Competitive Trucking) (June 17, 1987), at 2.

89. Office of Technology Assessment, *Gearing Up for Safety: Motor Carrier Safety in a Competitive Environment* (Sept. 1988), at 10.

90. Rosengren & Webb, *The Australian Road Freight Industry: Is There A Need for Government Regulation?*, AUSTRALIAN ECONOMIC PAPERS (Dec. 1981), at 306.

91. KAHN, *supra* note 54, at 186.

92. W. Firth & N. Derby, *Road Safety Effects of Deregulation of Heavy Freight Transport in New Zealand*, (Proceedings of Australian Road Research Board) (Aug. 1986), at 103.

gest that there is no relationship between economic regulation and trucking safety.

Mechanical defects were responsible for only 6.5 percent of total truck accidents in Oregon during 1987. Of far greater importance is the driving performance of the truck driver himself and the other driver, who were collectively responsible for 82.5 percent of total truck accidents in Oregon during 1987 (truck driver—47.4 percent; other driver—35.1 percent).[93] Driving performance is best controlled by direct inspection and enforcement.

Northwestern University held a conference in June, 1987, on "Transportation Deregulation and Safety" with participation from the Teamsters Union, American Trucking Association, and the U.S. Department of Transportation. The executive summary of the conference proceedings stated that:

> Participants at the Northwestern University conference strongly supported the position that *where safety difficulties are identified, they should be addressed by safety measures and not economic regulation.*[94]

Unfortunately the debate about economic regulation has often diverted attention away from more fruitful discussions of how safety could be improved by more direct enforcement.

III. The Effects of Deregulation

Any estimate of the potential effects of state trucking deregulation must consider the central role occupied by trucking in a modern economy. Raw materials may travel by truck at many different stages as they are converted into finished products for sale to consumers at retail outlets. Every trip which occurs in Oregon is influenced by state trucking regulation, even though the carrier itself may not be subject to direct state entry and rate regulation. It appears that deregulation of transportation has been followed by lower freight rates, faster inventory turnover, a lowering of the premium paid for use of organized labor, and a growth in total trucking employment.

Although any such estimate is necessarily conjectural, the potential benefit from Oregon trucking deregulation could be quite high. The trucking industry is used by business owners who want to minimize their total costs, including transportation costs, inventory carrying costs, and warehouse expenses. Producers must balance two different risks: the risk of not having enough raw materials on hand to continue production and the

93. Oregon Public Utility Commission, *1987 Truck Inspections and Truck Accidents in Oregon: Statistics and Summary*, at 3.

94. L. Moses & I. Savage, *Transportation Deregulation and Safety: Summary Reports of a Conference*, Northwestern University (June 25-29, 1987), at 6 (emphasis added).

risk of not having enough finished goods to meet the needs of their customers. A lack of adequate raw materials bring a halt to production. An insufficient supply of finished goods means that some customer orders cannot be filled on a timely basis.

Consumers benefit when logistics costs are kept low. An estimated thirty cents of every consumer dollars spent on goods goes for logistics costs—defined as transportation, inventory carrying costs and warehousing expense.[95] Personal consumption expenditures (less services) amount to about 38% of personal income in the United States.

Logistics costs are not directly reported in the national income accounts, and must therefore be estimated. Table 11 shows one such calculation of logistics costs. Line 2 shows total business inventories for the United States at $841 billion, as reported by the U.S. Department of Commerce. In addition, costs associated with warehousing, insuring, and accounting for these inventories, are judged by one logistics expert to average about 19% (line 3). A return must be earned on the inventory investment since lenders require compensation for the use of their funds.

Price changes, however, make inventory investment rather speculative. For example, suppose a business owner had $100 invested in an inventory of goods which later appreciated in price by 10%. He would have realized a $10 paper profit on the investment; which would have lowered the effective cost of a bank loan. Considering various inventory price level changes, it has been estimated that inventory carrying costs have averaged about 3.5% per annum from 1974 through 1986 (line 4). Add in transportation costs, (line 5), and a small amount for administrative costs (line 6), and the total estimate of 1986 logistics costs amounts to $425 billion in 1982 dollars.

A few additional calculations suggest that there have been significant improvements in logistics management in recent years. In 1980, the ratio of logistics costs to the nonservice component Gross National Product (GNP) was .260 (line 8 of Table 11). Non-service GNP grew by $282.4 billion for 1980 to 1986. If logistics costs in 1986 had also been .260 of non-service GNP, national logistics costs would have increased by $84 billion in 1982 dollars.

Inventory investment is also influenced by changes in the level of business activity. It may therefore be desirable to take a longer perspective, to smooth the effects of economic fluctuations. Logistics costs averaged about 26.1 percent of non-service GNP during the 1974-79 period, and then declined to an average of 24.0 percent during 1981-86; this

95. R. SAMPSON, M. FARRIS & D. SHROCK, DOMESTIC TRANSPORTATION: PRACTICE, THEORY, AND POLICY 16 (5th ed. 1985).

TABLE 11

Logistics Cost Savings
(1982 Dollars)

	1980	1986
1. Non-Service GNP	1676.0	1958.4
2. Total Business Inventory	769.1	841.0
3. Non-Interest Inventory Cost (19%* Line 2)	146.1	159.8
4. Constant Real Interest Rate Carrying Cost (3.5%* Line 2)	26.9	29.4
5. Transportation Cost	244.9	221.2
6. Administrative Cost	17.9	14.7
7. Constant Real (Interest Adjusted) Total Logistics Cost (Lines 3+4+5+6)	435.8	425.1
8. Ratio of Interest Adjusted Total Logistics Cost to Non-Service GNP (Line 7 - Line 1)	.260	.217

1986 Cost Savings:

(.260 − .217) = 4.3% savings

4.3% × 1958.4 = $84.21 billion

Post Deregulation Average:

Average Ratio of Interest Adjusted Total Logistics Cost to Non-Service GNP:

Average (1974 - 1979)	.261
Average (1981 - 1986)	.240
Difference:	.021 = 2.1%

2.1% *1958.4 = $37.69 billion

Source: F. Beier & G. Stone, *Review of the Delaney-Evans Debate*, project memorandum, U.S. Department of Transportation, Cambridge, Massachusetts, March, 1988, at 24-27.

change is a decline of 23.1 percent, and a savings of nearly $38 billion per year in 1982 dollars.

Food and clothing are large parts of every household budget. Revolutionary changes have been occurring in the way these essential products are being provided. Two specific examples show how consumers have benefited from reductions in logistics costs made possible by transportation deregulation.

More than half the groceries purchased today are checked out at cash registers hooked up to optical scanners. The data entered at the checkout stand reduces paperwork, and allows for "rapid price changes, measurement of consumer response to advertising, closer inventory control, precise dispatch orders for trucking . . . and reduced error rates in billing, ordering, and pricing."[96]

96. Office of Technology Assessment, *Technology and the American Transition: Choices for the Future* (1988), at 41.

Interstate trucking deregulation has allowed supermarkets and grocery wholesalers to use their trucking fleets more productively. Some have been using 60 to 80 percent of their trucks to backhaul manufacturers' goods. Familiar names include Borden, Frito-Lay, Kellogg, Quaker Oats, and T.J. Lipton. An estimated $169 million was directly saved by food and grocery distributors during 1982.[97]

Consumers have also benefited from changes in clothing production and distribution. The U.S. clothing industry has been under severe pressure from foreign competition. The industry is responding by developing an integrated system from fiber production to retail sales. The goal is to reduce greatly the 65 weeks now required to move fiber into a retail store as a finished product.[98]

J.C. Penney, for example, has been linked with a number of apparel makers such as J.P. Stevens, and with DuPont, the largest fiber manufacturer. In a pilot project, selected J.C. Penney locations were able to order clothing directly from participating suppliers. These orders were then electronically transmitted to the fabric and fiber makers who would send raw materials using a "just-in-time" delivery system. The manufacturers had set up flexible production processes, which allowed short set up and fast turn around on customer orders. This system substantially reduced inventory holding costs.[99] This improvement is particularly important in retailing, where forced markdown clearance sales may amount to as much as 14 percent of sales.[100] Inventory reductions of as much as two-thirds have been reported.[101] These changes are only beginning. The apparel industry is expected to evolve into "highly responsive networks" composed of "comparatively small establishments connected together by a well-managed communication and transportation system."[102]

The recent fall in national logistics costs "is equivalent to an increase of almost 3 percent in per capita income." These improvements would have been largely impossible under restrictive pre-reform ICC regulation. Although most of the benefits from transportation deregulation may have already been realized, it has been estimated that an additional $20 to $30 billion in transportation and logistics savings may be obtainable by eliminating the remaining vestiges of ICC economic regulation and by federal

97. Entwisle, *Super (Market) Strategies: Grocery Trucking Comes Full Circle*, DISTRIBUTION (Feb. 1984), at 54-55, 58.

98. Office of Technology, *supra* note 96, at 47.

99. Davidson, *Trends in Telecommunications Networks: Regulatory Issues and the Outlook for the U.S. Information Economy* (Federal Communications Commission Docket 87-313) (Apr. 1988), at 3, 4.

100. Office of Technology, *supra* note 96, at 239.

101. F. GHADAR, W. DAVIDSON AND C. FEIGENOFF, U.S. INDUSTRIAL COMPETITIVENESS: THE CASE OF THE TEXTILE AND APPAREL INDUSTRIES 98 (1987).

102. Office of Technology, *supra* note 96, at 239-240.

preemption of state regulation.[103]

State trucking regulation imposes internal trade barriers in the U.S. The European Economic Community is moving toward complete elimination of trucking entry and pricing regulation by the end of 1992. Since the production and distribution of domestic products often involves ten or more separate movements within the U.S., while imports usually involve only one or two movements, continued state trucking regulation may cause U.S. products to become increasingly less competitive in relation to foreign imports.[104]

As impressive as these technological improvements are, such streamlined logistical systems will not work without highly reliable transportation systems, and often that requires dedicated service under a performance contract with *one* carrier with penalties for late delivery to the assembly line. Pre-deregulation such penalties were considered to be illegal rebates. Shippers simply do not have time or patience to deal with a dozen carriers, each with highly particular and restrictive regulatory operating rights, none of which match precisely the shipper's business operations. Nor do shippers patiently endure the uncertain outcome of regulatory proceedings.

Before passage of the Motor Carrier Act of 1980, no interstate carrier had 48-state ICC authority. Private carriers were denied the right to accept for-hire freight. Under strict ICC regulation, a carrier's operating permit application, routinely faced opposition from other carriers—even from those not hauling the same commodities. Thus, carriers wishing to obtain a permit would often have to incorporate cost increasing restrictions to appease protesting carriers or risk jeopardizing the entire application. The resulting crazy quilt pattern of restrictions increased empty backhaul mileage, caused circuitous routes, and imposed restrictions on commodities which could be hauled. Two former ICC employees found that 84% of the ICC certificates granted in pre-reform 1976 were for *one-way authority only*.[105] In one notorious instance, a frustrated carrier filed an application to haul (non-existent) yak fat, only to be met with protests from 13 carriers.[106]

The pre-reform ICC restrictions led to a flourishing market for the sale and purchase of the legal right to haul freight from one point to another. The pattern of operating rights was similar to a jigsaw puzzle. Carriers often had to purchase operating rights to cope with "the complex web of inefficiencies" caused by detailed regulation of routes, commodities and

103. U.S. Dept. of Com., *1989 U.S. Industrial Outlook*, at 52-6, 52-7.

104. *Id.* at 52-7, 8, 9.

105. Mabley & Strack, *Deregulation—A Green Light for Trucking Efficiency*, REGULATION (July/Aug.) 1982), at 42.

106. Robyn, *supra* note 6, at 64.

services.[107] One researcher examined the sales of 1,500 ICC operating certificates between 1971 and 1977. He could predict the level of regulation-induced monopoly profits "simply by determining the level of service demand that is present in the service area."[108] Oregon state trucking regulation has likewise created value for the owners of operating certificates, which are also sometimes sold for a profit.

After passage of the Motor Carrier Act of 1980, some 4,000 interstate carriers were granted 48-state ICC authority. One-way restrictions were no longer imposed. Carriers were able to remove operating restrictions from their ICC certificates. Private carriers could obtain ICC authority to accept for-hire freight. Interstate carriers were able to obtain much broader ICC authority and directly control pickup from shippers, consolidate freight, and provide direct delivery from the plant to the customer. A range of highly non-traditional services have been provided by some carriers, including appliance installation, simple servicing, and holding safety inventory stocks close to the point of need. Carriers were able to work directly with shippers and receivers to ensure that all the components for a set production period arrive "just-in-time." Savings from 8 to 66 percent have been realized over traditional LTL class rates.[109]

Computers, telecommunications networks and management information systems are being used to achieve efficiencies undreamed of even fifteen years ago. Federal Express pioneered the use of the hub and spoke system and transformed the airfreight industry. Yellow Freight made major investments in information and telecommunications systems to be able to track LTL shipments across the U.S.[110]

Large multi-state LTL carriers stress the logistics advantages to shippers of dealing with a carrier which offers one-stop shopping, serving many different areas and locations. These carriers offer logistics planning assistance, and guaranteed delivery using state-of-the-art information systems. Smaller regional carriers claim that they offer superior personal attention and low rates by concentrating on smaller territories. A 1985 survey of manufacturers found that 40 percent had implemented just-in-time inventory systems. An additional 40 percent were planning to do so by 1987.[111]

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107. Kafoglis, *A Paradox of Regulated Trucking: Valuable Operating Rights in a 'Competitive' Industry*, AEI J. ON GOV'T. & SOC'Y (Sept./Oct. 1977), at 32.

108. Frew, *The Existence of Monopoly Profits in the Motor Carrier Industry*, J. OF L. & ECON. (Oct. 1981), at 313.

109. Anderson & Probst, *Innovative Shipper Transportation Options: The Post-Deregulation Experience*, 27 PROC. OF THE TRANSP. RES. F. (1986), at 216, 219, 221.

110. C. WISEMAN, STRATEGY AND COMPUTERS: INFORMATION SYSTEMS AS COMPETITIVE WEAPONS (1985), at 113-15, 140-41.

111. ICC, Office of Transportation Analysis, *Highlights of Activity in the Property Motor Carrier Industry*, Staff Report No. 11 (Aug. 1987), at 7-9.

Continued state trucking regulation thwarts development of consistent pricing systems and retards the introduction of more efficient methods of transferring information. Regulators need a clear audit trail of documentation in order to determine if rules have been broken. Shippers find it confusing to have to deal with two freight rate structures—one set by state authorities, the other freely negotiated for interstate movements. Shippers are also unwilling to spend the time required to participate in state regulatory proceedings.[112] Moreover, state regulation impedes the introduction of electronic data interchange systems—computer to computer exchange of bills of lading, freight bills, rate quotes, delivery receipts, trailer manifests, and other documents.[113]

Interstate trucking deregulation has apparently encouraged the beginnings of a futures market for TL freight in the United States,[114] which will further increase the competitiveness of the U.S. trucking industry. Such a system already appears to be well developed in France. Shippers or receivers may list their needs on a computerized information service. French truckers also list their schedules and the quantity of available capacity on each route. Empty backhaul space can be listed, for example, followed by a request for customers who wish to ship cargo on that route. This request by the French trucker may be matched with the requests by customers who wish to ship that route. Such a system permits easy scheduling and helps to make better use of the capacity of the French trucking industry.[115]

Trucking firms could be regulated on a *firm-by-firm* basis, as with public utilities. In Oregon, however, trucking companies are regulated on an *aggregate* basis. Firms of varying sizes, markets, and cost characteristics are lumped together and treated as a group for rate setting. This practice reduces administrative costs but tend to trade one form of inefficiency for another. It encourages price leadership and the padding of costs, as less efficient firms are included within the regulatory averaging process. Competitive unregulated markets would force these firms to make improvements. Regulators tend to seek "fair results" which allow some of the inefficient to survive, thereby increasing average costs. Inefficient carriers can survive in secure market niches, and efficient carriers find their expansion limited by government restrictions. The aggregate rate of return may appear reasonable on a relatively high level of average

112. G. Gorza, American National Can Co. testimony before Calif. Public Utility Commission (Oct. 26, 1988), at 6.

113. E. Hulton, Viking Freight System testimony before Calif. Public Utility Commission (Oct. 27, 1988), at 1.

114. Owen, *Deregulation in the Trucking Industry*, FTC Report (May 1988), at 17.

115. Davidson, *supra* note 99, at 14-15.

costs.[116] Pre-reform ICC regulation, in fact, did foster inefficiency and prevent the establishment of least-cost network systems.[117]

The productivity gains made possible by interstate deregulation occurred to some extent at the expense of organized labor in the trucking industry. ICC regulation had created an opportunity for organized labor to earn wages substantially above that paid for similarly skilled nonunionized trucking industry employes. Labor is a large component of total cost, particularly for LTL carriers. Unionized carriers paid wages as much as 50 percent above the wages paid for similarly skilled employes at nonunionized carriers.[118] By the mid-1970's, even before the beginnings of ICC regulatory reform, unionized carriers began to feel substantial competitive pressure from nonunionized carriers. The smaller unionized carriers had particular difficulty competing and were often forced to seek "under the table" wage and working practice concessions from local unions.[119] The number of workers covered by the National Master Freight Agreement (NMFA) dwindled by ten percent during the 1970's (from 306,037 in 1970 to 277,017 by 1979). Enactment of the Motor Carrier Act of 1980 was followed by a recession, and a substantial decline in NMFA coverage to somewhere between 200,000 to 160,000 workers by 1985.[120]

Interstate deregulation has reduced but not eliminated the wage premium earned by the unionized segment of the trucking industry. Data compiled by the Teamsters Union reportedly indicate that in 1985 NMFA drivers earned $40,000 per year (working an average of 50 hours per week) compared to only $22,000 for nonunionized drivers.[121] Thus, unionized carriers are likely to continue to feel competitive pressure from nonunionized carriers.

Total employment in the U.S. trucking industry grew by 8.6% from 1.249 million in 1979 to 1.356 million by 1987.[122] Employment in the Oregon trucking industry increased by 13.7% over the same period (from 17,198 to 19,561).[123] The average hourly earnings in the trucking indus-

116. Daugherty, *Regulation and Industrial Organization*, J. POL. ECON. (Oct. 1984), at 949-950.

117. McMullen & Stanley, *The Impact of Deregulation on the Production structure of the U.S. Motor Carrier Industry*, 26 ECONOMIC INQUIRY 314 (Apr. 1988).

118. Rose, Nancy L., "Labor Rent-Sharing and Regulation: Evidence from the Trucking Industry," J. OF POL. ECON. (Dec. 1987), at 1175.

119. Perry, *Deregulation and the Decline of the Unionized Trucking Industry*, Labor Relations and Public Policy Series No. 64, The Wharton Shool, University of Pennsylvania, (1986), at 65-68.

120. *Id.* at 2, 10.

121. ICC, *supra* note 111, at 19.

122. Supplement to Employment and Earnings, U.S. Department of Labor.

123. Oregon Employment Division, Research and Statistics.

try are about 12.3 percent higher than in the manufacturing sector.[124] Unemployment in the U.S. trucking industry since 1978 has been about the same or slightly below that of the manufacturing sector.[125]

Oregon trucking regulation protects the regulated carriers by imposing restrictions to limit the usefulness of private carriers who might otherwise be able to market their excess capacity and compete with the regulated carriers. Private interstate carriers won several major concessions in the Motor Carrier Act of 1980 which are still denied to Oregon intrastate private carriers.

Before interstate deregulation, empty backhauls for private carriers in the U.S. were estimated to be 27 percent, or two-thirds greater than that of for-hire carriers. With interstate regulatory reform, private carriers significantly reduced empty backhaul mileage to 11 to 12 percent.[126]

In theory, private carriers can obtain for-hire authority in Oregon. In practice, regulation of entry is so restrictive that only five percent of Oregon private carriers have obtained a certificate to provide for-hire service, according to a 1985 staff survey of 73 private carriers (each of which operates 20 or more power units plated in Oregon).[127] Oregon also prohibits compensated intercorporate hauling, which is permitted by federal law.

One carrier responded to the 1985 Oregon PUC staff survey by saying that the state policy on intercorporate hauling had forced him to merge five of six corporate subsidiaries into the corporate parent, in order to work around the Commission rules. Oregon policy also makes it difficult for private businesses to lease and operate a truck and driver—the driver must either become an employee of the lessee, or the lessor must have for-hire authority (which is extremely difficult to obtain). A majority (71 percent) of the Oregon private carriers who were surveyed said that they would like Oregon law on the use of private fleets to be made consistent with federal law. Five carriers said that a revision of Oregon law on intercorporate hauling would encourage their company to expand its Oregon operations.[128]

A large number of studies are available comparing rates before and after deregulation, comparing the unregulated to regulated carriers, determining the rate effects implicit in the sale of operating certificates, or the fall in stock market values following interstate deregulation. Florida

124. A. Kahn, (Testimony before the Calif. Public Utilities Commission, Docket I. 88-08-046) (Oct. 27, 1988), at 26.

125. ICC, *supra* note 111 at 30.

126. STANDARD AND POOR'S INDUSTRY SURVEYS (Sept. 22, 1988), at R39.

127. Oregon PUC, *Changes in Federal Regulation Affecting Private Carriers of Property: Implications for Oregon*, (staff report) (June 28, 1985), at i.

128. *Id.* at i, ii.

intrastate rates, for example, fell by about 12 to 16 percent after state deregulation.[129] Rose considers a fall of at least 10 to 20 percent in rates to be a likely outcome of California deregulation.[130] Schary believes that Oregon rates already reflect pressure from interstate competition but that a rate fall of 2 to 5 percent would be likely after state deregulation.[131]

Not all of the logistics productivity improvements are due to interstate trucking deregulation, but clearly the trucking industry is responsible for most of the improvements. Measured by revenues, the trucking industry is the dominant mode of freight transportation, with revenues amounting to more than 70% of the nation's freight bill. The U.S. census of transportation defines 60% of all motor carrier tonnage as intrastate.[132]

The most recent publicly available information on the distribution of intrastate motor freight tonnage among the states is the 1976 Continuing Traffic Study (CTS) tapes collected by the major rate bureaus and made available to the ICC. Oregon is among the "top ten" states in terms of both intrastate general freight ton-miles and intrastate general freight revenues. Oregon's share was 2.82% of intrastate general freight ton-miles and 3.06% of intrastate general freight revenues.[133]

The potential benefits from state trucking deregulation can be estimated based upon several assumptions: at least half of the fall in national logistics costs is attributable to interstate trucking deregulation; half of that amount represents a potential benefit from state regulation; the potential benefit could be allocated to Oregon based upon Oregon's relative share in intrastate freight; and that realistically, only about one-third could actually accrue as a result of intrastate deregulation.

With all of the above assumptions, the potential logistics savings from Oregon intrastate trucking deregulation could be calculated as perhaps $100 million per year in 1988 dollars ($42 billion $\times$ .5 $\times$ .5 $\times$ .03 $\times$ .33). This savings would represent a 2% reduction in Oregon's total logistics costs, assuming that Oregon's logistics costs are about $5 billion per year.[134]

The present value of all future costs would be much higher, even for

129. Blair, Kasserman & McClave, *supra* note 73.

130. N. Rose (Testimony before the Calif. Public Utilities Commission, Docket I. 88-08-046) (Oct. 27, 1988), at 22.

131. Schary, *An Investigation of the Impact of State Regulation of Motor Carriers of Property on Interstate Transportation* (prepared for DOT (forthcoming)), at 183.

132. Delaney, *The Disunited States: A Country in Search of an Efficient Transportation Policy*, Cato Policy Analysis No. 84 (Mar. 10, 1987), at 14.

133. Allen, *The Impact of Collective Ratemaking on Motor Carrier Rates: A Test*, INT'L J. TRANSP. ECON. (Aug. 1983), at 290-91.

134. Total U.S. logistics costs of $425.1 billion in 1982 dollars (Table 11, line 7), can be escalated by about 12 percent to 1988 dollars ($476 billion), and then multiplied by the ratio of Oregon's personal income to total U.S. personal income (1.02%) = $4.86 billion.

very low estimates of the annual cost of economic regulation of trucking.[135]

IV. CONCLUSIONS

Oregon has imposed economic regulation on part of its trucking industry for nearly 70 years. State regulation of trucking entry and rates began when highways were very poor and railroads were the predominant mode of transportation. Both railroads and interstate trucking were essentially deregulated in 1980. Yet trucking regulation lives on in Oregon and in 39 other states.

State trucking regulation is both unfair and inefficient. Oregon, as in two dozen other states, tightly restricts entry into for-hire carriage of general commodities. Established trucking companies are allowed to object to any potential new competition when applications are filed for additional or expanded operating authorities. Business opportunities are denied in order to protect those who got there first (and their heirs). The fully-regulated truckers are not free to change their rates in response to changes in market conditions, in order to fill up trailer space which would otherwise go empty, or ration limited capacity at times of peak demand. Shippers are restricted in their ability to negotiate for lower rates and better service. Empty mileage is created by restrictions imposed upon exempt, interstate, and private carriers.

This article has drawn upon the considerable body of research on trucking which has accumulated during the past ten years. An abundance of evidence, both theoretical and empirical, all point to the same conclusion. The trucking industry is like many other industries in our economy. It can be expected to work much better without government controls over entry and pricing.

Oregon trucking regulation, as in other states where regulation still exists, appears to often be justified by five false assumptions.

1. The trucking industry is not a natural monopoly. Its industry structure is not similar to gas, electric, or telephone utilities. If trucking were potentially monopolistic, shippers and receivers would have the most to lose from deregulation. Yet shippers and receivers most often express a desire *for* trucking deregulation. Many surveys and studies support the belief, expressed by shippers and receivers, that state and interstate deregulation has lowered freight rates and improved the quality and availability of trucking service. Entry barriers in trucking

135. For an assumed real interest rate of 2 percent, the present value of indefinite annual savings could be determined by dividing the annual savings estimate by .02. *See*, T. Copeland & J. Weston, FINANCIAL THEORY & CORPORATE POLICIES 702 (2d ed. 1983).

are very low; unregulated or exempt trucking companies have virtually no ability to hold their prices above their costs. State regulation acts to hamper interstate carriers which wish to establish an efficient transportation network. If there is any monopoly tendency in trucking at all, and the evidence indicates that there is none, it would be in the national LTL part of the business. Yet a small state such as Oregon clearly has little ability to regulate these large multi-state carriers. Trucking is one of the most competitive industries in the United States.

2. The trucking industry has no tendency toward "destructive" competition harmful for consumers. The very notion of "destructive" competition would probably be considered laughable by those shippers and receivers who must rely upon for-hire trucking, yet are not themselves sheltered from price and service competition. The "destructive" argument is usually advanced from the point of view of the established trucking companies, and not that of the consumers who are the intended beneficiaries of regulation. Healthy competition, beneficial for consumers, has been the outcome from state, interstate, and foreign trucking deregulation.
3. Government action to prevent "unjust discrimination" is usually appropriate only when consumers are unable to defend themselves—when they lack reasonable access to competitive alternatives. But it is state government itself which has created this problem because state regulation greatly reduces the number of actual and potential competitive alternatives.

   Interstate deregulation gave rise to deep discounting off the published interstate rates. The situation is perhaps similar to the regular 50-percent-off sales of mattresses advertised by department stores. Yet there is no public demand for regulation of department stores, or demand that consumers must pay the presale price for mattresses. Consumers who have access to competitive alternatives will be able to protect themselves.

   Oregon is one among the two dozen states which grant antitrust immunity for collusive ratemaking in the trucking industry[136]—sanctioning a business practice that would be illegal in almost all other American industries. This special privilege further reduces the defenses which would ordinarily be available to consumers.

   Discrimination is difficult for government officials to define and enforce in competitive industries in ways that do not end up doing more harm than good. Government regulation of trucking increases costs both for

136. D. Baker, *State Regulatory Activity and Federal Preemption*, 21st Transportation Law Institute, Oct. 23-26, (1988) (Attached to prepared testimony before the Calif. PUC, Case No. I 88-08-046), at 93-95.

those who use for-hire trucking and for those who are restricted in their ability to fully utilize their own private trucking fleets.

4. Economic regulation is not needed to sustain service to small communities. There is no evidence that small community service is "subsidized" by other consumers in large urban communities. Truckers are independent business persons who do not voluntarily serve unprofitable locations. State trucking regulation greatly *reduces* the number of actual and potential competitors in all communities—both urban and rural. State regulation makes it more difficult and expensive for interstate carriers to include rural communities as part of an efficient transportation network. Surveys conducted by impartial researchers have shown time and again that deregulation has not caused a deterioration of service to small communities.
5. Economic regulation is not an effective way to improve trucking safety. Most of the industry is not subject to any form of state economic regulation.[137] Accident, injury, and fatality rates per vehicle mile have declined substantially over the past 10 years—a period of interstate and growing state deregulation. Regulated Oregon intrastate carriers of general commodities have accident rates which are higher than the Oregon accident rates of comparable interstate carriers which are no longer subject to strict economic regulation. It might seem plausible to assume that vigorous competition would lead to cost-cutting, higher speeds, longer hours and less safety. But less than 7 percent of truck accidents are attributed to mechanical failure. More than 80 percent of Oregon accidents are attributed to driver failure by the truck driver (47.4%) or the other driver (35.1%).

   Clearly, direct inspection and enforcement is the best way to improve safety performance. It is perhaps ironic that the total annual fines for violations of Oregon economic regulations consistently exceed the fines for safety violations.

The five above fallacies are proclaimed with considerable ingenuity and disregard for internal contradictions. In Oregon, for example, it has been alleged that interstate carriers have suffered from destructive competition and soaring bankruptcy rates. It has also been claimed that intrastate rates are below comparable interstate rates, thus proving the "benefits" of continued state trucking regulation. If all of the above assertions were true, then the regulated intrastate carriers must be in very sorry condition indeed, and unable to generate the subsidies which are said to be necessary to sustain small community service and maintain safe trucking practices.

137. The 1982 U.S. Census of Transportation suggests that less than 9 percent of total Oregon truck miles are driven by for-hire intrastate and local carriers.

Any estimate of the potential effects of deregulation must consider the central role occupied by trucking in a modern economy. Raw materials may travel by truck at many different stages as they are converted into finished products for sale to consumers at retail outlets. Every trip which occurs in Oregon is influenced by state trucking regulation, even though the carrier itself may not be subject to direct state entry and rate regulation. It appears that deregulation of transportation has been accompanied by a successive fall in inventory investment, as businesses introduce modern logistics systems to lower their production and distribution costs. Deregulation has been followed by lower freight rates, faster inventory turnover, a lowering of the premium paid for use of organized labor, and a growth in total trucking employment. Although any such estimate is necessarily conjectural, some plausible assumptions suggest that the potential benefit from Oregon trucking deregulation could be as high as $100 million per year. This would be equal to an approximate 2 percent fall in Oregon logistics costs. There are no reasons to delay providing those benefits to the Oregon public.

APPENDIX
STUDIES OF TRUCKING COMPETITION: EXEMPT, REGULATED, AND DEREGULATED*

W. Allen & C. Taylor-Brown, *Examination of the Unregulated Trucking Experience in Delaware*, (prepared for DOT, available through Nat'l Tech. Info. Ser., Jan. 1980). (Unregulated Delaware intrastate carriers provide service "better than or equal to" then-regulated interstate carriers. Rates 8 to 30-50 percent below interstate rates. No cutthroat competition.)

W. Allen, S. Lonergan, & D. Plane, *Examination of the Unregulated Trucking Experience in New Jersey*, (prepared for the DOT, available through Nat'l Tech. Info. Ser. July 1978). (New Jersey shippers/receivers "overwhelmingly" favor no trucking regulation. Rates about 10 percent below then regulated interstate rates. Excellent service by unregulated intrastate carriers. No cutthroat competition.)

Beilock, *Is Regulation Necessary for Value-of-Service Pricing*, 16 RAND J. OF ECON. 93 (1985) (Intensely competitive unregulated Florida produce trucking industry operates efficiently without destructive competition.)

Beilock, Garrod, & Miklius, *Freight Charge Variations in Truck Transport Markets: Price Discrimination or Competitive Pricing?*, AMER. J. AGRIC. ECON. 226, 235 (1986) (Unregulated trucking market for Florida produce operates efficiently. "[C]orrelation of rates with the value of the commodity does not imply price discrimination.")

Beilock & Kilmer, *The Determinants of Full-Empty Truck Movements*, 68 AMER. J. AGRIC. ECON. 67 (1986) (Unregulated carriers of Florida agricultural produce, "act rationally, basing their decisions on a wide range of factors . . . regulatory restrictions continue to result in unnecessary empty movements.")

Beilock & Shonkwiler, *Modeling Weekly Truck Rates for Perishables*, S.J. AGRIC. ECON. 83 (July 1983) (No chaos or destructive competition in unregulated trucking for Florida produce.)

R. Beilock & G. Fletcher, *Exempt Agricultural Commodity Hauler in Florida*, PROC. OF THE TWENTY-FOURTH ANN. MEETING OF THE TRANSP. RES. F. (1983) (Efficient operation of unregulated Florida produce trucking. No destructive competition.)

Breen, *Antitrust and Price Competition in the Trucking Industry*, THE ANTITRUST BULL. (Spring 1983) (Following interstate deregulation, carriers began offering 20-25 percent "multiple pickup" discounts, and across-the-board discounts of 10 to 15 percent.)

Breen, *Regulation and Household Moving Costs*, REGULATION,

* Supplementing those discussed in the text.

Sept./Oct. 1978. (Regulated household goods rates 39 to 67 percent higher than deregulated rates.)

Breen, *The Monopoly Value of Household-Goods Carrier Operating Certificates*, 20 J. OF L. AND ECON. 153 (1977) (Monopoly value due to regulation estimated at $60.8 million.)

T. Brown, *An Examination of Unregulated Shipper Associations*, (Mar. 1980) (prepared for DOT, available through Nat'l Tech. Info. Ser.) (Rates for unregulated shipper associations 15 percent below those of comparable regulated freight forwarders.)

Informational Trucking Program Overview: En Banc Hearing Before California Public Utilities Commission, Division of Ratepayer Advocates, (Feb. 17, 1988) (California shippers saved at least $1.3 billion between 1982 and 1985 as a result of state deregulation. Rates in the petroleum tank truck sector fell by as much as 33 percent, and by 16 percent for general freight. Rates went up by $180 million per year when the CPUC later reinstituted regulation and ordered a 10 percent rate hike.)

De Vany & Saving, *Competition and Value of Service Pricing in the Trucking Industry: Reply*, 70 AM. ECON. REV. 184 (1980) (More valuable freight moves at higher prices in unregulated trucking markets. These rate differences enhance economic efficiency.)

Enis & Morash, *Accounting for Public Policy Actions: The Case of Motor Carrier Deregulation*, 21 ABACUS 63 (1985) (Investors did not believe that interstate deregulation would have a permanent negative impact on the trucking industry.)

Felton, *The Impact of Rate Regulation Upon ICC-Regulated Truck Back Hauls*, J. TRANSP. ECON. & POL'Y 253 (Sept. 1981) (Survey article estimates potential annual benefit of $182 million from abandonment of ICC policies requiring high and inflexible backhaul rates. The article notes that rate flexibility in deregulated British trucking led to a high degree of traffic balance.)

Felton, *Seasonal Variations in Demand and the Economic Regulation of Trucking*, 16 LOGISTICS & TRANSP. REV. (1980) (Elimination of commodity restrictions would improve seasonal utilization.)

Felton, *The Costs and Benefits of Motor Truck Regulation*, Q. REV. ECON. & BUS., (Summer 1978) (Citing study by Farmer, Felton reports that regulated carriers have costs and rates 66 percent or more higher than those of exempt unregulated carriers. Exempt carriers have 50 percent greater average tonnage. After court-ordered deregulation, interstate poultry freight rates fell by 33-36 percent. Fresh fruit and vegetable rates fell by 19 percent. Service improved.)

J. Freeman & R. Beilock, *The Impact of Motor Carrier Deregulation on Freight Rates in Arizona and Florida* (April 1985) (prepared for DOT,

available through Nat'l. Tech. Info. Ser.). ("Deregulation has been a success" in Arizona and Florida. Rates "generally lower." Small shippers not penalized. Service to remote areas improved. Rates moderate and stable. Small shipments not penalized relative to large shipments.)

J. Freeman & R. Beilock, *The Effects of Transportation Deregulation on Motor Carrier Service in Florida and Arizona*, (prepared for DOT, available through Nat'l. Tech. Info. Ser.) (May 1984) (Shippers "strongly prefer" deregulation "by a wide margin." Rural service did not decline. A plurality of Arizona carriers and one-third of the Florida carriers support deregulation. No shipper respondent had been left without truck service. Urban shipper/receivers did not appear to benefit at the expense of rural shipper/ receivers.)

Frey, Krolick & Tontz, *The Impact of Motor Carrier Deregulation: California Intrastate Agriculture Products*, 22 LOGISTICS & TRANSP. REV. 259 (1986) (Seventy-nine percent of California respondent shippers satisfied with state deregulation of fresh fruits and vegetables. Rates declined in real terms and service improved.)

Frey, Krolick, Nidiffer & Tontz, *Effects of Re-regulation of the California Trucking Industry*, TRANSP. J., Spring 1985, at 4. (Two-thirds of responding shippers report TL rate decreases, 55 percent LTL rate decreases after state deregulation. Shippers perceive regulatory reform as beneficial.)

Fuller, Makus & Lamkin, *Effect of Intrastate Motor Carrier Regulation on Rates and Service: The Texas Experience*, TRANSP. J. (Fall 1983) (Texas agricultural commodities—regulated intrastate rates higher than exempt interstate rates. Exempt carriers provide better service. Regulation not needed to protect small volume shippers.)

Hilton, *Ending the Ground-Transportation Cartel*, in INSTEAD OF REGULATION (R. Poole, Jr., ed. 1982) (Trucking "cartel is very inefficient, amounting to the equivalent of a tax on the economy of nearly $6.5 billion per year.")

Johnson, *Impacts on Agriculture of Deregulating the Transportation System*, AM. J. AGRIC. ECON. (Dec. 1981), at 913. (Article mentions that exempt livestock trucking industry provides reliable and good service with rates very close to USDA budgeted cost increases.)

Joy, *Unregulated Road Haulage: The Australian Experience*, OXFORD ECON. PAPERS, (July 1964), at 277. ("Fierce rate wars" after Australian deregulation; then flexible shifting of truck capacity in response to seasonal changes in demand. Rate flexibility and voluntary delays helped improve efficiency.)

Kim, *The Beneficiaries of Trucking Regulation, Revisited*, 27 J. OF L. AND ECON. 227 (1984) (Using Canadian data, Kim confirms Moore's anal-

ysis that regulation has primarily benefited organized labor and fuel suppliers.)

Klaus, *Trucking Deregulation—The West German Experience*, PROC.: TRANSP. RES. F., NO. 1 (1981). (West German truck rates declined after regulatory liberalization. Carriers made "significant increases in operating and administrative efficiency.")

Makus & Fuller, *Motor Carrier Regulation and Its Impact on Service: An Analysis of Texas Fresh Fruit and Vegetable Shippers*, S.J. OF AGRIC. ECON. (Dec. 1983) (Survey of Texas fruit and vegetable shippers who use both exempt interstate and tightly regulated intrastate carriers. Unregulated interstate carriers have lower rates and better service.)

Mandex, Inc., *Industrial and Commercial Shipper Survey*, (prepared for DOT, available through Nat'l. Tech. Info. Ser.) (Sept. 20, 1985) (Shipper costs reduced as carriers offer more complete and improved service. Smaller shippers and shippers of smaller loads also benefited.)

McMullen & Schary, *Intrastate Regulation and Interstate Motor Carriers*, PROC. OF THE TRANSP. RES. F. (1986) (Analysis of accounting reports filed with Oregon Public Utility Commission indicated that costs of intrastate shipments appeared to be higher than costs of comparable interstate shipments.)

McMullen, *Commodity Specific Rate Differentials in a Competitive Trucking Industry*, LOGISTICS & TRANSP. REV. (June 1985) (Unregulated Oregon log truck carriers operate efficiently.)

Miklius, *Effect of Regulatory Reform on Motor Carrier Quality of Service*, (Working Paper No. 82-04, prepared for DOT available through Nat'l. Tech. Info. Ser.) (July 1982) (Deregulated interstate carriers offering more price and service options. No significant change in service levels.)

W. Miklius & K. Casavant, *Stability of Motor Carriers Operating under the AGricultural Exemption*, in REGULATION OF ENTRY AND PRICING IN TRUCK TRANSPORTATION (P. MacAvoy & J. Snow eds. 1977) (Unregulated agricultural carriers provide stable and dependable service. Low bankruptcy rates.)

Moore, *Rail and Truck Reform—The Record So Far*, REGULATION, (Nov./Dec. 1983), at 33 (TL rates fell from an index value of 99 in year 1978 (1975 = 100) to an index value of 75 by 1982, following interstate regulation. LTL rates fell from 104 to 89. Return on investment for major trucking firms fell from 24.0 percent in 1978 to 11.1 percent in 1982.)

Moore, *The Beneficiaries of Trucking Regulation*, 21 J. OF L. AND ECON. 327 (Oct. 1978) (Monopoly value of ICC operating certificates worth an estimated $2.1 billion to $3 billion in 1972.)

Moore, TRUCKING REGULATION: LESSONS FROM EUROPE, (1976) (Freight rates "seem to have declined" after deregulation in Great Britain

and Sweden (page 133). Stable rates with no evidence of industry instability. Adequate industry profits. Regulated West German rates 40 to 50 percent higher than those which would prevail under deregulation.)

Moore, *Deregulating Surface Freight Transportation*, in PROMOTING COMPETITION IN REGULATED MARKETS, (A. Phillips, ed.) (1975) (Rates in highly regulated West Germany about 43 percent higher than in less regulated Great Britain, Belgium, Netherlands, and Sweden. Pre-reform ICC regulation imposed a $1 billion penalty on private carriers. Cost penalty for forestry trucks estimated to be $170 million per year.)

Morash, *The Economic Relationship Between Service Quality and Market Protection for Regulated Household-Goods Moving*, 27 J. OF ECON. & BUS. 123 (May 1985) (Regulation of household goods shelters inefficient carriers and thwarts development of better institutional arrangements.)

Nelson, *Regulatory Performance in Surface Freight Transportation in Australia, Canada, Great Britain and the U.S.A.*, contained in REGULATION AND COMPETITION IN TRANSPORTATION: SELECTED WORKS OF JAMES C. NELSON (1983) ("Very few" British shippers "could find anything much to complain about after deregulation" (page 104). Rates were competitive and service was good—even to remote locations. Industry earnings were adequate. No signs of instability. Satisfactory market performance in deregulated Canadian provinces.)

Nelson, *British Freight Transport Deregulation and U.S. Transport Policy*, in ECONOMIC REGULATION: ESSAYS IN HONOR OF JAMES R. NELSON, Michigan State University, 1981. (Satisfactory market performance. No tendency toward destructive competition.)

Nelson, *The Economic Effects of Transport Deregulation in Australia*, TRANSP. J. (Winter 1976) (Rate competition still prevails in Australia, with adequate industry earnings. Development of multi-model freight forwarding companies, providing good service at competitive rates.)

Policy Management Associates, Inc., *Regulatory Reform and Motor Carrier Tariff Complexity*, (prepared for DOT (1981)) (Deregulated truckers in Florida, Australia, and Great Britain offer simple tariffs reflective of cost causation.)

Pustay, *Regulatory Reform and the Allocation of Wealth: An Empirical Analysis*, 23 Q. REV. OF ECON. & BUS. (1983) (Monopoly value of ICC operating certificates estimated at $5.1 billion.)

Pustay, *Pre-Reform Entry Into the Interstate Motor Carrier Industry: An Appraisal*, J. OF TRANSP. ECON. & POL'Y. (Jan. 1986) (Pre-reform ICC regulation operating certificates sold at prices varying from 8.5 cents per dollars of annual sales (contract carriers) up to 33.1 cents per dollar of annual sales (general commodity regular route certificates.))

Rose, *Labor Rent-Sharing and Regulation: Evidence from the Trucking Industry*, J. POL. ECON. (Dec. 1987) (Organized labor received 70 percent of the monopoly benefit from trucking regulation.)

Rose, *The Incidence of Regulatory Rents in the Motor Carrier Industry*, RAND J. ECON. (Autumn 1985) (Loss of stock values after MCA is evidence that monopoly profits were earned under regulation.)

Rosengren & Webb, *The Australian Road Freight Industry: Is There a Need for Government Regulation?*, AUSTRALIAN ECON. PAPERS (Dec. 1981) (Bankruptcy rates for the deregulated trucking industry are not higher than for other self-employed businessmen. No "exceptional financial instability" (page 305.))

Schuster, *The Effects of Intrastate Motor Carrier Regulation Upon the Texas Agricultural Industry*, 24 PROC. OF THE TRANSP. RES. F. (1983). (Texas agricultural producers pay a $41.2 million penalty because they cannot use unregulated independent owner operators.)

Snow, *The Problem of Motor Carrier Regulation and the Ford Administration's Proposal for Reform*, in REGULATION OF ENTRY AND PRICING IN TRUCK TRANSPORTATION, (P. MacAvoy and J. Snow, eds.) (1977) (Exempt for-hire carriers provide fast and efficient service, even to remote locations.)

Van Auken & Crum, *The Impact of the Motor Carrier Act of 1980 on Motor Carrier Stock Returns*, 19A TRANSP. J. (1985). (Deregulation has not increased the industry cost of capital.)

Williamson, Singer & Bloomberg, *Impact of Regulatory Reform on U.S. For-Hire Freight Transportation: Carriers' Perspective*, TRANSP. J. (Summer 1985) (Shippers strongly support deregulation. Carriers offering more services and more flexibility after deregulation. Rate decreases outnumber rate increases.)

Williamson, Singer & Bloomberg, *The Impact of Regulatory Reform on U.S. For-Hire Freight Transportation: The Users' Perspective*, TRANSP. J. (Summer 1983) (Eighty-four percent of shipper respondents favor deregulation; benefits broadly dispersed to firms of different sizes. No destructive competition.)

Wilson, *Effects of 1979 Legislation Exempting Certain Commodities From PUC Regulation* (Oregon Legislative Research) (Jan. 21, 1981) (Oregon log truck deregulation lowered rates and improved service, according to a shipper survey. Independent truckers thankful for opportunity to compete.)

Wisconsin Office of the Commissioner of Transportation, *Deregulation of Wisconsin Motor Carriers* (prepared for the Wisconsin Legislature, July 1983) (Large majority of shippers satisfied with state deregulation.)

J. Ying & T. Keeler, Pricing in a Deregulated Environment, paper

presented to the Transportation and Public Utilities Group, American Economic Assoc. (Dec. 1988) (Overall effects of Motor Carrier Act of 1980 led to 18% reduction in rates by 1983).