

The economic theory of regulation and trucking deregulation: Shifting to the state level

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Accepted 23 September 1992

Abstract. Federal deregulation of the trucking industry in 1980 created a general gain in economic welfare at the expense of the monopoly rents of powerful interests, leading some scholars to ponder the limitations of the economic theory of regulation. However, analyzing only the federal changes excludes evidence from the significant intrastate sector of the trucking industry, regulation of which remains largely unchanged from that prior to 1980. This paper argues that after a decade of clear federal policy success, truckers continue to capture most state regulators, sustaining monopoly rents in what would otherwise be an inherently competitive industry. Using data from the fifty states, we demonstrate the extent to which the economic theory is in fact consistent with trucking industry evidence.

1. Introduction

The deregulation of American transportation, communications, and financial industries in the 1970s and 1980s greatly altered long-term patterns in economic regulation. At the same time, scholars were refining the “economic theory of regulation” (Stigler, 1971; Peltzman, 1976; Becker, 1983) and “rent-seeking” theories (Tullock, 1967; Krueger, 1974; Buchanan, Tullock and Tollison, 1980). While no doubt pleased with the actual policy results, advocates of these theories had to question whether deregulation revived public interest explanations at the expense of their theories.

In a retrospective survey, Peltzman (1989) argued that many of the deregulated industry cases could in fact be explained by a sophisticated application of the economic theory. The trucking industry, however, seemed to be the most prominent exception. Peltzman (1989: 26) wrote: “Here then is an industry in which substantial and sustainable rents received the fullest measure of organized support from their beneficiaries. There is simply no way I know to square the wholesale elimination of these rents by political action with any current version of the [economic theory].” We could debate whether or not Peltzman was too charitable to the theory in other cases, but there is no doubt he

was too modest in considering trucking. This modesty appears to have been borne of an oversight: Peltzman failed to consider American federalism and examine state regulation. The proportion of the industry regulated by states is far from trivial; Allen et al. (1991) note that 67 percent of all American trucking of manufactured goods moves intrastate, while fully 45 percent of the *regulated* trucking sector is intrastate.¹ Here we analyze on-going state regulation of intrastate trucking in 1990 to demonstrate the significant extent to which the economic theory is consistent with trucking industry evidence in this broader perspective.²

Many regulatory scholars have been unaware that, with few exceptions, states continue to exercise regulatory control over intrastate rates and entry, in a manner exactly parallel to previous interstate regulation by the ICC. Significantly, the 1980 congressional Motor Carrier Act (MCA) that largely (although not completely) deregulated interstate trucking *did not preempt* the ability of state regulators to regulate intrastate trucking. From 1980 through 1991, only 6 states comprehensively deregulated intrastate trucking through legislation,³ despite the fact that every major economic study of trucking deregulation shows significant economic gains (Allen et al., 1991; Winston et al., 1990) and transportation educators strongly support intrastate deregulation (Cunningham, Rakowski and Southern, 1987).⁴ By regulating rates and restricting entry, state regulators provide benefits to trucking firms and their employees, at the expense of freight shippers and, ultimately, diffuse consumers and the state economy generally.

2. The political economy of trucking regulation

Since trucking developed into a reliable way to move freight in the early 20th century, the technology of trucking has changed little. Management arrangements and institutional rules differentiate sectors of the industry, not production techniques. In shipping freight by truck, a firm would minimize costs by considering several alternatives. It could vertically integrate by retaining its own fleet of trucks (which is private, unregulated trucking); or it could enter a long-term contracting arrangement with a trucking firm (which is contract carriage); or, whenever the need arose, it could use a general for-hire, or common carrier, trucking firm. The economics of trucking – specifically low set-up costs, minimal asset specificity, and near-constant returns to scale – suggest an inherently competitive industry (Annable, 1973; MacAvoy and Snow, 1977; Moore, 1978). In a free market the industry could efficiently allocate and price trucking services, leaving no technological justification for government intervention. Thus, regulation results from political pressure by interest groups, as illustrated by a brief historical overview of federal and state regulation.

Railroads were the first interest group to campaign for trucking regulation, to maintain their own comparative advantage in long hauls. The railroad industry had been regulated by the ICC since 1887 and by most state public utility commissions (PUCs). The PUCs also sought controls on trucking, to ease the pressure on railroads and to expand their own influence (Robyn, 1987: 12), and by 1925 thirty-five states followed Pennsylvania's lead and regulated trucking by restricting entry and limiting maximum and minimum rates (Childs, 1985).

A 1925 Supreme Court ruling that state regulation impeded interstate commerce provided the first push toward federal trucking regulation.⁵ The National Association of Regulatory Utility Commissioners (NARUC) and the railroads lobbied Congress for such legislation, which truckers, labor, and shipper groups effectively opposed (Robyn, 1987: 13). As the Great Depression reduced profits from trucking, however, the new American Truckers Association (ATA) and the Teamsters labor union reconsidered and supported federal regulations that would limit entry and eliminate price wars. Congress passed the MCA in 1935, at which time only about 10% of all American trucking activity was interstate (Childs, 1985: 139).

The MCA gave the ICC broad powers over most interstate trucking entry and rates. The ICC granted trucking firms near-exclusive, but transferable, operating rights to carry specific commodities on certain routes. Although rate controls in theory could keep rates low, since entry was restricted, in reality they kept rates high enough to maintain profits. Rates were set by cartels, euphemistically called "rate bureaus" (see Tye, 1987), later specifically exempted from antitrust action in the 1948 Reed-Bulwinkle Act.⁶

Thus, the regulatory regime created under the MCA produced monopoly profits, excessive costs, and inflexibility. The beneficiaries were the original owners of ICC operating rights and the members of the Teamsters, who earned economic rents due to the cartelization of the industry (Rose, 1985; 1987).

Economists understood and opposed these regulation-induced inefficiencies from the outset. The Depression, however, had shaken general faith in the efficiency of markets and the "destructive competition" argument was taken seriously. As early as the 1950s academic economists began to show that large efficiency gains were possible by reducing regulatory constraints (Meyer et al., 1959; Hilton, 1972; MacAvoy and Snow, 1977; Moore, 1978; Rothenberg, 1987). In the 1970s, economists in the U.S. Department of Transportation provided detailed data that showed clear gains from deregulation (Robyn, 1987: 22; Phillips and Phillips, 1984). Energy price increases, stagflation, and concern about big government in the 1970s provided the impetus for Presidents Ford and Carter to adopt transportation deregulation as a partial solution.

With new Presidential appointments, the ICC relaxed regulations significantly in the late 1970s (see Alexis, 1983, for details), leading the ATA to favor restrictive legislation in Congress. This strategy backfired, however, as Con-

gress passed the 1980 MCA that went further than the ICC's administrative deregulation. Although the MCA did not fully deregulate interstate trucking, it did allow easier entry, more competition and greater operating efficiency.⁷

Since 1980, federal deregulation of interstate trucking has produced significant efficiency gains. Over 25,000 new entrants have joined the industry and Allen et al. (1991) claim credible estimates of welfare gains are in the range of \$10–11 billion annually. Allen et al. (1991) estimate that these gains could be enhanced by state legislators following the initiatives of their federal-level counterparts by at least \$3 billion per year,⁸ but intrastate trucking regulations remain in all but eight states.

3. Trucking politics in the states

Following the federal MCA, trucking deregulation did gain some momentum in the states. Florida deregulated trucking in 1980, followed by Arizona in 1981, Maine in 1982 and Wisconsin in 1983. This one-state-per-year pattern continued in 1984, when the Libertarian party successfully promoted trucking deregulation in Alaska. Vermont deregulated in 1985. New Jersey and Delaware had not previously regulated intrastate trucking.⁹ Aside from these eight cases, all other states continue to have legislation that provides for the regulation of intrastate trucking largely unchanged from the pre-1980 rules, despite a wealth of evidence that not only federal but state deregulation policies have produced very positive economic results (Allen and Taylor-Brown, 1980; Freeman and Beilock, 1983; Pustay, 1984; Blair, Kasserman and McClave, 1986; White, 1989).

With such limited legislative action, some state regulators have implemented more relaxed trucking regulation under their own initiative. Still, as of 1990 nearly three-fourths of the states regulated intrastate rates, with almost half regulating them "strictly" (Baker, 1990).

Truckers and shippers have fought prolonged and expensive battles in several states, and not all of the policy movement since 1980 has been consistently in the direction of deregulation. For example, the California PUC adopted an experimental regulatory program in 1980 that paralleled the federal MCA. After investigations in 1986 the California PUC adopted a re-regulatory regime, in part "to prevent competitive forces in the industry from becoming destructive" (Baker, 1987: 42). Trucking interests successfully supported re-regulation. Indiana also illustrates the power of the truckers: the legislature passed a law in 1987 allowing for free entry in 1990, while the state Motor Truck Association (MTA) was inattentive. After passage, however, the MTA successfully lobbied the legislators to repeal the free entry provision.

Significantly, Baker (1990) notes that deregulation has *never* been successfully passed in a state when truckers have organized and opposed it actively.

In many cases they have enlisted the support of small communities who fear loss of service under deregulation and (cross-subsidized) smaller shippers (see Gilligan, Marshall and Weingast, 1989 for similar coalitions in 1880s railroad regulatory battles).

4. Quantitative analysis of state regulation

In this analysis we focus on the extent to which variation in state policies one decade after federal deregulation continues to be influenced by the truckers and other interest groups. We analyze the explanations of: 1) complete state legislative deregulation; and 2) whether the state regulators still regulate rates in 1990, as determined by the TLA survey (Baker, 1983–90).¹⁰

Since we are testing the economic theory of regulation, we will analyze the role of several important interest groups involved in and affected by state trucking regulation. The economic theory, anecdotal evidence, and quantitative evidence on the efficacy of Senate PAC contributions by the ATA in 1980 (Frendreis and Waterman, 1985) all indicate that truckers are the most important interest group opposing deregulation. To measure their political power and concentration we use a TRUCK variable calculated for each state from the 1987 Census of Transportation that represents the percentage of all trucks used in common carriage that operate intrastate.

As the previous analysis indicates, several other groups have played important roles in trucking regulation. As competitors of truckers, railroad firms have generally favored federal and state trucking regulation (Carter, 1958; Hacker, 1962) throughout this century. Our RAILSQM variable measures the track mileage operated by large railroads in each state (in 1985, the latest available data) divided by that state's square mileage, to reflect the importance of concentrated railroad interests. Large shippers have lobbied for entry and rate deregulation in many states. To measure their influence, our SHIP variable is the percentage of manufactured tonnage carried intrastate as a percentage of all regulated trucked tonnage (reported in Allen et al., 1991). As noted earlier, the national aggregate figure is 45 percent, but the state figures range from 2 percent to 83 percent. Truckers carrying one specific category of shipments, farm produce, are usually exempt from regulation. A large farm sector in a state means that political representatives will have smaller incentives to advocate trucking regulatory reform; our FARMVALPC variable from 1987 is the dollar value of all farms in the state, divided by the state population. Since trucking within metropolitan areas also has usually not been regulated, we include a variable measuring the percentage of the state population living in metropolitan areas (POPMET), expecting that a larger percentage reduces the likelihood of regulation.

Table 1. Logit analysis of state legislative regulation

	Coefficient	Standard error	t-value	P > t
TRUCK	23.90	11.27	2.12	.04 **
RAILSQM	1.89	12.97	0.15	.89
SHIP	-.10	.05	2.00	.05 **
FARMVALPC	13.94	6.26	2.23	.03 **
POPMET	.07	.05	1.56	.13
CONSTANT	-6.53	3.25	2.01	.05

Notes: N = 50. Dependent variable: 8 states deregulated (= 0), 42 not (= 1). Logit chi = 17 (99% significant). 92% correctly predicted (explains 50% of unexplained variance).

Table 1 shows the results of a logit analysis to determine the impact of our independent variables on whether or not the state legislature still regulates trucking. The logit analysis as a whole is highly significant and so are several of the key variables. As expected, a larger percentage of intrastate common carrier trucks (TRUCK) leads to a greater likelihood of continued state regulation. A sensitivity analysis shows that the mean likelihood of regulation in a state would increase from the mean predicted value of .84 to .93 if all states had an intrastate trucking percentage one standard deviation above its mean value, with the other variables held constant.

The significance of the SHIP variable indicates that where intrastate shipping is more important shippers are more likely to achieve legislative deregulation. A sensitivity analysis shows if all states had SHIP values one standard deviation below the mean value, and thus less able to oppose truckers, the mean likelihood of regulation would rise from .84 to .94. Thus, as expected, truckers and shippers both influence state regulation significantly, and in opposite directions.

We also find that states in which farming is more important are more likely to continue trucking regulation. The farming variable has the largest influence; if all states had farmvalues per capita one standard deviation above its mean value, the mean likelihood of regulation would become a virtual certainty, at .99. Our measure of railroad strength does not significantly influence state legislative decisions, probably because the railroads' stake in intrastate issues has declined, as less than 10% of all railroad revenues today are generated intrastate.

While only 8 state legislatures have deregulated trucking, a larger number have relaxed regulations administratively, as the ICC did in the late 1970s. Six additional states no longer regulate trucking rates. Table 2 reports the results of a second logit analysis using rate regulation as the dependent variable and the same set of independent variables as in Table 1.

Only the trucking variable is significant in this analysis, suggesting that

Table 2. Logit analysis of state rate regulation

	Coefficient	Standard error	t-value	P > t
TRUCK	12.90	7.09	1.82	.08 *
RAILSQM	- 8.84	9.28	0.95	.35
SHIP	- .01	.01	0.84	.40
FARMVALPC	.30	.74	0.40	.69
POP MET	.02	.02	0.99	.33
CONSTANT	- 1.51	1.67	0.90	.37

Notes: N = 50. Dependent variable: 14 states do not regulate rates (= 0), 36 do (= 1). Logit chi = 6 (67% significant). 84% correctly predicted.

stronger trucking interests are able to maintain favorable rate regulation from the regulators. A sensitivity analysis of the truckers' influence shows that if all states had truckers' strength one standard deviation above its mean value, the likelihood of rate regulation would increase from the mean predicted likelihood of .72 to .85. While shippers and farmers influenced state legislative decisions (as illustrated in Table 1), they do not influence rate decisions made by trucking regulators. The bureaucratic changes in these six additional states must have been made based upon policy evaluations by regulators, constrained by the truckers' desire to maintain rate regulation, which has dominated in the other 36 states.

Sweeping conclusions from this quantitative evidence must be tempered by the relatively small sample of 50, but these results add considerably to anecdotal evidence of trucker influence in the states.

5. Conclusions

Although some industries that have been deregulated at the federal level – such as airlines – are not subject to state regulation, others – such as trucking and telecommunications – continue to face state rate and entry regulations. Many economists disagree about the desirability of on-going state telecommunications regulation, given network economics and continued local market dominance by the divested Bell companies. But no economic or technological justifications can be advanced for continuing state trucking regulation; indeed, a decade of evidence shows very strong gains from deregulation. The key policy concern, then, is the ability of intrastate truckers to sustain monopoly rents in what would otherwise be an inherently competitive industry.

Scholars like Peltzman (1989) who only examine the 1980 MCA and subsequent ICC trucking deregulation ignore the intrastate part of the story, which represents nearly half of the national market. They fail to observe how re-

markably consistent the economic theory is with much trucking industry evidence. While truckers certainly lost the battle in 1980 in Washington, DC, they by no means lost the war. Particularly telling is the fact that Congress did not preempt the states in the MCA, even though similar Congressional legislation from that era routinely preempted the ability of states to regulate differently than the ICC.¹¹

With intrastate trucking still in the hands of state regulators, anecdotal and quantitative evidence shows that entrenched interest group politics has reasserted itself and has even reversed some moves toward deregulation. After a decade of clear federal policy success, some state deregulator, successes, and large shippers in some states spending money and political effort to foster deregulation, truckers continue to capture most state regulators. A shipping manager who was surveyed in 1990 (Johnson and Schneider, 1991: 371) summarizes well: “With the unarguable benefits of federal trucking deregulation – improved service levels at greatly reduced rates – why is it that the great majority of state governments keep their archaic entry control regulations? I can only conclude that at the state level, truckers have more political clout than they had at the federal level.”

Notes

1. Allen et al. (1991) note that even these percentages are understated as they focus only on “first movements” of traffic and not subsequent movements to their final destination, which are more likely to be intrastate.
2. Ironically, Stigler (1971) used state trucking weight regulations as an empirical test in his seminal article on the “economic theory.”
3. A larger number of states have relaxed their regulations for entry and rate changes, without comprehensive deregulatory legislation, either through bureaucratic initiative or through targeted legislation.
4. For example, the truckers association in California could not find any professional economist willing to testify in favor of continuing trucking regulation (White, 1989).
5. *Buck v. Kuykendall*, 267 U.S. 307 (1925).
6. To prevent contract truckers from “cream-skimming” the most lucrative customers and routes away from common carrier trucking firms, the MCA provided for contract rate floors. Shippers transporting their own products were exempted from regulation, as were carriers of unprocessed agricultural commodities (Robyn, 1987: 14).
7. For example, entry into the industry was made much easier. The criteria for common carrier certification were eased and the opportunity for existing carriers to protest entry was removed. Restrictions on private and contract carriers were reduced, enabling them to compete more directly with common carriers. Also, by preventing rate bureaus from filing protests to the ICC, the act made it much easier for motor carriers to set rates independently. The act also permitted the concurrent transportation of regulated and exempt commodities and broadened the scope for backhauling.
8. This estimate is supported by that of Winston et al. (1990), who derive a lower bound gain from state deregulation of rates of about 2.7 billion in 1991 dollars.

9. Trucking within metropolitan areas has generally not been regulated in the U.S. Both New Jersey's and Delaware's population resides almost exclusively in metropolitan areas.
10. Daniel Baker is head of the Transportation Lawyers Association (TLA), which produces an annual survey and report called "Your Letter of the Law". This is a comprehensive survey of the states, relying on no less than 2 and up to 5 sources in each state to answer a series of questions about intrastate trucking deregulation.

In 1988 the California Public Utility Commission performed their own survey of rate regulation practices across the fifty states. While there are some small differences, this survey matches very closely with that of the TLA, and thus we are confident that the TLA has measured state regulation in a reliable fashion.

11. Examples of federal Congressional preemption from that period include the 1980 Staggers Act deregulating railroads and the 1982 Intercity Bus Passenger Act deregulating intercity buses. The ICC has attempted to preempt intrastate trucking regulation by expanding the definition of intrastate movements, as with the ICC's Armstrong decision in 1986.

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