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## ECN 190/TTP 215 Lecture 9



### **Transportation Economics: Deregulation Part II – Trucking and Railroads**

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## 100 Years of Government Intervention

- **Development of railroads in the U.S. marked by extensive government intervention from the beginning**
    - Extensive federal subsidies for railroad construction after Civil War
    - State and local governments offered additional incentives
    - Miles of track increased by 50% during 1870-6 in response to \$1.6 billion in state and federal subsidies
    - Predictably, “too much” track was built
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## 100 Years of Government Intervention

- **Overbuilding was followed by “excess competition”**
    - By 1880, 20 different railroads served the St. Louis-Atlanta market, many other “dense” markets characterized by similar overcapacity
    - Railroads had difficulty charging profitable rates, despite their use of open cartels in the years before the Sherman Antitrust Act
    - One (in)famous example of a railroad cartel – the Joint Executive Committee, which tried to control all grain shipments from Chicago to the Eastern Seaboard
    - 7 cartels in the St. Louis-Atlanta market quickly failed
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## 100 Years of Government Intervention

- **Unable to collude successfully on their own, railroad barons sought *government enforcement of collusion!***
    - Rail executives began to appeal to the national government for regulation of competition
    - “...a large majority of the railroads in the United States would be delighted if a railroad commission or any other power could make rates ... with such a guarantee, they would be very glad to come under the direct supervision of the National Government”; a direct quote from John P. Green, Vice President of the Pennsylvania Railroad
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## 100 Years of Government Intervention

- **There was some support from key groups of consumers**
  - Farmers supported price controls because railroads often practiced price discrimination, exploiting monopoly power in small towns, rural areas to offset losses in “dense markets”
  - Small town merchants supported price controls for similar reasons, perceived themselves at a disadvantage to “big city” merchants and shippers who benefited from the fierce competition in “dense markets”
  - A triumph of notions of equity over efficiency

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## 100 Years of Government Intervention

- **Evidence from this period casts strong doubt on traditional view of railroads as a “natural monopoly”**
  - For many markets, and for most traffic, railroads are not a “natural monopoly”
  - Whenever railroads attempted to exercise monopoly power by raising rates, they attracted competition
  - Traditional rationale for railroad regulation is historically false

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## 100 Years of Government Intervention

- **The Interstate Commerce Act of 1887**
  - Established an Interstate Commerce Commission (ICC) with authority to regulate rates
  - Specifically prohibited geographic price discrimination, barred rebates
  - Prohibited price discrimination between shippers

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## 100 Years of Government Intervention

- **The failure of government controls on competition**
  - ICC failed to stamp out all rebates and price cutting
  - Congress followed up original Act with additional legislation, including a 1920 law which explicitly stated that the ICC should “adjust rates so that the carriers ... will...earn...a *fair return*”
  - Industry failed to earn a “fair return” in the 1920s due to increasing competition from the unregulated trucking industry
  - Trucks competed with railroads in short-haul traffic, the one realm where railroads arguably had a defensible monopoly

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## 100 Years of Government Intervention

- **The railroad industry attempts to extend government curbs on competition to trucking**
    - Railroads took California state government to court in order to force state to extend regulation to motor carriers
    - When Supreme Court overruled state regulation of interstate trucking, railroads and ICC began to campaign for federal regulation
    - Joseph Eastman, ICC member, blamed financial difficulties of railroads on “cutthroat competition” from trucks; regulatory efforts strongly opposed by truckers, shippers, and vehicle manufacturers
    - Efforts to regulate trucking failed until onset of the Great Depression
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## 100 Years of Government Intervention

- **The Triumph of the Forces of Darkness – the Motor Carrier Act of 1935**
    - ICC acquired authority to regulate entry into the interstate trucking industry
      - ICC granted entry rights to less than one third of the carriers which were active prior to deregulation, strictly limited new entry thereafter
    - ICC acquired authority to strictly control shipping rates
      - All rates had to be filed with the ICC 30 days before became effective
      - If rates were protested by a competitor, they were suspended pending investigation
      - Any rates which did not cover the “full cost of transportation” as estimated by the ICC were rejected
      - The 1948 Reed-Bulwinkle Act exempted carriers from antitrust laws to allow them to cooperatively set rates in “rate bureaus”
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## 100 Years of Government Intervention

- **The Spoils of Evil, 1935-1980**
  - Government curbs on competition cost shippers between \$12 and \$27 billion in 1985 dollars; shippers overcharged by 25%
  - Much of the benefits of regulation went to approved carriers and to organized labor
    - Owners received 3.8-5.1 billion in rents
    - Teamster members earned a premium of 50% in wages versus the private market
  - Opposition to the Motor Carrier Act from the very beginning, this opposition received increasing support from political leaders in 1960s, 1970s
  - Rates were so high that many large corporations started their own in-house shipping services

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## 100 Years of Government Intervention

- **Despite extending regulation to motor carrier industry, railroads continued to decline**
  - Market share of intercity freight traffic declined from 74.9% in 1929 to 39.8% in 1970
  - Market share of intercity passenger traffic fell from 77.1% in 1929 to 7.3% in 1980

**Table I.** Volume of U.S. Intercity Freight Traffic, Total Ton-Miles and Percentage of Traffic

Year	Billions of Revenue Freight Ton-Miles, Total	Railroad Share, Percent	Trucks Share, Percent	Great Lakes Share, Percent	Rivers and Canals, Share, Percent	Oil Pipelines Share, Percent	Air Share, Percent
1929	607	74.9	3.2	16.0	1.4	4.4	0.0
1939	544	62.3	9.7	14.0	3.7	10.2	0.0
1944	1,088	68.6	5.4	10.9	2.9	12.2	0.0
1950	1,063	56.2	16.3	10.5	4.9	12.2	0.0
1960	1,314	44.1	21.7	7.6	9.2	17.4	0.1
1970	1,936	39.8	21.3	5.9	10.5	22.3	0.2
1980	2,487	37.5	22.3	3.9	12.5	23.6	0.2
1987	2,640	36.8	25.1	2.8	12.8	22.2	0.3
1988	2,779	37.0	25.1	3.0	12.8	21.8	0.3
1989	2,807	37.3	25.5	2.7	12.8	21.3	0.3
1990	2,871	37.6	25.6	2.8	13.2	20.4	0.4

Sources: Figures through 1989 are from the *Railroad Facts* [2, 32]. The 1990 figures are from the Eno Transportation Foundation [7, 44].

**Table II.** Volume of U.S. Intercity Passenger Traffic, Total Revenue Passenger-Miles and Percentage of Total (Except Private)

Year	Millions of Revenue Passenger-Miles, Total (Except Private)	Railroad Share, Percent	Buses Share, Percent	Air Carriers Share, Percent	Inland Waterways, Share, Percent	Private Auto-mobiles, Millions of Revenue Passenger Miles	Private Air-planes, Millions of Revenue Passenger Miles
1929	44,065	77.1	15.4	—	7.5	175,000	—
1939	34,938	67.7	26.0	2.0	4.3	275,000	—
1944	128,989	75.7	20.9	1.7	1.7	181,000	1
1950	68,880	47.2	38.4	12.7	1.7	438,293	1,299
1960	75,319	28.6	25.7	42.1	3.6	706,079	2,228
1970	149,702	7.3	16.9	73.1	2.7	1,026,000	9,101
1980	242,800	4.5	11.3	84.2	NA	1,300,400	14,700
1987	364,400	3.3	6.3	90.4	NA	1,520,700	12,100
1988	370,100	3.5	6.2	90.3	NA	1,586,000	12,100

NA: Not Available.  
 Note: Railroads includes all classes, including electric railways, Amtrak and Auto-Train.  
 Source: *Railroad Facts* [1, 32].

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## The Move Toward Deregulation

- **Penn Central bankruptcy in 1972 prompts Congressional action – the Railroad Revitalization and Regulatory Reform Act of 1976**
  - Provided for a “zone of reasonableness” within which rate changes could not be challenged by regulators
  - Act’s practical usefulness undermined by loophole allowing ICC to challenge rates when there was “market dominance”

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## The Move Toward Deregulation

- **Reformers appointed to the ICC**
  - Nixon/Ford Administration appointments to the ICC begin to publicly argue for more competition
  - Reformist commissioners begin to issue pro-competitive rules
    - Rate bureaus prohibited from protesting rate filings in railroads and trucking
    - “Commercial zones” (exempt from federal regulation) around major cities significantly expanded, deregulating large trucking service areas

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## The Move Toward Deregulation

- **Reformers take control**

- Carter appoints reformist commissioner Daniel O’Neal Chairman of the ICC
- O’Neal eases restrictions on entry into the trucking industry
- All reforms adamantly opposed by industry, Teamsters Union
- Senator Edward Kennedy(!) holds hearings on anticompetitive practices in trucking industry, consensus builds in favor of more competition

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## The Move Toward Deregulation

- **Reformers turn the tide**

- ICC Chairman O’Neal steadily chips away at entry restrictions, deregulates all freight shipments under federal contract
- At end of 1978, O’Neal proposes that all applicants for carrier service be provided with licenses subject to meeting fitness standards; advocates relaxation of rate controls within a broad zone of reasonableness
- Carter White House plans major surface transportation deregulation legislation; plans are boosted by success of airline deregulation bill
- Railroads support deregulation

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## The Move Toward Deregulation

- **Reformers turn the tide**
  - Carter sends railroad deregulation bill to Congress in 1979
  - Carter and Senator Kennedy support deregulation legislation for the trucking industry
  - ICC continues to move towards de facto deregulation despite increasing opposition from trucking industry and its Congressional allies
  - Motor Carrier Act of 1980 passed, sweeping deregulation of trucking industry
  - Staggers Rail Act partially deregulates railroads

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## Staggers Rail Act

- **Provides railroad with considerable pricing freedom**
- **Allowed ICC to exempt a growing list of products from regulation**
- **Allowed railroads to enter into contracts with shippers**
- **Allowed railroads more freedom to abandon unprofitable routes**
- **Since the Act's passage, ICC has continued to promote competition in its rulings**
- **The Act is widely credited with helping U.S. rail freight industry survive**

## Staggers Rail Act

- **Some debate about impact of reform on overall rates, but general conclusion is that impact was beneficial for industry and consumers**
  - Benefits of \$5.3 - \$7.2 billion in lower rates to shippers
  - \$5 - \$10 billion in reduced inventory-related logistics costs
  - Just less than \$500 million in higher profits for railroads
  - \$700 million in tax savings to tax payers
  - Some reduction in wages to labor in the rail sector (as much as \$1 billion (1985 dollars) in reduced wages)

Table 1. Index of Rail Carloadings of Various Types of Traffic (1978 = 100)

<i>Traffic</i>	1969	1975	1978	1979	1980	1981	1982	1983	1984
Fruit	632	274	100	104	136	196	232	260	—
Vegetables	538	284	100	92	140	203	232	192	—
Coal	116	106	100	119	129	130	127	118	134
Grain	96	100	100	107	117	101	94	103	106
TOFC <sup>a</sup>	84	71	100	101	90	95	105	127	146

Source: *Freight Commodity Statistics* (1970–1982), American Railway Association.

<sup>a</sup>Trailer on flat car.

**Table III. Average Real Rail Rate Changes, Percent**

Category	1978-1980	1980-1987	1978-1987
Farm Products	14.23	-44.01	-36.05
Coal	9.36	-10.19	-1.78
Food and Kindred	14.09	-37.82	-29.06
Lumber and Wood	-0.74	1.01	0.26
Pulp and Paper	9.13	-19.40	-12.05
Chemicals	4.49	-20.06	-16.47
Transportation Equipment	5.60	3.83	9.64
Intermodal*	13.93	-25.44	-15.05
All Others	8.16	-33.14	-27.68
Average Rate Change <sup>b</sup>	8.55	-22.35	-15.71

Notes:

a. Trailer-on-flatcar and container-on-flatcar.

b. Annual rate changes for each category weighted by their share of revenue

Source: *Railroad Regulation* [14, 53].

**Table IV. Rate of Return on Net Investment and Rate of Return on Stockholders' Equity (Figures are in percent)**

Year	Rate of Return on Net Investment	Rate of Return on Shareholders' Equity
1960	2.13	2.57
1965	3.69	4.59
1970	1.73	0.43
1975	1.20	1.87
1980 <sup>a</sup>	5.56	6.01
1981	3.98	10.54
1982	2.11	5.43
1983 <sup>b</sup>	4.29	7.26
1984	5.70	9.94
1985	4.58	6.83
1986	1.30	2.10
1987	4.75	8.05
1988	6.73	9.11
1989	NA	8.44

Source: *Railroad Facts* [2, 18, 21].

a. Beginning in 1978, the railroad "Uniform System of Accounts" was refined. Therefore, historical operating expenses before 1978 are not precisely comparable with those after 1978 [2, 8].

b. In 1983 "railroad accounting for track and related structures was changed from "Retirement, Replacement, Betterment" to "Ratable Depreciation" [1, 3].

**Table V. Revenue Adequacy of Class I Railroads.** (Figures are in per cent.)

Year	Return on Investment (ROI) 5 Largest RR	Return on Investment (ROI) 11 other RR	Cost of Capital (COC)	ROI minus COC 5 Largest RR	ROI minus COC 11 other RR
1980	5.23	5.45	11.2	-5.97	-5.75
1981	5.96	5.34	16.5	-10.54	-11.16
1982	4.36	2.40	17.7	-13.34	-15.30
1983	5.62	2.01	15.3	-9.68	-13.29
1984	7.09	4.21	15.8	-8.71	-11.59
1985	6.02	2.81	13.6	-7.58	-10.79
1986	5.05	2.13	11.7	-6.65	-9.57
1987	5.60	3.18	11.6	-6.00	-8.42
1988	6.71	3.61	11.7	-4.99	-8.09

Source: *Railroad Facts* [2, 42]. The cost of capital for Class I railroads was 11.5% in 1989, based on the ICC's annual cost of capital calculation [2, 19].

## Remaining Issues in Rail Regulation

- Railroads still limited in ability to price at market rates where intermodal competition is limited
- Railroads still not “revenue adequate” (more downsizing may be required)

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## The Motor Carrier Act of 1980

- **Drastically limited the ability of incumbents to protest rates of new entrants – burden of proof placed on protestor**
- **Requires that the ICC provide procedures permitting carriers to reduce limitations on their operating authority**
- **Puts into law the pro-competitive practices of the ICC in the late 1970s**

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## The Motor Carrier Act of 1980

- **Motor carrier rates declined by as much as 25%**
- **The number of entrants continued to rise**
- **Deregulation widely supported by shippers**
- **Some existing carriers were unable to survive deregulation and recession, went bankrupt in early 1980s**

Table 3. Purchases of Operating Authority

Year	Number in June	Average Value	
		Common Carriers Only <sup>a</sup>	Number in Sample
1975	43	\$398	20
1976	23	579	17
1977	15	531	28
1978	36	370	25
1979	13	55	24
1980	3	171	4
1981	3 <sup>b</sup>	13	1
1982	0	15	2

Sources: *Traffic World* (various dates), and motor carrier finance cases from the files in the Docket Room, ICC.

<sup>a</sup>Thousands of 1982 dollars.

<sup>b</sup>For the period February through June.

Table 4. Entry and Number of Property Carriers

Year	Authority Applications from Carriers		Percentage Granted		Number of Carriers
	Existing	New	Existing	New	
1975	2,822	276	55	61	16,005
1976	6,406	586	61	62	16,462
1977	8,622	558	65	72	16,606
1978	12,983	703	69	78	16,874
1979	20,687	974	69	80	17,083
1980	18,788	1,490	73	86	18,129
1981	19,135	4,576	88	85	22,270
1982	9,150	4,925	84	55	25,722

Sources: Interstate Commerce Commission, special preparation, and *Annual Report to Congress* (various years).

Table 5. Indexes of Real Freight Rates and Average Compensation

Sample Size	1975	1976	1977	1978	1979	1980	1981	1982
<i>Rates Paid by Shippers</i>								
TL 35	100	100	100	99	95	88	81	75
LTL 30	100	103	105	104	101	98	91	89
Rail 23	100	102	96	102	101	100	90	93
<i>LA-Denver Posted Rates (Class 100)</i>								
TL	100	102	101	na	93	90	89	102
LTL	100	105	107	na	103	103	110	117
<i>Average Compensation</i>								
All employees	100	94	103	96	94	93	87	89
Drivers and helpers								
Mileage basis	100	117	124	109	105	105	106	100
Hourly basis	100	88	114	92	92	92	92	90

Sources: Author's survey as described in text; ICC Rate Filings; ICC Annual Reports; and ICC Transport Statistics in the United States.

Table 6. Financial Data on Major Trucking Firms

Year	Number of Firms in Group	Return on Transportation Investment (%)	Payroll to Revenue (%)	Revenue Per Ton-Mile <sup>a</sup> (¢)	Industry Bankruptcies
1973	1144	25.7	na	na	na
1974	972	25.5	na	na	231
1975	803	19.5	43.4	21.5	240
1976	748	19.7	43.2	22.0	276
1977	963	22.8	41.7	21.7	193
1978	857	24.0	41.7	20.1	162
1979	721	14.5	40.2	19.7	186
1980	704	15.1	39.4	19.9	382
1981	704	11.1	38.7	19.4	610

Sources: G. Barry Kohler, *Financial Analysis of the Motor Carrier Industry* (1978), Bank of America and American Trucking Associations, and Patricia Lisciandro, *Financial Analysis of the Motor Carrier Industry*, (1982), Chase Manhattan Bank and American Trucking Associations. Bankruptcies are from Dun & Bradstreet's *Business Failure Record* (January 28, 1983), and reflect failures in the whole industry, regulated, unregulated, and local carriers.

<sup>a</sup>1982 dollars.

Table 7. Quality of Service after Motor Carrier Act of 1980

	Sample Size	Percent		
		Improved	Unchanged	Worse
Quality of trucks	71	24	68	8
Promptness of service	70	47	46	7
Availability of service	71	73	17	10
Reliability	71	37	52	11
Adjustment of claims	71	18	63	19
Need for supervision	70	14	69	17
Willingness to serve off-line points	71	34	42	24
Overall	495	35	51	14

Source: Author's survey of major shippers. Data include multiple responses by firms; when different divisions of the same firm responded, they were treated as separate responses.

## Parallels with Airline Deregulation

- **Regulating agencies “taken over” by reformers**
- **Reformers successfully pursue “de facto” deregulation in advance of authorizing Congressional legislation**
- **Deregulating Acts largely codify existing practice**
- **Effect on consumers, economy largely viewed as positive**

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## General Lessons from Deregulation

- **Incumbent industry generally opposed liberalization**
- **Partial reform by regulatory agency helped pave the way for more complete reform with authorizing legislation**
- **Consumers have fared much better under competition than under regulation, industry performance under many measures has also improved**