MARKET DOMINANCE IN THE RAILROAD REVITALIZATION
AND REGULATORY REFORM ACT OF 1976

by

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Approved by:

[Signature]
Major Professor
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ACKNOWLEDGMENT

I am appreciative of those who have been supportive of my educational experience and want to give special recognition to my graduate committee, chaired by Dr. L. Orlo Sorenson. The comments and suggestions by the committee have been greatly appreciated and essential in the development of this report. I am indebted to my parents who have always supported and encouraged me.
INTRODUCTION

Railroads were the first industry in the United States to be brought under federal price control. This came about with the passage of the Act to Regulate Commerce in 1887 and the establishment of the Interstate Commerce Commission (I.C.C.). One purpose of economic regulation was to control the ability of the industry to exploit the public through its position of monopoly power and market dominance. Since regulation was initially imposed, developments of new transportation modes have weakened the monopoly position which the railroads once possessed. The legislation establishment in 1887 has been amended several times but rate regulations imposed on the rail industry have continued.

The Railroad Revitalization and Regulatory Reform Act, signed into law by President Gerald Ford on February 6, 1976, was designed to provide the revitalization of failing railroads through federal aid and the revitalization of all railroads through regulatory reforms calculated to enhance the industry's competitive strength.

Under this Act, the Interstate Commerce Commission's powers are limited and, for rate increases, suspension is dependent on market dominance by the carrier proposing the rate increase. The Act refers to market dominance as the absence of effective competition by other rail carriers and other transportation modes. The Interstate Commerce Commission was required to further define "market dominance" and "the absence of competition" to make them workable concepts for purposes of carrying out the Intent of Congress in administering regulatory legislation. Congress, in the legislation, set a deadline date of 240 days after the legislation
was signed into law for the I.C.C. to adopt a final definition of market dominance.

The objectives of this report are (1) to assemble and examine literature related to I.C.C. development of an operational definition of market dominance for railroad regulatory purposes and (2) to relate the final definition to applicable economic theory indicating the manner in which theoretical concepts are either explicitly or implicitly applied. It is not an objective to this report to develop evidence of the functional quality of the final I.C.C. definition as determined by measurement problems and quality of available data. The purpose is to review the operational concept in light of dominant firm theory.

This report first discusses the purposes and basic provisions of the Railroad Revitalization and Regulatory Reform Act of 1976 to give a broad overview of this legislation. Second, the report discusses the development of the dominant firm concept and the evolution of the attitudes of shippers and carriers to the proposed, interim and final definitions adopted by the I.C.C. The final section of the report discusses the literature involving economic theory and the effect of monopoly regulation as related to concepts incorporated in the final I.C.C. definition.
Chapter 1

PURPOSE AND PROVISIONS OF THE RAILROAD REVITALIZATION AND REGULATORY REFORM ACT OF 1976

The Railroad Revitalization and Regulatory Reform Act of 1976 is an "Act to improve the quality of rail services in the United States through regulatory reform, coordination of rail services and facilities, and rehabilitation and improvement financing, and for other purposes."\(^1\)

It was the purpose of Congress in this Act to "provide means to rehabilitate and maintain the physical facilities, improve the operations and structure, and restore the financial stability of the railway system of the United States, and to promote the revitalization of the system, so that this mode of transportation will remain viable in the private sector of the economy and will be able to provide energy-efficient, ecologically compatible transportation services with greater efficiency, effectiveness, and economy."\(^2\)

Basic provisions of the Railroad Revitalization and Regulatory Reform Act of 1976 (4-R Act) called for making available $2.1 billion for Consolidated Rail Corporation (ConRail) to continue and complete the reorganization of the bankrupt railroads in the Northeast and in the Midwest. ConRail was authorized to issue debentures and Series A preferred stock to the United States Railway Association (USRA) for $2.1 billion and also


to issue securities plus certificates of value equal to those securities to transferors of property to the ConRail system.³

Title IV of the Act, Implementation of the Final System Plan, creates a Finance Committee composed of the Secretaries of Transportation and Treasury and the chairman of the USRA. This board has authority to control the flow of government funds to ConRail and has the right to shut off the funds if they find that ConRail has committed a violation of any of the covenants or undertakings made to the USRA, or if ConRail cannot achieve the expected goals projected in the Final System Plan or cannot achieve those goals without substantial additional federal assistance. Any decision that is made by this committee is not effective for thirty days during which time either house of Congress may veto.⁴

For six years following passage of the Act, properties not originally designated in the Final System Plan may either be acquired or conveyed to ConRail. The Final System Plan refers to the plan and any additions thereto adopted by the United States Railway Association.⁵

The Act called for reforming rate regulations to give railroads new ratemaking freedom and imposed new procedures on the Interstate Commerce Commission to reduce regulatory lag. No railroad rate can be found to be too low if that rate contributes to the "going concern value" of the carrier proposing the lower rate. A rate greater than or equal to the variable costs of the service in question is presumed to contribute to

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³4-R Act of 1976, Title VI - Implementation of the Final System Plan, Section 605, Debentures and Series A Preferred Stock; Section 605 is an amendment to Title II of the 4-R Act, Section 216(a), General, Public Law 94-210 (S. 2718), February 5, 1976.

⁴Ibid., Section 216(c), Finding, Direction, and Review by Congress.

⁵Ibid., Title 1 - General Provisions, Section 102, Definitions.
the going concern value. No rate can be found to be unreasonably high unless the Interstate Commerce Commission finds that the carrier propos-
ing the higher rate has "market dominance" over the service in question. If the Interstate Commerce Commission cannot find market dominance, the Commission cannot suspend a rate because it is too high.6

For two years following passage of the Act, railroads could raise or lower specific rates by as much as 7 percent from the level in effect at the beginning of each year without suspension because of the reason-
ableness of the rate being proposed. A general across-the-board rate increase does not apply. The Act directed the Interstate Commerce Com-
mission to make known the rules for establishing seasonal, regional or peak period demand rates. The Commission was required to set standards for establishing and maintaining adequate railroad revenue levels, suf-
cient to cover operating expenses, depreciation, plus a reasonable rate of return on investment. The Interstate Commerce Commission was given jurisdiction over intrastate rates provided that the appropriate state agencies have not acted on the rate within 120 days. The Act requires the Commission to decide on any proposed rate within 180 days if the rate involves a capital investment of $1 million or more by a carrier, shipper or a receiver. Once a rate meeting this condition has gone into effect, it cannot be challenged for five years unless the rate is found to be below variable costs. The Act provided for certain specific activ-

ities or services to be exempt from regulation if the Interstate Commerce

64-R Act of 1976, Title II - Railroad Rates, Section 201, Expedi-
Commission determines that the regulation is not necessary in the public interest.\(^7\)

Title III pertains to Interstate Commerce Commission reform. The Commission was directed to propose a modernization and revision of the Interstate Commerce Act. An Office of Rail Public Counsel was established with authority to participate in cases before the Commission and to bring issues before the Interstate Commerce Commission. The Office was established as an independent office affiliated with the Commission. The director was to be appointed by the President for a four-year term, from a list submitted by the Commission. The Act improved the access to Interstate Commerce Commission information by Congressional Committees. Effective three years from enactment is a provision which prohibits discriminatory tax treatment of transportation property by states and localities. The Interstate Commerce Commission was required to prescribe a uniform cost and revenue accounting system for all common carriers by rail by June 30, 1977, the system to become effective January 1, 1978. A Rail Services Planning Office was permanently established within the Interstate Commerce Commission to assist the Commission, states and localities and to develop standards for commuter service assistance. The Act called for an equitable distribution of cars for unit train service and provided that copies of the Interstate Commerce Commission budget request and other information supplied to the Office of Management and Budget be sent to Congress.\(^8\)

\(^7\)Ibid., Title II - Railroad Rates, Section 206, Rate Incentives for Capital Investment.

\(^8\)Ibid., Title III - Reform of the Interstate Commerce Commission.
Title IV authorized the Department of Transportation to plan and develop proposals for mergers, consolidations and joint use. The Secretary of Transportation was directed to conduct studies, assist any railroad and to hold conferences for planning and proposing mergers that the Secretary believes would result in a more economically efficient and adequate system. 9

The Act provided for $600 million in government loans to railroads for plant and equipment rehabilitation. A rail fund was established within the Treasury Department ($600 million) to be administered by the Secretary of Transportation until September 30, 1978, for financial assistance to railroads, including ConRail. Another $1 billion was authorized for loan guarantees for facility or equipment purchases or rehabilitation. Two hundred million dollars was guaranteed for electrifying the routes between Harrisburg and Pittsburgh, Pennsylvania. 10

The Department of Transportation was authorized to administer funding for upgrading the Northeast Corridor. The funding was $1.6 billion in grants over a five year period. Amtrak was permitted to form a subsidiary corporation to manage the Northeast Corridor Project to separate these operations from the rest of Amtrak's system in order to determine whether the passenger system within the Corridor can show a profit. 11

Title VIII of the Act required each railroad to submit to the

9Ibid., Title IV - Mergers and Consolidations, Section 401, Responsibilities of the Secretary.

10Ibid., Title - Railroad Rehabilitation and Improvement Financing.

11Ibid., Title VII - Northeast Corridor.
Interstate Commerce Commission a map of its system identifying any lines within their respective systems that are "potentially subject to abandonment."\textsuperscript{12} The Act prohibits the abandonment or discontinuance of any line unless it has been on the list for "potentially subject to abandonment" for four months. If any financially qualified person offers financial assistance to continue service, then the Interstate Commerce Commission is to postpone any abandonment or discontinuance. The assistance must cover "the difference between the revenues which are attributable to such line of railroad and the avoidable cost of providing rail freight service on such line, together with a reasonable return on the value of such line; or cover the acquisition cost of all or any portion of such line of railroad."\textsuperscript{13} The Act defines reasonable rate of return to be the cost of capital to the railroad if the railroad is not in reorganization.\textsuperscript{14}

Section 803 provided for $360 million financial assistance to states for rail freight assistance programs that are designed to cover, "the cost of rail service continuation payments, the cost of purchasing a line of railroad or other rail properties to maintain existing or provide for future rail service, the cost of rehabilitating and improving rail properties on a line of railroad to the extent necessary to permit adequate and efficient rail freight service on such line and the cost

\textsuperscript{12}\textit{Ibid.}, Title VIII - Local Rail Service Continuation, Section 802, Discontinuance and Abandonment of Rail Service.

\textsuperscript{13}\textit{Ibid.}, Title VIII - Local Rail Service Continuation, Section 802, Discontinuance and Abandonment of Rail Service, S. 802, 6, a, ii, A & B.

\textsuperscript{14}\textit{Ibid.}, Section 802, 10(b).
of reducing the costs of lost rail service in a manner less expensive than continuing rail service."  

The Federal share of the costs of any rail service assistance program was 100 percent for the period from July 1, 1976 to June 30, 1977, 90 percent the second year, 80 percent the third year and 70 percent for the fourth and fifth years.  

ConRail and any other carriers are required to provide services where assistance payment is offered.  

ConRail was required to continue commuter service as it was on the day of property conveyance for 180 days and to continue to provide the service if state or commuter authority offers a service assistance payment. One hundred and twenty-five million dollars was offered to assist states, commuter authority and ConRail in maintaining commuter services for 2½ years. Twenty million dollars was made available for assistance to convert abandoned right-of-ways to recreational and conservation purposes. Six million dollars was authorized to establish a rail bank for fossil fuel and agricultural purposes.  

Title IX directed the Department of Transportation Secretary to conduct a study of the railway system to analyze the effects of rail transportation federal aid, including environmental impact and abandonment of lines and discontinuance of services in the states outside the region.  

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15 Ibid., Section 803, Local Rail Service Assistance, (f), 1-4.  
16 Ibid., Section 803, (g), 1-4.  
17 Ibid., Section 804, Termination and Continuance of Rail Services, (c) Continuation of Rail Services.  
18 Ibid., Title VIII - Local Service Continuation.  
19 Ibid., Title IX - Miscellaneous Provisions.
Chapter 2

THE 4-R ACT AND RAILROAD RATEMAKING

Section 202 of the 4-R Act pertains to railroad ratemaking and introduces into legislation the concept of "market dominance." A basic goal of the legislation is to encourage competition among all carriers by railroad and other modes of transportation by providing rate flexibility to the railroads.\textsuperscript{20} The Act requires that each rate for service rendered in the transportation of persons or property by a railroad shall be just and reasonable\textsuperscript{21}, and that a rate that is unjust or unreasonable is prohibited and unlawful. The Act refers to rate as any "rate or charge for the transportation of persons and property."\textsuperscript{22}

No rate which contributes to the "going concern value" of a carrier shall be found to be unjust or unreasonable on the ground that the new rate is below a just or reasonable minimum for the service rendered.\textsuperscript{23} A rate that is equal to or greater than the variable costs of providing a service shall be presumed to contribute to the going concern value of the carrier or carriers proposing the rate.\textsuperscript{24} In determining variable costs, the Interstate Commerce Commission shall determine only those


\textsuperscript{21}4-R Act of 1976, Title II - Railroad Rates, Section 202, Railroad Ratemaking, (b), Public Law 94-210 (S. 2718), February 5, 1976.

\textsuperscript{22}Ibid., Section 202, (c), il.

\textsuperscript{23}Ibid., Section 202, (b).

\textsuperscript{24}Ibid.
costs of the specific services in question. Variable costs do not in-
clude expenses which do not vary directly with the level of service pro-
vided under the questioned rate.\textsuperscript{25} No railroad rate can be found to be too low if the rate is equal to or greater than the variable costs of the service in question. This is allowing carriers to freely adjust rates downward at their own discretion as long as they cover the costs that vary directly with the service.

No rate shall be found to be unjust or unreasonable on the ground that the rate exceeds a just or reasonable maximum for the service ren-
dered, unless the Interstate Commerce Commission has found that the pro-
ponent carrier has "market dominance" over the service.\textsuperscript{26} The Act defines market dominance as "an absence of effective competition from other car-
rriers or modes of transportation, for traffic or movement to which a rate applies."\textsuperscript{27} If no market dominance is found, the Interstate Commerce Commission (I.C.C.) cannot suspend a rate because the rate is too high. The theory is that, if the railroad does not have market dominance, the forces of competition will prevent it from raising rates to a level that would allow it to realize monopoly profits, and thus there is no need for Commission intervention. A carrier having market dominance over a service does not necessarily mean that the rate or rates for the service exceed a just and reasonable maximum. The Act does not prohibit a rate increase from a level which reduces the going concern value of the proponent car-
rrier to a level which contributes to such going concern value. A rate

\textsuperscript{25}ibid.

\textsuperscript{26}ibid.

\textsuperscript{27}ibid., Section 202, (c), i.
Increase which does not raise a rate above the incremental cost of rendering the service shall be presumed to be just and reasonable.\(^{28}\)

Whenever a railroad rate is challenged as being unreasonably high, the Commission shall determine whether the proponent carrier has market dominance over the service to which the rate applies. The challenge can originate with a shipper or on the initiative of the Commission. The Commission's decision on market dominance must come within 90 days after the investigation begins.\(^{29}\)

For a period of two years following enactment of the legislation, the I.C.C. could not suspend any proposed rate if the rate did not represent more than a 7 percent increase or decrease in any one given year over the existing rate, unless (1) the Commission found the carrier to have market dominance, (2) the rate was alleged to be illegal under section 2, 3, or 4 of the Interstate Commerce Act\(^{30}\), or (3) the rate was unfair, predatory, destructive, or otherwise undermined competition. This did not include general rate increases. Should the I.C.C. suspend a rate for the reasons cited above, the Commission was given seven months to investigate the charges against the rate. If the hearing was not completed and the final decision made by the Commission prior to the seven month deadline, the new rate became effective, unless prior to the

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\(^{28}\) Ibid., Section 202, (b).

\(^{29}\) Ibid., Section 202, (c), 9.

\(^{30}\) The Act to Regulate Commerce of 1887 is now called the Interstate Commerce Act which defines the jurisdiction of the Interstate Commerce Commission over domestic transportation; Section 2 - Special rates or rebates for like service forbidden; Section 3 - Undue or reasonable preference or prejudice forbidden, must provide proper and equal facilities for interchange of traffic; Section 4 - Forbidden to charge more for shorter than a longer haul except under "substantially similar circumstances and conditions."
expiration date the Commission reported in writing to Congress that they were unable to decide, together with a full explanation for the reason for the delay. If the report was made to the Congress, the final decision had to be made within ten months after the date of filing. If the decision was not made in the designated time period, the carrier was entitled to the new proposed rate.\footnote{4-R Act of 1976, Title II - Railroad Rates, Section 202, Railroad Ratemaking, (e), Public Law 94-210 (S. 2718), February 5, 1976.}

After the expiration of the 7 percent rule, the concept of market dominance continues to be significant in railroad ratemaking. Section 202(b) of the Act has no expiration date and it states;

Notwithstanding any other provision of this part, no rate shall be found to be unjust or unreasonable, or not shown to be just and reasonable, on the ground that such rate exceeds a just and reasonable maximum for the service rendered or to be rendered, unless the Commission has first found that the proponent carrier has market dominance over such service.\footnote{Ibid., Section 202, (b).}

Congress recognized that the structure of the transportation industry had changed since enactment of the Interstate Commerce Act in 1887. Railroads now face competition within their own mode and competition from other modes of transportation.

Railroads were the first large business to be regulated by the Federal Government. The regulation was called for by the Industry's dominance of the market and its ability to price some services monopolistically while engaging in predatory competitive practices in other markets. These problems exist today but in a very different transportation environment....

In 1887, a single railroad often provided the only transportation available to shippers. Growth of other modes
Table I

MODAL SHARE OF INTERCITY FREIGHT TRAFFIC
IN THE UNITED STATES, 1929-1973
(billions of net ton-miles)

<table>
<thead>
<tr>
<th>Year</th>
<th>Railroad Ton-Miles</th>
<th>Railroad Percent of Total</th>
<th>Motor Carrier Ton-Miles</th>
<th>Motor Carrier Percent of Total</th>
<th>Inland Waterway System Ton-Miles</th>
<th>Inland Waterway System Percent of Total</th>
<th>Great Lakes Ton-Miles</th>
<th>Great Lakes Percent of Total</th>
<th>Pipeline Ton-Miles</th>
<th>Pipeline Percent of Total</th>
<th>Air Cargo Ton-Miles</th>
<th>Air Cargo Percent of Total</th>
<th>Real GNP (billions of 1958 dollars)</th>
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<tr>
<td>1929</td>
<td>454.8</td>
<td>74.9</td>
<td>19.7</td>
<td>3.3</td>
<td>8.7</td>
<td>1.4</td>
<td>97.3</td>
<td>16.0</td>
<td>26.9</td>
<td>4.4</td>
<td>0.003</td>
<td>0</td>
<td>607.4</td>
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<tr>
<td>1939</td>
<td>338.8</td>
<td>62.4</td>
<td>52.8</td>
<td>9.7</td>
<td>19.9</td>
<td>3.7</td>
<td>76.3</td>
<td>14.0</td>
<td>55.6</td>
<td>10.2</td>
<td>0.012</td>
<td>0</td>
<td>543.5</td>
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<td>1942</td>
<td>645.4</td>
<td>69.5</td>
<td>59.9</td>
<td>6.5</td>
<td>26.4</td>
<td>2.8</td>
<td>122.2</td>
<td>13.1</td>
<td>75.1</td>
<td>8.1</td>
<td>0.034</td>
<td>0</td>
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<td>1947</td>
<td>664.5</td>
<td>65.3</td>
<td>102.1</td>
<td>10.0</td>
<td>34.5</td>
<td>3.4</td>
<td>112.2</td>
<td>11.0</td>
<td>105.2</td>
<td>10.3</td>
<td>0.16</td>
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<td>1952</td>
<td>623.4</td>
<td>54.5</td>
<td>194.6</td>
<td>17.0</td>
<td>63.8</td>
<td>5.6</td>
<td>104.5</td>
<td>9.1</td>
<td>157.5</td>
<td>13.8</td>
<td>0.41</td>
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<td>1957</td>
<td>626.2</td>
<td>46.9</td>
<td>254.2</td>
<td>19.0</td>
<td>114.6</td>
<td>8.6</td>
<td>117.3</td>
<td>8.8</td>
<td>227.7</td>
<td>16.7</td>
<td>0.57</td>
<td>0.05</td>
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<td>1962</td>
<td>600.0</td>
<td>43.8</td>
<td>309.0</td>
<td>22.5</td>
<td>133.0</td>
<td>9.7</td>
<td>90.0</td>
<td>6.6</td>
<td>238.0</td>
<td>17.3</td>
<td>1.30</td>
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<td>1967</td>
<td>731.2</td>
<td>41.4</td>
<td>388.5</td>
<td>22.0</td>
<td>174.0</td>
<td>9.9</td>
<td>107.0</td>
<td>6.1</td>
<td>361.0</td>
<td>20.5</td>
<td>2.59</td>
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<td>1970</td>
<td>771.0</td>
<td>39.8</td>
<td>412.0</td>
<td>21.3</td>
<td>204.0</td>
<td>10.6</td>
<td>114.0</td>
<td>5.9</td>
<td>431.0</td>
<td>22.3</td>
<td>3.30</td>
<td>0.17</td>
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<td>1971</td>
<td>746.0</td>
<td>38.2</td>
<td>445.0</td>
<td>22.7</td>
<td>210.0</td>
<td>10.7</td>
<td>105.0</td>
<td>5.4</td>
<td>448.0</td>
<td>22.9</td>
<td>3.50</td>
<td>0.18</td>
<td>1,954.0</td>
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<td>1972</td>
<td>784.3</td>
<td>37.8</td>
<td>470.0</td>
<td>22.6</td>
<td>229.8</td>
<td>11.1</td>
<td>108.9</td>
<td>5.2</td>
<td>480.0</td>
<td>23.1</td>
<td>3.70</td>
<td>0.18</td>
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<td>1973b</td>
<td>860.0</td>
<td>38.7</td>
<td>510.0</td>
<td>23.0</td>
<td>237.0</td>
<td>10.7</td>
<td>114.0</td>
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<td>495.0</td>
<td>22.3</td>
<td>4.20</td>
<td>0.20</td>
<td>2,220.2</td>
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*Includes both for-hire and private carriers.

b Preliminary figures.

In the past century has raised the question whether protection against rail monopoly is any longer necessary in many markets.\textsuperscript{33}

Over the past 20 years, 37,000 miles of Federal interstate highways have been opened to truck competition. Barge traffic, whether over all-water routes or in combination with truck and railroads, is providing competition. Pipelines, which transport oil and gas, provide significant competition to railroads because coal transported by rail competes with oil and natural gas. Because of this, railroads face two different types of competition, (1) modal competition - for the carriage of the product to the geographic market, and (2) product competition - for the sale of the product in the geographic market\textsuperscript{34}, (i.e., coal competes with oil and natural gas as products.)

Congress recognizes that the regulation by the I.C.C. had failed to assure adequate industry profits and rates of return. In 1974, the industry's rate of return was 3.4 percent and the cost of capital was 10 percent. In the past 15 years, the rate of return of Class I railroads has averaged 2.6 percent and has never reached 4 percent.\textsuperscript{35}

\textsuperscript{33}Paul W. MacAvoy and John W. Snow, Railroad Revitalization and Regulatory Reform Act, American Enterprise Institute for Public Policy Research, Washington D.C., 1977, p. 226, excerpt taken from: U.S. Congress, Senate, S. Rept. 499, 94th Congress, 1st session, 1975, pp. 10-11: "In 1947 the railroads carried nearly two-thirds of the intercity freight; by 1973 that share had dropped to 39%. During the same period, when the gross national product grew approximately 179%...and while industrial production grew 219%, total U.S. rail revenue ton-miles grew only 30%, while ton-miles carried in the eastern district actually declined 17%"


\textsuperscript{35}Ibid., p. 7.
The rate rigidity imposed on the railroad industry by the Interstate Commerce Act had undermined the financial potential of the industry by preventing it from competing with other modes which have not been subject to the intense degree of regulation that the railroads have been. Congress determined that,

if railroads are to increase their revenues and attract the resources necessary to revitalize the industry, they must be able to raise their rates in a timely fashion free from regulation in markets sufficiently competitive to prevent abuses of monopoly power.\textsuperscript{36}

The market dominance concept is based on recognition that railroads today generally face substantial competition and that maximum rate regulation is no longer necessary or desirable where effective competition exists.\textsuperscript{37} In passing the Act, Congress sought to move away from regulation and to place greater reliance on market forces while still retaining some control over rail rates. The House Commerce Committee expressed it this way:

Underlying the regulatory reform provisions of the entire bill is a conviction that competitive market forces, rather than regulation, should be used to set price and service levels where effective market competition exists. Where effective market competition does not exist, regulation to protect against abuse of market power must be and is retained. The market dominance provision, therefore, targets regulation of those situations where effective market competition does not exist and lets market forces operate where it does exist. The Committee wants to make it clear that it will retain oversight on the administration of these provisions to ensure that the underlying purpose of this provision is not frustrated by a too narrow or protectionist attitude or by desire to retain jurisdiction over competitive markets. The Committee has inserted clear guidelines,

\textsuperscript{36}MacAvoy and Snow, op. cit., p. 227, "More than half of all truck shipments are by unregulated carriers. Water carriers are for the most part unregulated. Pipeline regulation has been minimal."

\textsuperscript{37}Ibid.
both for the courts and the Commission, to act upon in determining whether adequate competition exists.38

George H. Stafford, Chairman of the I.C.C., speaking before the Traffic Club of Philadelphia at the time of enactment of the 4-R Act, said that the "Commission recognizes that there is no justification for exercising regulatory jurisdiction where forces of a free market can provide the protection needed against unfair pricing practices and can assure the continuation of adequate transportation services."39 "The Agency could not quarrel with the assumption that effective competition is the best regulator, and that where competition exists, prices should be allowed to seek their own proper level and the Comission should withhold its regulatory hand."40 Railroads were given the freedom to compete with motor carriers and water carriers, but they were not given the freedom to destroy their competition.

To implement the provisions of this section of the Act pertaining to market dominance, the Congress directed the I.C.C. to establish by rule, standards and procedures for determining whether and when a carrier possesses market dominance over a service rendered or to be rendered at a particular rate or rates.41

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40Ibid.

Chapter 3

INTERSTATE COMMERCE COMMISSION'S
INITIALLY PROPOSED DEFINITION OF MARKET DOMINANCE

Under the 4-R Act, the I.C.C.'s powers are limited and, for rate increases, suspension is dependent on market dominance by the carrier proposing the rate increase. The Act refers to market dominance as the absence of effective competition by other rail carriers and other transportation modes. The I.C.C. had to further define market dominance by identifying conditions that constitute absence of competition and hence market dominance. The Commission's definition includes seven patterns in four general areas, any one of which could indicate absence of rail competition. The purpose of this section is to look at the Commission's proposed definition of market dominance.

The definition is contained in a notice of proposed rulemaking served March 10, 1976 in Ex Parte 320, Special Procedures for Making Findings of Market Dominance as Required by the Railroad Revitalization and Regulatory Reform Act of 1976. The definition is a test designed to focus the Commission's regulatory efforts on areas in which competition is insufficient to protect the public from unjust and unreasonable rates. Conversely, the rail carriers are given freedom to increase rates where there is effective competition. 42

In Ex Parte 320, the I.C.C. stated that the most promising approach is to identify certain patterns that imply market dominance and to require the submission of evidence designed to establish these patterns. The rules proposed by the Commission provide for a rebuttable presumption that the carrier has market dominance over a service under specified circumstances. The market dominance presumption is effective whenever there is evidence of one or more of the seven factual patterns which imply a lack of effective competition. The agency broke the seven patterns down into four general areas. They include rates considered by rate bureaus; the absence or presence of competition; the ability of a carrier to exact a premium for its service; and service and commodity characteristics of markets where railroads traditionally have been free of market competition. The first area involving rate bureaus refers to instruction from Congress to the Commission that there will be presumed an absence of effective competition between railroads with respect to any rate considered by rate bureaus.

The I.C.C.'s proposed rules provided that a presumption of market dominance would arise in the following seven situations:

(1) Where the rate in issue had been discussed or considered in proceedings before a rail carrier rate bureau acting under antitrust exemptions contained in the Interstate Commerce Act;
(2) Where no other carrier or any other mode has handled a significant amount of the involved traffic for at least one year preceding the filing of the proposed rates;
(3) Where other carriers of any mode have handled a significant amount of traffic but there is no evidence of actual price competition in the past three years;
(4) Where the rate in issue exceeds the rate(s) charged by other carriers offering the same or interchangeable service between the involved points by 25 percent or more;

\[43\] Ibid.

\[44\] Ibid.
(5) Where the rate in issue exceeds the fully allocated cost of providing the service by 50 percent or more;
(6) Where the distance between the origin and destination exceeds 1,500 miles, except that when the involved movement occurs as a single-line movement, market dominance may be presumed where the distance exceeds 1,500 miles, providing, however, in either instance that when a rate is subject to a minimum weight, such minimum weight shall equal or exceed twenty net tons;
(7) Where the commodity moving under the rate in issue customarily moves in bulk shipments.\textsuperscript{45}

The proposed rules did not contain any definition identifying those cases in which market dominance did not exist.

Chapter 4

INTERIM AND FINAL DEFINITIONS OF MARKET DOMINANCE

The proposed definition was criticized by the railroads. In a statement filed by the Association of American Railroads with the Commission, the railroads said the I.C.C.'s proposed rule "represents an unusual and ill-premised approach to determining the absence of effective competition," and "proceeds from an assumption of railroad dominance of the national transportation system that is wholly at odds with the facts." The railroads estimated that rate flexibility for at least 90 percent of all rail traffic would be eliminated by the proposed rule and that "this is squarely at odds with the 4-R Act's purpose of accomplishing substantial rate deregulation and according railroads a far broader range of freedom. The rule would only expand and complicate ratemaking proceedings." The railroads accused the Commission of beginning on the false premise that the railroads dominate most transportation markets and they offer a substitute rule which starts on the premise that competition in transportation is generally prevalent, which they believe to be the conditions recognized by Congress in enacting the 4-R Act.

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47 Ibid.

48 Ibid., p. 3.
The United States Railway Association claimed that the proposed rulemaking restricted the ability of ConRail to become a financially self-sustaining corporation. ConRail started operations with 17,000 miles of railroad in an 18 state area formerly served by 7 bankrupt railroads. The I.C.C. estimated that ConRail had a rail service monopoly throughout two-thirds of the northeast region. Under the market dominance concept and with market conditions such as these, ConRail is faced with less rate freedom and more I.C.C. regulations than its bankrupt predecessors.

The Rail Services Planning Office of the I.C.C. has argued that the monopolistic nature of the unified ConRail would provide only limited incentives for efficient service for captive markets. Resources, such as rail cars, could be drained from the captive markets to competitive areas where service is significant to shippers. ConRail's monopolistic position will require increased regulation by the Commission in order to protect the region's rail users and solvent railroads. ConRail's President, Edward Jordan, felt that ConRail might have a problem with the market dominance concept but he felt that the shippers were more concerned over the availability of cars and condition of the roadbeds than the monopolistic advantage ConRail possessed.

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50 "Market Dominance May Mean ConRail Cannot Make Use of Rail Rate Flexibility," Traffic World, March 22, 1976, p. 12.

51 Ibid.

52 Ibid.
During this reply statement phase, the Department of Transportation's attitude was that the Commission's proposal would result in finding market dominance for every rate change proposed by any railroad and would be contradictory to the attitude of the Congress in reforming the regulatory process. "Competitive pricing and less restrictive rate regulation would be accorded no significantly greater role than they are today."\textsuperscript{53} There was general agreement among the Department of Justice, Department of Transportation, and the Association of American Railroads that "market share" would be the most reliable indicator of market power and they urged the I.C.C. to adopt a counterpresumption that effective competition exists when the market share of the proponent railroad(s) is insubstantial.\textsuperscript{54}

Early reply by shippers indicated a continued basic distrust of the railroads. Shippers continued to assert fears that railroads are seeking unrestrained ratemaking power and that something needed to be done to control them.

Congress, in the legislation, set a deadline date of 240 days after the legislation was signed into law, for the I.C.C. to adopt a final definition of market dominance.\textsuperscript{55} On August 23, 1976, the I.C.C. issued an interim report which left out four presumptions originally proposed by the agency, modified the remaining three, and added one new presumption. The four originally proposed presumptions that have been


\textsuperscript{54}MacAvoy and Snow, op. cit., p. 228.

dropped were: (3) where there was no evidence of price competition; (4) where the proposed rate exceeds existing rates by 25 percent or more; (6) where long-haul shipments of at least 20 net-ton minimum rate were involved and (7) when the commodity in question customarily moves in bulk shipments.  

The Commission's new definition outlines four presumptions under which a rebuttal finding of market dominance by a carrier can be found:

(1) Where a rate has been discussed, determined or approved by rate bureaus under anti-trust exemptions contained in the Interstate Commerce Act, a rebuttable presumption will arise in instances when "a carrier participating in the rate, or, in such discussion, or consideration, does not provide effective competition to the proponent rail carrier for the involved traffic or movement."
(2) When the carrier has handled 70 percent or more of the traffic affected by the tariff change during the year before the new rate was filed. (In its original proposal, the Commission said that such a presumption would arise where no other carrier of any mode has handled a significant amount of the involved traffic for at least one year preceding the filing of the proposed rates). 
(3) When the rate in question exceeds the variable costs of providing the service by 80 percent or more. (In its original definition, the agency said such a presumption could be made when the rate in issue exceeded fully allocated costs by 50 percent or more). 
(4) When a shipper or consignee protesting a rate can establish that it has made a substantial investment in railroad equipment that prevents or makes it impractical to use another carrier or mode.  

In the interim definition, the Commission said that there would be market dominance when the proponent carrier handled 70 percent or more of the traffic during the preceding year, compared to the original definition where market dominance was found when no carrier handled a

significant amount of the traffic. The 70 percent figure comes from past experience where the courts generally found monopoly where market share exceeds 70 percent and have found that competition declines when market share of traffic exceeds 25 percent. If competing carriers handle less than 30 percent of the traffic, they are usually not equipped or prepared to rapidly take on a substantial amount of traffic which would come their way due to increased rates elsewhere. Because of the inability for the smaller carrier(s) to absorb this traffic, the Commission believed that shippers will continue to rely on the dominant carrier despite the rate increase. 58

In the Commission's original definition, they presumed market dominance when the rate in issue exceeded fully allocated costs by 50 percent or more. In modifying the definition, the Commission believed that variable costs control ratemaking in competitive conditions. The Commission had, in the past, taken the position that variable costs represent a floor below which rates are usually not permitted to fall because they would be noncompensatory rates. The Commission estimated that variable costs cover 77 percent of the carrier's total operating expenses, rents and taxes. Fully allocated costs are about 129 percent of the variable costs. Therefore, in the first definition, the presumption dealt with a rate 180 percent of variable costs which is well above that revenue required to cover all expenses, rents, and taxes. For a carrier to maximize investment returns, the carrier will set a rate close to variable costs in order to retain the most traffic when competition exists. The Commission reasoned that the margin in the rate above variable cost

58 Ibid., pp. 13-14.
reflects the value of service or demand considerations. When a railroad is in a non-competitive condition, it will shift its constant-cost burdens to this traffic, the result being higher rates to captive traffic and lower rates to competitive traffic. 59

The new presumption, calling for market dominance when a shipper or receiver has made substantial investment in railroad equipment that makes it impractical to use another carrier or mode, resulted from shippers who are in this position and seek maximum use of this equipment to justify the investments. The shippers argued that these investments removed their option of diverting their traffic to other modes and in effect made them captive to rail service. The railroads claimed that any equipment bought could be sold and that shippers can change modes to meet changing competitive conditions. A shipper's investment in rail oriented equipment should not be grounds for presuming the absence of competition, and therefore market dominance. The Commission's attitude was that the shipper must be able to use alternative service without realizing substantial economic loss. The greater the costs are for the shipper to change carriers or modes, the better position the proponent carrier is in to charge substantial premiums without fear of diverting that traffic. Investing in rail oriented equipment indicates that the shipper believes that rail transportation will be most economical for his purposes. The Commission does not agree that a shipper can sell his equipment without realizing a significant loss. 60


60 Ibid., p. 15.
forth an explicit definition of either market dominance or effective competition. The A.A.R. suggests that the Commission's proposals should include private carriage because private transportation is a "substantial element in the transportation system and constitutes one of the modes which must be considered in determining whether there is intermodal transportation competition."\(^{61}\) The railroads suggest competition potential through the product market and also geographic advantages that the Commission does not recognize.

On October 1, 1976, the I.C.C. issued a final report which formally adopted market dominance rules.\(^{62}\) The proceedings were held open for possible modifications based on actual experience in working with the market dominance concept. The final definition was very similar to the interim definition. Market dominance could be found to exist:

1. Where a rate has been discussed, determined or approved under anti-trust immunity contained in the Interstate Commerce Act.
2. Where a carrier has handled 70 percent or more of the traffic involved during the year before the new rate was filed.
3. When the rate in question exceeds the variable cost of service by 60 percent or more. (This was the only change from the proposal contained in the Interim report. Originally, the agency proposed that a market dominance supposition would exist if the rates were 80 percent above variable costs). This change has the effect of making it more difficult for railroads to use the rate flexibility authorized by Congress in the 4-R Act because a greater percentage of the railroad traffic would be subject to I.C.C. market dominance findings.\(^{63}\)

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\(^{62}\) "Final Market Dominance Definition Differs Little From Interim Rate Plan," Traffic World, October 11, 1976, p. 47.

(4) In instances where the shipper or consignee protesting a rate can establish that it has made a substantial investment in railroad equipment that prevents or makes it impractical to use another carrier or mode. 64

In its final definition, the Commission made an attempt to clarify some misunderstandings of market dominance. Shippers who protest a rate change need to establish only one presumption of market dominance and then the burden of proof is with the proponent carrier. If market dominance is proven under one test, and effective competition is proven in another test, then the two do not cancel each other out. Rate bureau activity does not automatically mean market dominance because there may be effective competition from non-participating railroads or other modes. A market dominance presumption will apply to other modes which participate in any discussion of a rate on intermodal movements. The Commission did not accept suggestions by the Department of Justice and the Department of Transportation that private carriage be considered in figuring a railroad's market share, but they do recognize that impact and encourage evidence to support the significance of the impact in ratemaking proceedings. A specific dollar amount on what would constitute shipper investment in rail oriented equipment is not possible because the Commission needs to compare the investment to the shipper's total production and transportation costs, and the costs involved in changing modes. A finding in market dominance is not limited to the four presumptions, but rather, these four presumptions can be supplemented by other evidence which indicates that effective competition for the movement involved does not exist. 65

64 "Final Market Dominance Definition Differs Little From Interim Rate Plan," Traffic World, October 11, 1976, p. 48.

65 Ibid., p. 48.
Chapter 5

THE DEVELOPMENT OF MARKET DOMINANCE

The purpose of this section of the report is to review the discussion of the 'market dominance' concept following enactment of the Commission's final definition.

The I.C.C. made the first market dominance finding in a rate suspension case on increased rates on coal from Arkansas and Oklahoma to Texas. The order was served on November 5, 1976. Commissioner Dale W. Hardin claimed that the majority ignored the intent of Congress in the 4-R Act to allow for greater flexibility in rate adjustments. The division who voted on the suspension argued that the 4-R Act provided that a rate may not be suspended unless the evidence showed that without suspension it will cause substantial injury to a protesting party. The evidence indicated that the proponent railroads had market dominance over the traffic because virtually all of the traffic moved by rail carriers which had participated in rate bureau discussions and publication of the rates, and there were no viable alternative carriers or modes available to the protesters. The protesters demonstrated that without suspension the rate change would cause substantial injury. All division members voted to find market dominance, but Hardin voted not to suspend because the proponent railroads claimed that the canceled rates were below variable costs and the 4-R Act refers to the formulation of standards and guidelines for determining adequate revenue for railroads. Hardin also argued that the Act required that it must be shown, by specific facts in the complaint, not just general allegations, that without suspension there
would be substantial injury. By these standards, a substantial injury showing had not been made.\textsuperscript{66}

Within a month of the Commission's final definition on market dominance, the Council of Wage and Price Stability asked that the definition be liberalized. The Council felt that the Commission's approach might interfere with the market system which was expected to bring about better efficiency in rail transportation. The Council disagreed with the provision under which market dominance was presumed when a rate exceeded variable costs by 60 percent. The Council claimed the I.C.C. based its findings on data outlining revenue to variable cost ratios for commodity classes, but did not consider individual rates to variable cost ratios. By aggregating, the ratios resulted in middle range while the extreme ratios where individual rates exceed 60 percent of variable costs were missed. Too strict criteria for market dominance would limit the number of filings. The Council asked the Commission to reinstate the original 80 percent standard.\textsuperscript{67}

Shipper groups (Drug and Toilet Preparation Traffic Conference, Farm and Industrial Equipment Institute, and the National Small Shipments Traffic Conference Inc.) argued that the Wage and Price Council was only interested in limiting the number of hearings before the I.C.C. and that the Council had no facts to support its position. The shippers accused the Council of taking the position that market dominance should be defined so that very few proposals require I.C.C. hearings, and that the Council


wasn't concerned whether market dominance exists but were concerned as to the number of hearings before the Commission. 68

Three months later the I.C.C. ruled against contentions by the Council that the Commission's market dominance definition was contrary to the legislative intent of the 4-R Act. The Council was challenged that it was acting contrary to its mandate by encouraging higher prices. The Commission argued that the market dominance test reflected Congressional intent to balance shipper and carrier interests and that the 60 percent over variable costs test assured the balance. The Commission also said that no constraints on rail pricing freedom would result "in view of the fact that the presumptions are rebuttable and will be re-evaluated on the basis of actual experience, and that existence of market dominance does not necessarily entail a finding that a rate is unjust or unreasonable."69 The Council's request was turned down because it did not present sufficient grounds to warrant definition liberalization.

On November 22, thirty-eight of the major railroads asked the U.S. Court of Appeals to set aside the market dominance definition adopted by the I.C.C. 70 on the grounds that the Commission's report and regulations were contrary to the 4-R Act, "frustrates the purpose of Congress in


enacting the statute," and the I.C.C. had been "arbitrary and capricious in its reasoning and has failed to discuss issues presented to it necessary for rational resolution of the proceedings, and has rested its determinations upon premises that are neither rational nor supported by evidence." 71 The following week, five electric utility companies asked the Federal Appeals Court to review the Commission's orders defining the term 'market dominance' as used in the 4-R Act. 72 The companies urged that discussion of a rate in a rate bureau should give rise to a presumption of market dominance, not just a lack of effective competition by rail participants in the rate or discussion. 73

In a June 1977 House Appropriations Committee report on an appropriation bill for the Department of Transportation, the Committee reported that the Department of Justice and the Federal Trade Commission both felt that the I.C.C.'s rules were not consistent with the intent of Congress. The Committee also reported that D.O.T. and U.S. Railway Association officials had testified that, by placing the burden of proof on the railroads,


the I.C.C.'s market dominance rules "have unnecessarily complicated the
determination of market dominance and are not consistent with the intent
of Congress as expressed in the 4-R Act." The Committee was concerned
enough that they expressed their intentions to closely monitor the situ-
ation.

William H. Dempsey, president of the Association of American
Railroads, reporting to the Budget Committee Task Force on Tax Expendi-
tures, Government Organization and Regulation, said, "Little more than a
year after Congress's first substantial effort at regulatory reform, the
railroads today are subject to regulation which is more extensive, com-
plex and costly than ever before." He blamed the Commission for a sig-
nificant share of inadequate earnings by the railroads, estimating that
the industry lost about $1.5 billion between 1967 and 1975 from delay in
obtaining general rate increases that were eventually approved by the
Commission.

The Interstate and Foreign Commerce Committee's Subcommittee on
Transportation and Commerce sponsored a symposium on December 14 and 15,
1977. The major complaint was that the market dominance provision of the
4-R Act had not led to the intended results and its failures have greatly
hindered the rail industry in earning an adequate rate of return. 1.C.C.
Commissioner Christian summarized the Commission's experience with the
market dominance provision and reported that during the 14 months after


76Ibid.
the final definition had become effective, the Commission had suspended only 6 proposed rate increases on the ground that they appeared higher than a reasonable maximum. There had been 63 protestant cases during the same period. Rail rate suspension in 1975 was 176 cases, in 1976 there were 74 suspensions, and only 15 cases for 1977. This summary suggests that the Commission interference with rail ratemaking had declined significantly. 77 These statistics may be misleading because protestants had not yet become familiar and comfortable with the Act and their responsibility to show substantial injury. In the 10 month period following implementation of the Ex Parte 320 procedures, the Commission received protests to 39 tariff filings involving claims of unreasonableness because the rates were alleged to be too high. In over half of these cases, the Commission could not even begin to make a market dominance determination because the protestant had failed to follow the Ex Parte 320 procedures. The most common deficiencies were either failure to raise the issue of market dominance at all or failure to support an allegation of market dominance with any type of evidence. By law, the Commission must be able to find market dominance before it can find a rate to be too high. 78

Despite this report, the majority of the participants at the December conference felt the regulatory reform provisions of the Act had not led to the intended results. The I.C.C. Chairman, A. Daniel O'Neal, said this provision should be reexamined by Congress. 79


Carl Lyon, Senior Vice President of the Association of American Railroads, in his remarks at the symposium, charged the I.C.C. "has proved unwilling to follow the mandate of Congress where this involves a surrender of bureaucratic power the agency has long exercised."

Using the market share presumption (where the carrier(s) proposing the rate have a market share equal to or greater than 70 percent of the relevant market), the Commission found the practical effect of applying this test to be 44.7 percent of current rail traffic would probably have market dominance. The figure is an aggregation of individual commodity and geographic markets. The patterns observed were that market dominance exists to a significantly greater degree on bulk commodities than on manufactured goods; market dominance is less likely in regions where barge competition exists; the likelihood of market dominance increases as the length of the haul increases. Applying the second presumption (where the rate equals or exceeds 160 percent of variable costs) 11.1 percent of current rail tonnage is presumptively market dominant. When analyzing the results of this test, the Commission found that the particular percentage was not nearly as important as had originally been believed. The results from the test were not very sensitive to minor variations in the cost/revenue ratio chosen. Using a test ratio of 150 percent of variable costs resulted in 14.9 percent of market dominant rail traffic. When using 180 percent, 6.5 percent of the traffic would be market dominant. The Commission felt these variations to be smaller than expected and questioned

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the practical significance of this particular test. When analyzing the third test (where shippers and consignors have made a substantial investment in rail-related facilities or equipment) about 25 percent of all rail tonnage may be market dominant. The commodities involved here are chemicals, petroleum products, and dry bulk commodities moving in multiple car shipments. Forty-eight and one-half percent of total rail traffic would be affected by at least one of the presumptive tests. This is not conclusive because the carrier(s) have the right to rebut the presumption. 81

In May of 1978, the U.S. Court of Appeals for the District of Columbia approved the I.C.C.'s basic market dominance rules that had been challenged by the railroads and utility companies (page 31 of this report). The Court rejected the railroad's argument that the Commission was taking an overly broad view of market dominance in an effort to continue its jurisdiction over rail rates. The Court claimed the "market dominance presumptions constitute an initial attempt at interpreting and implementing a new regulatory scheme," 82 and added that the Commission's market dominance effort is an ongoing process that might well produce new and different rules. 83 The Court also rejected the electric company's argument that rate bureau activity establishes market dominance. The Court said Congress intended for the I.C.C. to consider all sources of


83 ibid.
competition when determining market dominance. The Court recognized that the I.C.C.'s rationale in adopting the cost presumption is that lack of effective competition permits relatively high rates. The Court stated that such reasoning was not arbitrary, but after reviewing the record for the basis of the 160 percent of variable cost figure, the Court concluded that "we do not sufficiently comprehend the I.C.C.'s reasoning" in setting that figure.

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84 Ibid.
Chapter 6

THE DOMINANT FIRM THEORY

In a purely competitive market economy, the resource allocation problem is solved through the interaction of supply and demand forces on the market and not through a conscious effort on the part of individual producers or governmental bodies. Economists define pure competition as many firms selling identical products with no one firm large enough relative to the entire market to be able to influence market price. Should one firm leave the market, the supply would not be affected enough to increase the price. On the other hand, one firm cannot increase production enough to lower the product price. This model is seldom found in the real world.

On the other end of the market spectrum is monopoly, which is a market situation in which a single firm sells a product for which there are no good substitutes. The firm has the market for its product all to itself. The monopolist is able to exert influence on price and output of his product. Again, few markets in the economy conform to this definition of monopoly.

A "natural monopoly" is a situation where the economies of scale enable a firm to become so large in relation to the market that there is room for only one firm. Regulation has been imposed to prevent the firm

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87 Ibid., p. 90.
from raising prices in exploitation of its position. Prior to developments in other modes of transportation, the railroads had been in this position. The unit of enterprise had to be large or it could not exist. Large inputs of capital were necessary, since facilities to handle peak loads were a prerequisite to the first ton of traffic handled. As a commodity, transportation service cannot be stored and therefore the service demand varying with cycles could not be smoothed through inventory adjustment. The plant and equipment had to be in tact, independent of the level of traffic. 89

The theoretical model of natural monopoly follows. When there are increasing returns to scale there is a natural barrier to entry into the industry. A firm operating under increasing returns can lower prices to undercut any competition because average costs fall as output increases. This allows the monopolist to realize excess profits when there are no new entrants and also allows him to force out any new entrants. 90

With increasing returns to scale, Average Cost (AC) falls as output increases, with Marginal Cost (MC) less than AC at all output levels. Assuming the natural monopolist (i.e. railroad) is attempting to maximize its profits, it will operate at an output where the costs incurred for one more unit of output will be equal to the revenue received for that additional unit of output. In Graph A, next page, that is point E, where MR=MC. The price the unregulated monopolist charges at output Qm is Pm. The firm's profits are equal to its Total Revenue (TR) less its Total Costs


(TC), TR being equal to Average Revenue (AR) times Quantity (Q), and TC being equal to Average Cost (AC) times Quantity. At output Q_m, TR=OP_m·OO_m and TC=OP_x·OO_m, the difference in these areas being monopoly profits, OO_m(OP_m-OP_x).

The largest output at which profits are normal (where net revenue is equal to zero) is output Q_n, where the Average Revenue is equal to Average Cost. (When AR=AC, TR=TC and profits are zero). If the regulatory commission, (I.C.C.) sets the price (tariff rates) below P_n, a subsidy equal to the loss would have to be paid to the firm in order to keep it operating. If the firm cannot cover its AC in the long run, the firm
cannot remain in business. The political problems associated with sub-
sidizing natural monopolies and the difficulties of determining true
marginal costs, have led to average cost pricing.\textsuperscript{91} In the model pre-
sented here, that would be at price $P_n$ and output $Q_n$ where the regulated
firm earns only normal profits. Should the commission set the price above
$P_n$ (e.g. $P_x$) the AR and MR curves become $P_x G$. The firm would face a loss
of $OQ_x' \cdot P_x F$ if it tried to operate at $Q_x'$ where $MC=MR$. It could increase
output to $Q_x$ and show a profit of $GH \cdot OQ_x$.

Most markets fall somewhere on the market spectrum between pure
competition and natural monopoly. These markets differ where there is
sufficient competition to rely on market forces to control firm behavior
and where there is not. The length of time required for competitors to
provide alternative services and for shippers to shift to the other ser-
vices could indicate the competitive level a railroad is at after raising
its rates. If the railroad is in a market where there is "effective com-
petition," the response of competitors and shippers could be relatively
faster than where the railroad is in a market where it has "market domi-
nance."\textsuperscript{92} Here the response of competitors and shippers might be slower, or
it might not occur at all.\textsuperscript{92} Market situations where there are few sellers
of a particular product for the activities of one to be of importance to
the others are called oligopoly markets.\textsuperscript{93} A railroad occupies a position
of sufficient importance in the market for changes in its activities to
affect others. Other modes react to the market activities of the railroad
and their reactions in turn have effects on the railroad.

\textsuperscript{91} Ibid., p. 261.
\textsuperscript{93} Leftwich, op. cit., p. 212.
In the economic literature pertaining to oligopolistic industries, where one large firm is found with a number of smaller firms, it is suggested to avoid price competition, collusion may occur in the form of price leadership by the dominant firm (in this case the railroad presumed by the I.C.C. to be in a position of market dominance; i.e. carrier handled 71 percent of the previous years traffic) and a number of small firms (intermodal competition).

If the dominant firm sets the rate for the traffic, the smaller firms can sell all they desire to sell at that rate and the dominant firm will sell the rest. "Dominant firm price leadership occurs when an industry consists of one firm dominant in the customary sense of the word - i.e. controlling at least 50 percent of the total industry output - plus a competitive fringe of firms, each too small to exert a perceptible influence on price through its individual output decisions."\textsuperscript{94} The dominant firm's problem is to choose the best price from its own viewpoint, taking into account the supply of the competitive fringe at whatever price it sets.\textsuperscript{95}

Each small firm can sell whatever it wants to at the set price, therefore each faces a horizontal demand curve at the set price. The marginal revenue curve will coincide with the demand curve, and to maximize profits each small firm will produce that output where its marginal cost is equal to its marginal revenue at the price set by the dominant firm.

The summation of all the small firms' marginal cost curves is their combined supply curve which shows how much output all the small firms


\textsuperscript{95} Ibid.
together will be willing and able to sell at the given price. That curve is represented by MCs (refer to Graph B). The market demand curve D'D shows the amount of product (service) consumers are willing and able to buy at each possible price. The horizontal differences between these two curves at all possible prices show how much output the dominant firm can sell at those prices and is represented as dd, dominant firm's demand curve. If the dominant firm sets a price at \( p' \) or higher, the small firms would fill the market. There would be no incentive for the dominant firm to do that because it would have no sales at all. The horizontal difference between MCs and D'D at price \( p' \) is zero and therefore \( p' \) is the intercept for the dd curve with the vertical axis. The difference between the two curves at price \( p^* \) is \( yz \) which is equal to \( jv \). This can be done for every possible price to derive the dominant firm demand curve, dd. The marginal revenue curve for the dominant firm is MRd and its marginal cost curve is MCd. The dominant firm will maximize its profits where MRd is equal to MCd and set the price at \( p'' \). At that price, the small firms face a horizontal demand curve which is also their marginal revenue curve. They too will attempt to maximize their profits, operating where their respective marginal cost curves intersect the marginal revenue curve, the summation of their marginal cost curves intersecting with the marginal revenue curve at the output \( OXs \). The dominant firm will produce output \( OXd \). The total industry output will be the summation of the dominant firm's output and the small firm's output, \( OXd + OXs \), which is \( OX \). Profit for the dominant firm will be \( Xd \) times the difference between price \( p'' \) and the dominant firm's average cost at output \( Xd \). Profit for each small firm will equal its output times the difference between price \( p'' \) and its average cost at that output.\(^{96}\)

\(^{96}\)Leftwich, op. cit., pp. 223-225.
This solution seems determinate and stable in the short run, because indefinite expansion by the small firms is prevented by the rising short run marginal costs as capacity limits are approached. But if the price set by the dominant firm is attractively high and the small firms are realizing substantial economic profits, they will have an incentive to expand their existing plants. Assuming freedom of entry into the industry, these profits will attract new producers to the market and the combination of the new entrants and larger plants of the small firm segment will shift the supply curve to the right. At any given price set by the dominant firm, more output will be supplied by the smaller firms.
Since the dominant firm's demand curve is derived from the difference of the industry demand and the small firm's supply curve, the effect will be to shift the dominant firm's demand curve to the left. The dominant firm has given up a portion of its market to the expanded competitive segment by decreasing its own output. Even with a growing industry market demand, its share of the total market, and therefore its share of total profits declines over time. The remedy to prevent this is by not attempting to maximize profits in the short run, but instead reduce the price level and profits to discourage new entrants and expansion of the small firm segment.

In the case of the railroad (natural monopoly) where there is substantial scale economies, the rate which maximizes the railroad's short run profits may be lower than the minimum unit cost of small, high-cost producers. New entry on the small scale is unlikely, and existing competitors can be driven out by predatory or destructive ratemaking. If railroad's short run profit-maximizing rate is high enough for small competitors to cover their costs, they can still eliminate that competition by cutting rates below their costs and reducing their own profits. Should the dominant firm leave rates high enough for small competitors to cover their costs, they will in time expand their market shares at the expense of the railroads. By building larger plants, the competitors achieve scale economies and increase their profits, encouraging more growth and new entrants. Theoretically, the dominant firm's market dominance will gradually decline, until a more evenly balanced oligopoly market structure results.

97 Scherer, op. cit., p. 216.
98 Ibid., p. 217.
However, predatory pricing at rates below variable costs may not be very successful if re-entry can occur without much difficulty. Where railroads compete with trucks re-entry may be relatively easy. Truckers have comparatively few fixed facilities specialized in particular routes or services, hence there is little economic barrier to re-entry. When considering barge competition with rail this may not be the case, however—the ability of railroads to regain losses through practicing predatory pricing may be rather limited.
Chapter 7

CONCLUSION

The I.C.C. identifies a carrier to possess market dominance when the proposing carrier has handled 70 percent or more of the traffic involved during the year before the new rate was filed. In Graph B (page 44) involving dominant firm theory, the farther to the left the MCs curve is (the summation of all the small firm's marginal cost curves is their combined supply curve), the smaller market share the summation of the smaller firms have and the larger market share the dominant firm has. In considering the extreme case, when the dominant firm approaches total market share activity, (monopoly) the dominant firm's demand curve (dd) approaches its limit of coinciding with the market demand curve D'D'. Theoretically the 70 percent presumption would be indicated on the graph when the distance OXd is 70 percent of the distance OX. Should the distance OXd be greater than 70 percent of OX, the carrier is presumed to have market dominance. There appears to be no significance theoretically in the 70 percent standard, a number arbitrarily chosen. If the system were in equilibrium under the leadership of a dominant firm, regardless of the magnitude of dominance, there would be no incentive for the dominant firm to change its price. Again, the higher rates would encourage more entrants and expanded facilities of the smaller firms allowing them economies of scale advantages, and there would be no incentive to lower rates because that position would not enable the dominant firm to maximize its profits, or to minimize its losses. The Commission must assume that the system is not in equilibrium if a firm holds more than 70 percent of the
traffic involved and that they can better utilize these resources through regulation of rates.

The Commission's cost presumption, where the rate in question exceeds the variable costs of a service by 60 percent or more could be a valid clue to market dominance and the likely existence of an inelastic demand curve such that railroads maximize revenue at rates significantly above costs. Market dominance from a pricing standpoint doesn't have much meaning unless this is the case. I.C.C. cost data applied over broad areas place fully distributed costs on carload traffic at about 30 percent over variable costs. A permissible pricing range from 0 to 60 percent over variable costs would permit an approximately equal variation above and below fully distributed costs and hence normal profits if traffic is normally distributed over the 0-60 percent range.

The equipment investment presumption, where a shipper or consignee can establish that it has made a substantial investment in railroad equipment that prevents or makes it impractical to use another carrier or mode, may be a reliable indicator of market dominance. Railroads, in some circumstances, could exercise short-term market dominance where shippers transporting freight in a particular market have made substantial investment in rail-oriented facilities that may not be quickly liquidated. Therefore the carrier is in a position to erode the shipper's capital investment and absorb its value through higher rates if there is not a market for sunken investment. The market for rail cars probably is not so bad that the shipper needs federal price protection simply because he has invested in cars. There may be other, less mobile, rail-oriented equipment and facilities more in need of federal price protection.

In the presumption where the rate has been discussed by rate bureau
members, the Commission assumes that when two or more railroads conspire to fix a rate, the rate is not set by the forces of competition and therefore effective competition does not exist and consequently there is market dominance. Virtually all rate change proposals go through carrier rate bureaus. Railroads have high market shares in many markets (i.e. coal) where rates are probably 10 percent above variable costs. If the shipper must show that only one of the four criteria for market dominance exist to shift the burden of proof to the carriers, then the shipper need not consider much beyond rate bureau activity.
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MARKET DOMINANCE IN THE RAILROAD REVITALIZATION
AND REGULATORY REFORM ACT OF 1976

by

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B. A., Graceland College, 1973

AN ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the
requirements for the degree

MASTER OF ARTS

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Railroads were the first industry in the United States to be brought under federal price control. This came about with the passage of the Act to Regulate Commerce in 1887 and the establishment of the Interstate Commerce Commission. One purpose of economic regulation was to control the ability of the industry to exploit the public through its position of monopoly power and market dominance. Since the regulation was initially imposed, developments of new transportation modes have weakened the monopoly position which the railroads once possessed. The legislation established in 1887 has been amended several times but rate regulations imposed on the rail industry have continued.

The Railroad Revitalization and Regulatory Reform Act, signed into law by President Gerald Ford on February 6, 1976, was designed to provide for the revitalization of failing railroads through federal aid and the revitalization of all railroads through regulatory reforms calculated to enhance the industry's competitive strength.

Under this Act, the Interstate Commerce Commission's powers are limited and, for rate increases, suspension is dependent on market dominance by the carrier proposing the rate increase. The Act refers to market dominance as the absence of effective competition by other rail carriers and other transportation modes. The Interstate Commerce Commission had to further define market dominance as to what constitutes the absence of effective competition. Congress, in the legislation, set a deadline date of 240 days after the legislation was signed into law for the Interstate Commerce Commission to adopt a final definition of market dominance. In its initially proposed definition, the Commission outlined seven market patterns, the presence of one or more of which would indicate a market dominance situation. The patterns fall in four general
areas; rates considered by rate bureaus; the absence or presence of com-
petition; the ability of a carrier to exact a premium for its service; and
service and commodity characteristics of markets where railroads tradition-
ally have been free of market competition.

The initially proposed definition came under heavy industry attack
and was followed on August 23, 1976 by an interim report outlining four
rebuttable presumptions, and a final report which formally adopted market
dominance rules on October 1, 1976. Market dominance could be found to
exist where; a rate has been discussed, determined or approved under anti-
trust immunity contained in the Interstate Commerce Act; a carrier has
handled 70 percent or more of the traffic involved during the year before
the new rate was filed; the rate in question exceed the variable cost of
service by 60 percent or more; the shipper or consignee protesting a rate
can establish that it has made a substantial investment in railroad equip-
ment that prevents or makes it impractical to use another carrier or mode.
A finding in market dominance is not limited to the four presumptions, but
rather, these four presumptions can be supplemented by other evidence
which indicates that effective competition for the movement involved does
not exist.

The final section of the report discusses the literature involving
economic theory and the effect of monopoly regulation as related to con-
cepts incorporated in the final Interstate Commerce Commission's definition.
The very nature of this legislation suggests that Congress recognizes that
the railroad industry does not possess the market powers that it once did
and that the market forces should be relied on to determine freight rates,
rather than regulation. The criteria for market dominance appear self-
defeating in that virtually all rate proposals go through carrier rate
bureaus, therefore grounds for market dominance. If the shipper must show
that only one of the four criteria for market dominance exists to shift
the burden of proof to the carriers, then the shipper need not consider
much beyond rate bureau activity.