

Taxi Industry Regulation, Deregulation & Reregulation: the Paradox of Market Failure

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I. INTRODUCTION

During the last fifteen years, Congress has deregulated, wholly or partly, a number of infrastructure industries, including most modes of transport—airlines, motor carriers, railroads, and intercity bus compa-

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nies.¹ Deregulation emerged in a comprehensive ideological movement which abhorred governmental pricing and entry controls as manifestly causing waste and inefficiency, while denying consumers the range of price and service options they desire.²

In a nation dedicated to free market capitalism, governmental restraints on the freedom to enter into a business or allowing the competitive market to set the price seem fundamentally at odds with immutable notions of economic liberty. While in the late 19th and early 20th Century, market failure gave birth to economic regulation of infrastructure industries, today, we live in an era where the conventional wisdom is that government can do little good and the market can do little wrong.³

Despite this passionate and powerful contemporary political/economic ideological movement, one mode of transportation has come full circle from regulation, through deregulation, and back again to re-regulation—the taxi industry. American cities began regulating local taxi firms in the 1920s. Beginning a half century later, more than 20 cities, most located in the Sunbelt, totally or partially deregulated their taxi companies. However, the experience with taxicab deregulation was so profoundly unsatisfactory that virtually every city that embraced it has since jettisoned it in favor of resumed economic regulation.

Today, nearly all large and medium-sized communities regulate their local taxicab companies. Typically, regulation of taxicabs involves: (1) limited entry (restricting the number of firms, and/or the ratio of taxis to population), usually under a standard of “public convenience and necessity,” [PC&N] (2) just, reasonable, and nondiscriminatory fares, (3) service standards (e.g., vehicular and driver safety standards, as well as a common carrier obligation of nondiscriminatory service, 24-hour radio

1. Such legislation includes the Air Cargo Deregulation Act of 1977, the Airline Deregulation Act of 1978, the International Air Transportation Competition Act of 1979, the Staggers Rail Act of 1980, the Motor Carrier Act of 1980, the Household Goods Transportation Act of 1980, the Bus Regulatory Reform Act of 1982, the Civil Aeronautics Board Sunset Act of 1984, the Surface Freight Forwarder Deregulation Act of 1986, the Negotiated Rates Act of 1993, the Trucking Industry Regulatory Reform Act of 1994, and Title VI of the Federal Aviation Act of 1994. See generally, PAUL DEMPSEY & WILLIAM THOMS, *LAW & ECONOMIC REGULATION IN TRANSPORTATION* (1986), and PAUL DEMPSEY, ROBERT HARDAWAY & WILLIAM THOMS, *AVIATION LAW & REGULATION* (1993). Note however, that although the U.S. Congress has preempted much of state and local regulation of the airline, railroad, and trucking industries, economic regulation of the surface passenger transportation industry has remained largely untouched by federal preemption.

2. See, e.g., PAUL DEMPSEY, *THE SOCIAL & ECONOMIC CONSEQUENCES OF DEREGULATION* (1989); PAUL DEMPSEY & ANDREW GOETZ, *AIRLINE DEREGULATION & LAISSEZ FAIRE MYTHOLOGY* (1992).

3. See generally Paul Dempsey, *Market Failure and Regulatory Failure As Catalysts for Political Change: The Choice Between Imperfect Regulation and Imperfect Regulation*, 46 WASH. & LEE L. REV. 1 (1989).

dispatch capability, and a minimum level of response time), and (4) financial responsibility standards (e.g., insurance).⁴

This article explores the legal, historical, economic, and philosophical bases of regulation and deregulation in the taxi industry, as well as the empirical results of taxi deregulation. The paradoxical metamorphosis from regulation, to deregulation, and back again, to regulation is an interesting case study of the collision of economic theory an ideology, with empirical reality. We begin with a look at the historical origins of taxi regulation.

II. HISTORICAL ANTECEDENTS OF MODERN TAXICAB REGULATION

Hackneys (horse drawn coaches for hire), the predecessors of today's taxicabs, were regulated shortly after they appeared on the streets of London and Paris between 1600 and 1620.⁵ In 1635, Charles I ordered that London hackneys be licensed so as "to restrain the multitude and promiscuous use of coaches."⁶ Nineteen years later the British Parliament adopted a regulatory regime which limited the number of hackneys.⁷

In the United States, governmental regulation of private firms, rather than public ownership, has been deemed the appropriate means of protecting the public interest in economically viable modes of transportation.⁸ Although some attribute comprehensive regulation of taxicabs to the Great Depression, in fact, regulation began in earnest during the 1920s.⁹ In the 1930s, the growth in unemployment and unsold

4. See Michael Kemp, *Taxicab Service*, in *PARA-TRANSIT: NEGLECTED OPTIONS FOR URBAN MOBILITY* 64 (Urban Institute 1984); *DEMPSEY & THOMS*, *supra* note 1, at 1; Roger Teal & Mary Berglund, *The Impacts of Taxicab Deregulation in the USA*, *J. TRANSP. ECON. & POL'Y* 37 (Jan. 1987).

5. David Williams, *Information and Price Determination in Taxi Markets*, 20 *Q. REV. OF ECON. & BUS.* 36 (1981). Actually, common carrier liability owes its origins to Roman Law, beginning about the year 200 B.C. See *DEMPSEY & THOMS*, *supra* note 1, at 2.

6. U.S. DEP'T OF TRANSP., *TAXICAB REGULATION IN U.S. CITIES* 5 (1983).

7. *Id.* at 6. The London Hackney Carriage Act of 1831 (as amended in 1843) was the first comprehensive taxicab regulation ordinance; Gene Stalians, *Regulatory Revision and the Taxicab Industry: What We Have Learned* 1, Address before the 50th Annual Convention of the New Zealand Taxi Proprietors' Federation, Wellington, New Zealand, Aug. 30, 1988.

8. WILLIAM BARKER & MARY BEARD, *URBAN TAXICABS: PROBLEMS, POTENTIAL, AND PLANNING*, in *PROCEEDINGS OF THE CONFERENCE ON TAXIS AS PUBLIC TRANSIT* 40 (Univ. of California, 1978). Modes of transport which were not economically viable in the market (e.g., urban railways, Amtrak and the U.S. Postal Service) were provided by government in a process John Kenneth Galbraith is said to have referred to as "Lemon Socialism."

9. MARK FRANKENA & PAUL PAUTLER, *AN ECONOMIC ANALYSIS OF TAXICAB REGULATION* 75 (Fed. Trade Comm., 1984); See Kemp, *supra* note 4, at 65. "The campaigns of professional cab associations for vehicle licensing during the late 1920s were a direct response to the disruption in the market created by hit-and-run entrants."; see also Edward Gallick & David Sisk, *A Reconsideration of Taxi Regulation*, 3 *J.L. ECON. & ORG.* 117, 123 (1987).

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automobiles produced a drastic increase in the number of taxicabs.¹⁰ While fewer people could afford to ride a taxi, the number of taxicabs skyrocketed, while occupancy rates and revenue per taxi declined.¹¹ Capacity and demand were moving in opposite directions.

An editorial published by the *Washington Post* in January 1933 illustrates the public's perception of the chaotic state in which the taxicab industry found itself:

Cut-throat competition in a business of this kind always produces chaos. Drivers are working as long as sixteen hours per day, in their desperate efforts to eke out a living. Cabs are allowed to go unrepaired. . . .

Together with the rise in the accident rate there has been a sharp decline in the financial responsibility of taxicab operators. Too frequently the victims of taxicab accidents must bear the loss because the operator has no resources of his own and no liability insurance. There is no excuse for a city exposing its people to such dangers.¹²

Economists of the era argued that taxis were a declining cost industry; excessive competition between numerous small operators decreased carrier efficiency and increased consumer costs.¹³ The U.S. Department of Transportation also summarized the tenor of the times:

The excess supply of taxis led to fare wars, extortion, and a lack of insurance and financial responsibility among operators and drivers. Public officials and the press in cities across the country cried out for public control over the taxi industry.

The response was municipal control over fares, licenses, insurance and other aspects of taxi service.¹⁴

III. CONTEMPORARY STATUTORY AND REGULATORY CRITERIA GOVERNING THE TAXI INDUSTRY

Virtually all municipalities engage in taxi industry regulation under state legislation requiring or permitting such regulation, which itself acts under the guise of the state's police power. Although sometimes challenged as unconstitutional on various grounds, or preempted by federal law, these statutes and municipal ordinances have been nearly universally

10. See GORMAN GILBERT & ROBERT SAMUELS, *THE TAXICAB: AN URBAN TRANSPORTATION SURVIVOR* 149 (1982).

11. FRANKENA & PAUTLER, *supra* note 9, at 75.

12. *Taxicab Chaos*, WASH. POST, Jan. 25, 1933, editorial page.

13. Sandra Rosenbloom, *The Taxi in the Urban Transport System*, *THE PRIVATE CHALLENGE TO PUBLIC TRANSPORTATION* (Charles Lave, ed., 1984). Similar arguments were made in the 1920s and 1930s in favor of regulating the trucking industry. See Paul Dempsey, *Running On Empty: Trucking Deregulation and Economic Theory*, 43 ADMIN. L. REV. 253, 304-306 (1991).

14. U.S. DEP'T OF TRANSP., *supra* note 6, at 6-7.

upheld.¹⁵

Typically, taxis are regulated at the local level, with city or county boards restricting the number of firms and number of taxis (with the issuance of medallions), and setting prices (usually on a mileage basis), safety, insurance and service standards. Their decisions are given extreme deference by reviewing courts. In this section, several of the approaches to economic regulation of taxis in some of the nation's major cities are examined. As we shall see, their similarities are far more numerous than their differences.

A. NEW YORK

The state of New York permits its municipalities to adopt ordinances which require the registration and licensing of taxicabs.¹⁶ New York municipalities may also establish restrictions concerning parking and passenger pick-up and discharges.¹⁷ Jurisdiction to promulgate rules and regulations concerning the supervision and operation of taxis has been vested in the Police Commissioner.¹⁸ Typically, the municipal ordinances require that taxis be insured for specific amounts.¹⁹

New York City has regulated its taxis since the 1930s. Medallions were limited to 11,787 in 1937,²⁰ causing the medallion price to reach exorbitant levels, itself generating some measure of legitimate criticism of taxi regulation.

B. LOS ANGELES

In contrast to New York, which permits municipalities to enact taxi regulations, the Texas and California state statutes require municipalities to regulate the local taxi industry.²¹ These municipalities may enact ordinances which regulate entry, such as "controls, limits or other restrictions

15. See e.g., *Golden State Transit Corp. v. City of Los Angeles* 726 F.2d 1430 (D.C. Cir. 1983), *cert. denied*, 105 S. Ct. 1865 (1983). Here, a municipality's taxicab regulation survived scrutiny under the Sherman Act, as it fell under the "state action" exemption to that legislation. Although Title VI of the Federal Aviation Act of 1994 preempted intrastate regulation of motor carriers of property, it did not preempt intrastate regulation of the transportation of passengers. The Bus Regulatory Reform Act of 1982, although providing for Interstate Commerce Commission review of intrastate entry, exit and rate regulation, did not apply to the taxi industry. See also *Rudack v. Valentine*, 295 N.Y.S. 976 (1937) (taxi statute unsuccessfully challenged on grounds that it violated claimant's due process rights).

16. N.Y. Gen. Mun. § 181(1).

17. *Id.*

18. See *Teuch v. Murphy*, 256 N.Y.S.2d 25 (1965).

19. See *Foley v. McKnealley*, 325 N.Y.S.2d 165 (1971).

20. Peter Suzuki, *Unregulated Taxicabs*, 49 *TRANSP. Q.* 129, 132 (1995).

21. California's statute is typical:

[E]very city or county shall protect the public health, safety, and welfare by adopting an ordinance or resolution in regard to taxicab transportation service rendered in

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on the total number of persons providing the services, rates, safety and insurance requirements” and other requirements which will “ensure safe and reliable passenger transportation service.”²²

The city of Los Angeles requires an applicant to prove “public convenience and necessity” in order to gain entry into the taxicab industry, with entry, rates and business practices governed by the Los Angeles Board of Transportation Commissioners.²³ In evaluating the PC&N criterion, the Board may consider the applicant’s financial capability, evidence that existing taxicabs “are not, under efficient management, earning a fair and reasonable return on their capital devoted to such service . . .”, that existing taxicabs “. . . are or are not, under normal conditions, adequately serving the public . . .”, and “. . . whether existing services are meeting the need or demand.”²⁴

The Los Angeles ordinance includes the typical requirements of insurance,²⁵ an approved identification system of color and signage,²⁶ meters,²⁷ rate regulation,²⁸ a requirement that the driver take the most direct route²⁹ and not charge more than the prescribed fare,³⁰ and describes the circumstances under which a driver or vehicle permit may be temporarily or permanently suspended or revoked.³¹ The rules adopted by the Board of Transportation Commissioners include precise safety regulations (including maximum age of vehicles, inspection, maintenance, repair, seat belt and other requirements), cleanliness of vehicle, courtesy and honesty of driver, and common carrier service obligations.³²

C. HOUSTON

The licensing of new entrants under the Houston municipal Code requires a hearing by the city Department of Finance and Administration

vehicles for carrying not more than eight persons, excluding the driver, which is operated within the jurisdiction of the city or county. . . .”

CAL. GOV’T CODE § 53075.5 (West Supp. 1996). The California Public Utilities Commission may not regulate the local taxi industry if it is already licensed and regulated by the city. *People v. San Francisco*, 155 Cal. Rptr. 319 (1979). Texas requires the municipality to regulate not only the area within its jurisdiction, but also jointly owned municipal property and property “in which the municipality possesses an ownership interest.” TEX. LOCAL GOV’T. § 215.004 (West 1995)

22. TEX. LOCAL GOV’T CODE ANN. § 215.004 (West 1995).

23. LOS ANGELES MUN. CODE, ch. VII, art. 1, §§ 71.00, 71.12.

24. *Id.* § 71.13.

25. *Id.* § 71.14.

26. *Id.* §§ 71.16, 71.19, 71.20, 71.21.

27. *Id.* § 71.22.

28. *Id.* § 71.25.

29. *Id.* § 71.23.

30. *Id.* § 71.24.

31. *Id.* §§ 71.01 - 71.10.

32. DEPT. OF TRANSP., CITY OF LOS ANGELES, TAXICAB RULES AND REGULATIONS OF THE BOARD OF TRANSP. COMM’N (1991).

under a "public convenience and necessity" standard, in which applications are denied unless the applicants are able to prove, by clear and convincing evidence, that the standard is met.³³ In assessing the PC&N standard, the director of the Department must evaluate the number of vehicles to be operated, the effect of new entry on traffic congestion (vehicular and pedestrian), the number of permits in operation, the impact on existing permit holders, and "any other facts the director may deem relevant."³⁴

33. HOUSTON, TEX., CODE OF ORDINANCES § 46-66 (1968). The Houston Code requires all applications for the \$400 taxicab permits to be filed in January of even-numbered years for a hearing the following month. Ordinance 93-155 of the City of Houston amended § 46-64 of the Houston Code, requiring taxicab permit hearings to be held in even-numbered calendar years, where previous hearing were conducted annually. The director of the department of finance and administration conducts the hearings under a "public convenience and necessity standard" in which all applicants are denied unless they are able to provide clear and convincing evidence that the standard is met. HOUSTON, TEX., CODE OF ORDINANCES § 46-66 (1968). However, the director retains absolute discretion in determining whether public convenience and necessity requires the issuance of additional permits, since Houston ordinances require the director to consider not only enumerated factors such as effects on traffic congestion, the number of existing permits in operation, and potential economic impact on existing permit holders, but also "any other facts the director may deem relevant." The Houston Code § 46-66 provides in part:

In determining whether public convenience and necessity require the issuance of the taxicab permit to the application, the director shall take into consideration:

(3) Number of vehicles to be operated.

.....

(6) The effect of additional vehicles upon the traffic congestion, vehicular and pedestrian alike.

.....

(10) The total number of taxicab permits in operation.

(11) Whether the requirements of public convenience and necessity can be met and complied with only by the issuance of additional permits.

(12) The resulting effect upon the business of existing permit holders and upon existing agencies of mass transportation in the city.

(13) Any other facts the director may deem relevant.

34. The taxicab business in Houston, Texas, has traditionally been controlled by Yellow Cab company, which prior to 1993 held almost 70% of the 2,098 annual permits issued by the City of Houston. *Cab Deregulation Draws Praise, Criticism*, HOUSTON POST, Sept. 13, 1993. In September, 1993, The Houston City Council voted to award 49 new taxicab permits, predominantly to smaller cab companies, in an effort to respond to a rosier economic outlook and a perceived need for more competition in the industry. The partial deregulation by the City Council signaled a new approach by the Regulatory Affairs Office of the City of Houston in allowing an increase in the number of permits, an action which was vigorously opposed by Yellow Cab. In addition to the increase in the number of taxicab permits in Houston, the city increased the taxi fares slightly from \$1.50 for the first 2/11 mile and \$0.30 for each additional 11/45 mile to \$1.50 for the first 1/9 mile and \$0.30 for each additional 2/9 mile, while eliminating a provision providing a maximum per-cab fare for trips within the downtown area. HOUSTON, TEX., ORDINANCE § 93-9 (1993). Flat rates to Houston Intercontinental Airport (IAH) and maximum waiting time charges also increased under the amended ordinance, so while Houston has increased the level of taxicab competition by allowing easier entry, it appears that pricing controls will remain in effect to prevent fare wars among the larger taxi fleet.

Despite Houston's relaxation of entry, the city retains firm control of the taxicab routes

1996] Taxi Industry Regulation, Deregulation & Reregulation 81**D. CHICAGO**

The Municipal Code of Chicago provides a system of strict regulation of license acquisition and fare setting.³⁵ The code is typical of the entry criteria imposed by most cities on the taxi industry. It requires that new entry be permitted only where consistent with the “public convenience and necessity”, which is to be determined with an evaluation of public demand, safety, the economic impact on competitors, and the wages, hours and conditions of drivers.³⁶

between the city and its two major airports, IAH and William P. Hobby Airport (HOU). Any taxicab departing either airport with passengers is required to pay a flat fee to cover the city’s administrative and related expenses, and pricing to and from IAH is controlled by a flat rate scheme based on the division of the city of Houston into seven zones. Taxicab standing queues have been established at IAH, limiting passenger pick up to only those cabs that are operating under a valid city permit, and eligible cabs may receive a priority reassignment (thereby moving to the front of the queue) if the taxicab returns to the departure zone within forty-five minutes of its previous departure. HOUSTON, TEX., CODE OF ORDINANCES § 46-26 (1968). Although the city of Houston continues to regulate the lucrative airport routes, and general meter pricing, it remains to be seen what effect relaxed entry standards will have on Houston’s taxicab business. One Houston City Councilman has suggested that relaxed entry has signaled the death knell of regulation. *Cab Deregulation Draws Praise, Criticism*, HOUSTON POST, Sept. 13, 1993. City Councilman Frank Mancuso is quoted as saying: “In my opinion, we no longer regulate cabs. It’s that simple. Everybody and anybody is going to be out there now. It doesn’t bode well to lose complete control like that.”

35. CHICAGO, ILL., MUN. CODE, ch. 4-348-040 (1956):

In determining whether public convenience and necessity require additional taxicab service, due consideration shall be given to the following:

1. The public demand for taxicab service;
2. The effect of an increase in the number of taxicabs on the safety of existing vehicular and pedestrian traffic;
3. The effect of increased competition;
 - a. On revenues of taxicab operators;
 - b. On the cost of rendering taxicab service, including provisions for proper reserves and a fair return on investment in property devoted to such service;
 - c. On the wages or compensation, hours and conditions of service of taxicab chauffeurs;
4. The effect of a reduction, if any, in the level of net revenues to taxicab operators on reasonable rates of fare for taxicab service;
5. Any other facts which the commissioner may deem relevant.

If the commissioner shall report that public convenience and necessity require additional taxicab service, the council, by ordinance, may fix the maximum number of taxicab licenses to be issued, not to exceed the number recommended by the commissioner.

36. CHICAGO, ILL., MUN. CODE, ch. 4-348 (1956). In 1960, the public vehicle license commissioner of Chicago was granted authority to issue additional taxicab licenses up to a maximum of 4,600, increasing the prior limitation of 3,761 medallions. Under the municipal code, the commissioner was required to report a finding of “public convenience and necessity” based on public demand, traffic safety considerations, industry competition effects, and commissioner discretion, before licenses could be increased up to the 4,600 ceiling. Over the last twenty-five years, taxicab medallions were predominantly in the hands of the two largest cab companies, Checker Taxi Company and Yellow Cab Company. These two companies controlled 80% of the Chicago licenses, prompting the Chicago City Council to propose the issuance of 1,500 additional licenses in 1988, to be distributed over a three year period, with open entry slated for 1991. Faced with

E. ST. LOUIS

The St. Louis city ordinance is also typical of those governing the taxi industry. It establishes a Board of Public Service to issue certificates of PC&N, determined on the basis of:

[W]hether the demands of the public require the proposed or additional taxicab service within the City; that existing taxicab service is not sufficient to properly meet the needs of the public; the financial responsibility of the applicant; the number, kind, type of equipment and color scheme proposed to be used; the increased traffic congestion and demand for increased parking space upon the streets of the city which may result, and whether the safe use of the streets by the public, both vehicular and pedestrian, will be preserved by the granting of the additional license; and other relevant facts as the Board may deem advisable or necessary.³⁷

Vehicles must be painted in distinctive colors³⁸ and must be "in a thoroughly safe condition for the transportation of passengers, clean, fit, of good appearance and well painted."³⁹ Taxis must be equipped with posted fares and taximeters, with fare schedules filed with and approved

the prospect of rapid deregulation, Checker and Yellow Cab forged an agreement with the City of Chicago, providing an increase in medallions of 1,100, coupled with the relinquishing of 1,300 medallions by Checker and Yellow Cab for reassignment, over a ten year period. Ann Marie Lipinski & Jane Tanner, *Taxi Deal Gets Council's O.K After a Battle Royal*, CHI. TRIB., Jan. 28, 1988, at C1, C2. The new and relinquished licenses are awarded to independent drivers by lottery, whose market share will increase to 59% by 1998.

Chicago's movement toward liberalized entry will particularly impact medallion owners, who received \$20,000 on the open market for a medallion in 1988. With each issuance of a medallion through the lottery, the medallion value drops, as lottery winners are able to limit their taxicab license investment to \$250. The Chicago agreement may also affect taxicab fare regulation, in which the Chicago City Council has been traditionally hesitant to increase fares. Despite rate increases of roughly 30% in March, 1990, Chicago's rates were significantly lower than those of other major U.S. cities. See James Strong, *Time to Dig Deeper for Taxi Rides*, CHI. TRIB., Mar. 9, 1990, at C4, C5. Rate increases made by the City of Chicago in 1991 were the first since 1981. Jerry Feldman, the president of Checker Taxi Company, Inc., testified before a City Council hearing in 1991 that a three-mile taxi ride in Chicago which costs \$3.60 would be at least \$6.50 in Los Angeles, \$5.50 in Philadelphia, and \$4.60 in New York City.

Within three years, the City of Chicago survived a challenge to its deregulation scheme when Checker and Yellow Cab were determined to have violated the 1988 ordinance by setting up "sham companies" which financed the purchase of licenses for drivers in return for the driver putting the medallion up for collateral. P. Davis Szymaczak, *City Gets Rare Victory Over Cab Companies*, CHI. TRIB., May 24, 1991, at C2. If the driver defaulted on the financing, the medallion passed to the cab company, effectively circumventing the city's goal of limiting the market share of Checker and Yellow Cab. Although the City of Chicago was able to keep the move to liberalized entry alive, given the resistance by the large taxicab companies in Chicago, it is unclear whether the market will be open in 1988, or whether the City will forge another limited regulation agreement.

37. ST. LOUIS, MO., ORDINANCES 58795, § 8.98.023.

38. *Id.* § 8.98.113.

39. *Id.* § 8.98.101.

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by the Board of Public Service.⁴⁰ To ensure compliance, vehicles shall be inspected annually.⁴¹ Liability insurance must be maintained.⁴² To eliminate conflict between drivers, specific rules of conduct apply at taxi stands:

Taxicab drivers entering a taxicab stand shall do so from the rear, and shall progress toward the front thereof whenever the opportunity to do so is present. The driver in the foremost position shall be entitled to serve the first customer arriving at that location, provided, however, that should the customer elect to employ any other taxicab, he shall have a free choice thereof at all times.⁴³

A common carrier obligation is imposed on drivers to accept all potential patrons, except service "to anyone who is intoxicated or may present a personal safety hazard, and . . . any person in furtherance of any unlawful purpose."⁴⁴

F. BOSTON

Legislation promulgated by the Massachusetts legislature in the 1930s gave the police commissioner of Boston the power to authorize not more than 1,525 taxis to "suitable persons, firms and corporations who are owners of vehicles known as hackney carriages . . ." ⁴⁵ Regulations promulgated by the Boston Police Commissioner call for a \$10 fee for a hackney carriage license, and a \$2 fee for a hackney driver's license, probably the lowest such fees in the nation.⁴⁶ Nonetheless, because of the limited number of medallions issued, the market price for an existing medallion has approached \$90,000 in recent years.⁴⁷

In 1989, metered fares were increased 19%, raising the fare for a two-mile trip from \$3.50 to \$4.30.⁴⁸ Boston Police regulations also call for annual vehicle inspections,⁴⁹ a card displaying rates in the rear compartment of the taxicab,⁵⁰ etiquette in taxi stands,⁵¹ appropriate driver ap-

40. *Id.* §§ 8.98.107, 305.

41. *Id.* §§ 8.98.155-167.

42. *Id.* §§ 8.98.172-173, 185-186.

43. *Id.* § 8.98.425.

44. *Id.* § 8.98.449.

45. Acts of 1930, ch. 392, § 4.

46. See CITY OF BOSTON, RULES AND REGULATIONS ESTABLISHED BY THE POLICE COMMISSIONER FOR THE CITY OF BOSTON FOR HACKNEY CARRIAGES AND HACKNEY STANDS IN ACCORDANCE WITH CHAPTER 392 OF THE ACTS OF 1930, as amended, §§ 2, 4. See also, CITY OF BOSTON, HACKNEY CARRIAGE TRAINING MANUAL.

47. Suzuki, *supra* note 20, at 130.

48. Mark Muro, *Roache to Boston Cab Drivers: Take a Hike*, BOSTON GLOBE, July 29, 1989, at 18.

49. CITY OF BOSTON, *supra* note 46, § 7.

50. *Id.* §§ 8, 17.

51. *Id.* § 12.

pearance⁵² and behavior,⁵³ including a prohibition against transporting dead bodies.⁵⁴

G. MINNEAPOLIS

The Minneapolis Taxicab Ordinance has three purposes: (1) to achieve “. . . a better cab service for the riding public . . .”; (2) provide “greater safety and protection to the public . . .”; and (3) establish “better operating conditions for cab owners and drivers.”⁵⁵ In determining whether the public convenience and necessity warrant new entry, the city council must conduct a hearing, at which the following criteria shall be considered:

[T]he level and quality of service being provided by existing taxicab operators; whether additional competition would improve the level and quality of service or the degree of innovation in delivery of services; the impact upon the safety of vehicular and pedestrian traffic; the impact upon traffic congestion and pollution; the available taxicab stand capacity; the public need and demand for service; the impact on existing taxicab operators; and such other factors as the city council may deem relevant.⁵⁶

The Minneapolis ordinance also specifies requirements regarding the qualifications of new entrants, requiring the city council consider:

[T]he financial capability and responsibility of the applicant; the applicant's prior experience in the taxicab business; the level and quality of taxicab service provided by the applicant in the past in areas in which it has operated; the experience and competence of the applicant's drivers; the applicant's prior record of compliance with the taxicab ordinance including complaints and disciplinary actions against drivers and vehicle owners; the applicant's prior record of service complaints; the age and condition of the vehicles proposed to be licensed by the applicant; and such other factors as the city council may deem relevant.⁵⁷

Drivers must be courteous,⁵⁸ assist passengers,⁵⁹ accept all paying passengers,⁶⁰ give them receipts upon request,⁶¹ not smoke without their permission,⁶² not overcharge them,⁶³ drive safely,⁶⁴ carry liability insur-

52. *Id.* § 18.

53. *Id.* §§ 15, 20.

54. *Id.* § 28. It is unclear whether the taxi driver must jettison a passenger who dies in transit.

55. MINNEAPOLIS, MINN., TAXICAB ORDINANCES ch. 341 (1993).

56. *Id.* § 341.270(a).

57. *Id.* § 341.270(b).

58. *Id.* § 341.100.

59. *Id.* § 341.110.

60. *Id.* § 341.170.

61. *Id.* § 341.200.

62. *Id.* § 341.250(d).

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ance,⁶⁵ and pass a driver training course.⁶⁶ The ordinance goes so far as to prescribe the clothing drivers shall wear, prohibiting as outergarmets: "T-shirts, underwear, tank tops, swimwear, jogging suits, body shirts, shorts, cut-offs, trunks, or similar attire . . ."⁶⁷ Licenses may be revoked or suspended for good cause after notice and hearing.⁶⁸

H. DENVER

While most city governments regulate their own taxi companies, Colorado is something of an anomaly in that the state Public Utilities Commission [PUC] regulates the taxi industry of Colorado's major cities.⁶⁹ Until 1994, entry licensing in the Colorado taxi industry was governed by the standard of "regulated monopoly";⁷⁰ beginning in 1994, it was governed by the standard of "regulated competition."⁷¹

Under the prior "regulated monopoly" regime, no finding of public convenience and necessity for additional common carrier authority was justified unless the applicant could demonstrate that the existing operations were substantially inadequate,⁷² for "the existence of an adequate

63. *Id.* § 341.250(n). Rates are dealt with in §§ 341.710-810.

64. *Id.* § 341.120.

65. *Id.* § 341.500.

66. *Id.* § 341.380.

67. *Id.* § 341.130.

68. *Id.* § 341.980.

69. The Colorado legislature authorized its PUC to issue certificates to motor vehicle carriers in 1917. 1917 Colo. Sess. Laws, ch. 110, § 35. In 1969, it declared common carriers to be public utilities. 1963 C.R.S. § 115-1-2(5) (Perm. Supp. 1969) and 1963 C.R.S. § 115-9-2 cited in *Miller Bros., Inc. v. Pub. Util. Comm'n*, 185 Colo. 414, 421, 525 P.2d 433, 445 (1974); Section 40-10-105(2), C.R.S. 1973.

70. Prior to 1967, motor common carriers of property were governed by a statutory provision restricting new entry under a standard of "regulated monopoly." In 1967, the Colorado legislature changed the standard to one of "regulated competition." See *Denver Cleanup Serv., Inc. v. Pub. Util. Comm'n*, 192 Colo. 537, 541, 561 P.2d 1252, 1254 (1977) (by changing the law, "without question [the General Assembly] intended to protect the public health, safety, and general welfare by providing a framework for the better transportation of persons or property.")

71. Judicial and agency precedent interpreting the import of the parallel 1967 statutory change is instructive as to the standards to be employed in considering the parallel legislative change in 1994 by the Colorado legislature of entry standards governing taxi companies.

72. The Colorado Supreme Court observed that:

[U]nder the policy of regulated monopoly, additional common carrier authority was not granted where adequate service was already being rendered. . . . In accordance with this theory of regulated monopoly, we have held that a common carrier serving a particular area is entitled to protection against competition so long as the offered service is adequate to satisfy the needs of the area, and no finding of public convenience and necessity for common carrier service is justified unless present service offered in the area is inadequate.

Miller Bros., Inc. v. Pub. Util. Comm'n, 185 Colo. 414, 422, 525 P.2d 433, 446 (1974). "Under [the concept of regulated monopoly] an applicant for a competing certificate was obliged to show 'substantial' inadequacy in existing services." 185 Colo. at 430, 525 P.2d at 451.

and satisfactory service by motor carriers already in the area is a negation of public need and demand for added service by another carrier.”⁷³

The Colorado Supreme Court held that while inadequacy of existing services may be considered by the PUC in a “regulated competition” environment, it is no longer the controlling criterion that it had been in a “regulated monopoly” regime.⁷⁴ Under the “regulated competition” standard, the controlling criterion is the “public interest” or the “public need.”⁷⁵

In its seminal decision of *C.M. Morey v. Public Utilities Commission*⁷⁶ [*Morey II*], the Colorado Supreme Court observed that the consideration of the public need for safe, adequate, dependable, efficient and reasonably priced transportation services warrants an evaluation of the impact that potential new entry may have in creating excessive or destructive competition.⁷⁷ In assessing new entry proposals for taxi service in Colorado, the issue of destructive competition is at the heart of an assessment of the public’s interest in avoiding impaired transportation services or higher rates. Neither can “regulated competition” reasonably be interpreted as supporting unlimited entry.⁷⁸

73. *Ephriam Freightways, Inc. v. Pub. Util. Comm’n*, 151 Colo. 596, 380 P.2d 228 (Colo. 1963); *Colo. Transp. Co. v. Pub. Util. Comm’n*, 158 Colo. 136, 143, 405 P.2d 682, 686 (1965) (taxi company seeking to provide bus service failed to prove inadequacy in existing services).

74. *Miller Bros., Inc. v. Pub. Util. Comm’n*, 185 Colo. 414, 431-32, 525 P.2d 433, 451 (1974); *C.M. Morey v. Pub. Util. Comm’n*, 196 Colo. 153, 156, 582 P.2d 685, 687 (1978).

75. *C.M. Morey*, 196 Colo. at 157-58, 582 P.2d at 688; *C.M. Morey v. Pub. Util. Comm’n*, 629 P.2d 1061, 1065 (Colo. 1981) (hereinafter *Morey II*). In assessing the evidence, the public need is broader than the individual needs or preferences of an applicant’s customers. In determining whether a public need exists, the PUC may consider the needs and preferences of the witnesses who testify in favor of the applicant, although they are not determinative. *Morey II*, 629 P.2d 1061, 1066 (Colo. 1981). The public need consists of the needs of the public as a whole. *Id.* at 1067.

76. *Morey II*, 629 P.2d 1061, (Colo. 1981).

77. The court held:

As a corollary of our holding that the “public need” is broader than the individual needs and preferences of an applicant’s customers, we agree that the Commission may consider the impact additional competition may have, not only on the conflicting economic interests of competing carriers, but also on the ability of existing carriers to provide their customers and the public generally with safe, efficient and economical transportation services. The obligation to safeguard the general public against the impaired services and/or higher rates accompanying destructive or excessive competition is at the heart of the policy of regulated competition.

Id. at 1066 [citations omitted]. “Because of this obligation, the PUC can require a carrier to serve unprofitable routes that are important to certain segments of the population as a condition of granting it authority to operate more lucrative routes.” *Durango Transp., Inc. v. Durango*, 786 P.2d 428, 431 (Colo. Ct. App. 1989).

78. In *Morey II*, the Colorado Supreme Court affirmed the PUC, which denied a new application on the basis of evidence which established that:

- The market for transportation services in the affected areas was relatively inelastic;
- The operating capacities of existing common carriers were underutilized;
- The operating revenues of existing carriers were low; and

IV. THE ECONOMIC CHARACTERISTICS OF THE TAXI INDUSTRY

A. INDUSTRY SIZE & STRUCTURE

Taxicab companies comprise a \$6.5 billion industry employing nearly 300,000 people,⁷⁹ of whom 225,000 are drivers.⁸⁰ It has been estimated that the taxicab industry transports more passengers than all U.S. mass transportation systems combined.⁸¹

The taxi industry is a common carrier form of urban transportation, differing from its mass transit rivals in that it is privately owned, operates over public streets on no fixed routes, and provides door-to-door (or point-to-point) service in small vehicles on behalf of, and at the direction of, individual or very small numbers of patrons.⁸² Typically, the contract between the driver and passenger is informal and *ad hoc*. Where regulated, the price is usually based on the distance (and sometimes the dura-

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- Additional competition for present and prospective business would seriously impair the ability of existing carriers to continue to provide efficient and economical service to the public.

Morey II, 629 P.2d at 1066.

The Colorado Supreme Court subsequently reaffirmed each of these principles. In *Trans-Western Express, Ltd. v. Pub. Util. Comm'n*, 877 P.2d 350 (Colo. 1994), the Supreme Court concluded that the entry standard of "regulated competition" is to be applied as follows:

1. Under the doctrine of regulated competition, the controlling consideration is the "public need" or the "public interest." *Id.* at 353;
2. The burden of proof in establishing public need is on the applicant. *Id.*;
3. The public need is broader than the individual needs and preferences of an applicant's customers, and consists of the needs of the public as a whole. *Id.* at 354;
4. The public need is advanced by "safe, efficient, and economical transportation services." *Id.*;
5. The PUC may consider the adequacy or inadequacy of existing services in determining the public need. *Id.*;
6. The Commission may consider the impact of additional competition on the economic health of existing carriers, as well as their ability to provide the public with safe, efficient and economical service. *Id.*;
7. "Providing for the public need and regulating competition demands that some restraints be placed upon inter-carrier competition therefore avoiding destructive competition." *Id.* at 353, n.7 citing *Morey II*, 629 P.2d 1061, 1066;
8. "The doctrine of regulated competition requires the PUC to deny an application for common-carrier authority if granting the application would create 'excessive' or 'destructive' competition." *Id.* at 353; and
9. "Regulated competition is not synonymous with deregulation." *Id.* at 354 citing *Morey II* 629 P.2d at 1066-67.

79. See ROY SAMPSON, ET AL., *DOMESTIC TRANSPORTATION: PRACTICE, THEORY, AND POLICY* 150 (6th ed. 1990).

80. ENO TRANSPORTATION FOUNDATION, *TRANSPORTATION IN AMERICA* 62 (12th ed. 1994).

81. Rosenbloom, *supra* note 13.

82. Roger Teal, *Taxis As Public Transit*, PROCEEDINGS OF THE CONFERENCE ON TAXIS AS PUBLIC TRANSIT 3 (Univ. of California, 1978); County of San Diego Dep't of Transp., *TAXICAB STUDY* 6 (1978). See ROY SAMPSON, MARTIN FARRIS & DAVID SCHROCK, *DOMESTIC TRANSPORTATION: PRACTICE, THEORY, AND POLICY* 150 (6th ed. 1990).

tion) of the ride.⁸³ Airport vans and limousines differ in that they typically operate over fixed routes while taxicabs proceed directly to the destination designated by the patron.⁸⁴

The taxi industry may be divided into several distinct segments:

1. *Radio-Dispatched Cabs*

The radio dispatched portion of the taxicab industry involves a central dispatching system whereby patrons call by telephone and cabs are summoned by radio.⁸⁵ Taxis are equipped with two-way radios, and fleets are typically larger and have centralized maintenance and repair facilities.⁸⁶ Economies of scale have been acknowledged to exist in this segment of the industry due to indivisibilities of the inputs employed in marketing, dispatching, and management, as well as the need for a sufficiently large fleet to provide adequate service within reasonable time within a designated service territory.⁸⁷ Thus, this segment of the industry is likely to be relatively concentrated.⁸⁸ In most cities, the telephone order market accounts for 70%-80% of the overall demand for taxi service.⁸⁹

2. *The Cabstand Business.*

Cabstands exist with queues for both taxis and passengers at concentrated locations such as airports and hotels.

3. *Cruising Cabs.*

The cruising cab business consists of taxis driving along streets on which pedestrians congregate, searching for a random patron to hail them. It is profitable only in downtown urban areas of large cities where a high density of potential riders exists at random locations; the cruising cab business does not work well in cities with low density populations.⁹⁰

83. Kemp, *supra* note 4, at 57.

84. *Id.*

85. FRANKENA & PAUTLER, *supra* note 9, at 11-12.

86. Kemp, *supra* note 4.

87. FRANKENA & PAUTLER, *supra* note 9, at 54-55; GILBERT & SAMUELS, *supra* note 10, at 150 ("When revenue, and hence profit, is considered . . . it appears that larger firms do have access to significant economies of scale. First, they are more likely to be able to respond quickly to trip requests than are many small firms serving the same area independent of each other."). See also Teal & Berglund, *supra* note 4, at 49 ("Costs for a new entrant include radio equipment, facilities, personnel and a fleet large enough to provide responsive city-wide service where there are thought to be 'economies of scope'.").

88. Teal & Berglund, *supra* note 4, at 38.

89. *Id.* at 39.

90. Chanoch Shreiber, *The Economic Reasons for Price and Entry Regulation of Taxicabs: A Rejoinder*, 15 J. TRANSP. ECON. & POL'Y 81, 82 (1981).

4. *Public Contract Services.*

Sometimes a public agency contracts with a taxi company to provide one of more of the following services:

- (A) traditional fixed route transit or demand-responsive services in low-density areas, or late at night, often in lieu of existing fixed-route services;
- (B) feeder services to fixed routes;
- (C) paratransit services for special target groups such as the poor, the elderly, and the handicapped;
- (D) involvement in user-side subsidy program; and
- (E) brokerage services matching travelers to the most cost-effective provider for each service.⁹¹

B. INDUSTRY COSTS

The costs of entry into the cabstand or cruising segments of the taxi industry are exceptionally modest, consisting principally of a chauffeur's license, a down payment on a car, four re-tread tires, a few gallons of gasoline, and a couple of quarts of oil.

In the radio dispatch segment of the industry, fixed costs include the purchase price of a fleet of automobiles, depreciation, regular maintenance, the radio dispatching equipment and personnel to run it, marketing and advertising costs, insurance, driver training, and license and permit fees. Variable costs in the industry are generally a function of distance, duration and destination which consume variable rates of fuel, oil and labor.⁹² Labor expenses have been estimated to constitute 50% of the cost of taxi service.⁹³

Many costs are joint costs, spread over the outbound and inbound segments of the journey. A trip without dead heading enjoys two segments of revenue over which to spread both fixed and variable costs. For example, a thirty-mile passenger trip to a commercial airport enjoys a high probability of returning with a paying passenger, while a thirty-mile passenger trip to a remote suburban community has a high probability the taxi will return empty.⁹⁴ The relationship between cost and revenue of these two equivalent trips will differ significantly because of the existence or non-existence of a paying patron on the return leg of the journey.⁹⁵ In the absence of regulation, a taxi driver has a strong incentive either to refuse service to a patron seeking transportation to a remote community from which there is unlikely to be a return trip (or to charge a

91. Rosenbloom, *note 13*.

92. See Gallick & Sisk, *supra* note 9, at 117-8.

93. Teal & Berglund, *supra* note 4, at 49.

94. Gallick & Sisk, *supra* note 9.

95. *Id.*

price much higher, on a per-mile basis, than is charged elsewhere), and to queue for profitable trips at cabstands.⁹⁶

Where profits are inadequate (as results for example, where entry is deregulated) the principal costs which can be trimmed are drivers' wages, vehicle maintenance, and the purchase of new equipment. However, taxi driver wage rates are already among the lowest in the labor force.⁹⁷

C. THE PASSENGER MARKET

The market for taxicab services can be divided into several distinct segments, each with its own demand characteristics:

1. *The Transportation Disadvantaged.*

The "transportation disadvantaged" include the elderly, unemployed, handicapped, children and low-income persons. In fact, a large proportion (perhaps most) of the users of taxicab service are persons of low income.⁹⁸ For example, a 1970 study of taxi use in Pittsburgh revealed that 58% of those who used taxis regularly did not own an automobile; 60% of the trips were made by housewives, students, or unemployed, retired or incapacitated individuals.⁹⁹ The 1975 *National Personal Transportation Study* revealed that 60% of all taxi services are provided to the transportation disadvantaged. A Federal Trade Commission study concluded that, "the low-income population spends higher shares of their income, and often simply more dollars, on taxis than does the high-income population."¹⁰⁰

Hence taxis play an essential role in transporting the disadvantaged, low mobility, and lower income segments of the population.¹⁰¹ The poor are particularly reliant on the radio dispatched segment of the market.¹⁰²

2. *Non-Residents.*

In large cities, the market also consists of a substantial number of out-of-town business, convention or vacation visitors.¹⁰³ These travelers do have a competitive alternative in the form of rental cars, although usually at a much higher price than taxicabs.¹⁰⁴ Business travelers also may not be as highly sensitive to the price of taxicab service since many are on

96. *Id.* at 120.

97. Teal & Berglund, *supra* note 4, at 49.

98. *See supra* note 13.

99. Teal, *supra* note 82.

100. FRANKENA & PAUTLER, *supra* note 9, at 3.

101. *See* GILBERT & SAMUELS, *supra* note 10, at 112.

102. FRANKENA & PAUTLER, *supra* note 9, at 12.

103. *See* Teal, *supra* note 82, at 14.

104. BARKER & BEARD, *supra* note 8, at 44.

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their company's expense accounts.¹⁰⁵

3. *Affluent Residents.*

The wealthy are not financially burdened by the regular use of taxicabs, and enjoy the personalized nature of the service and its convenience.¹⁰⁶ In certain densely populated cities, particularly those in the Eastern United States, with their congested streets and limited and expensive parking, a large number of residents find a private automobile an inconvenient way to travel.

V. MARKET IMPERFECTIONS

A. THE ABSENCE OF A COMPETITIVE MARKET.

In the cabstand market, the "first in, first out" rule severely restricts comparative shopping by consumers.¹⁰⁷ In both the cabstand, and the cruising cab market, competitive shopping is impractical, and the transaction costs to prospective passengers of finding the taxi with the lowest price can be problematic.¹⁰⁸ One source summarized the practical problems with competitive shopping at cabstands:

First, space on airport or hotel stands is usually severely limited and cabs not at the head of the line often do not have a safe manner in which to pull out from the queue when hired. Second, there is no way in which one cab can be made to wait while a prospective passenger goes shopping.¹⁰⁹

Another observed:

[The cab stand market] is a system that impedes price competition, because it puts drivers in a stronger position than customers. . . . Moreover, airport customers are unlikely to dicker with or refuse a cab that seems to be assigned to them, especially when they do not know local fares or know that legal fares may vary, or when they are on expense accounts and not much concerned about costs. . . .

In cab lines . . . the deterioration in quality also occurs because there can be little competition on the basis of either quality or price.¹¹⁰

Given these practical difficulties, it is not at all clear that a competitive market for taxi services either exists or can be created.¹¹¹ As one

105. FRANKENA & PAUTLER, *supra* note 9, at 129.

106. See BARKER & BEARD, *supra* note 8 at 44; GILBERT & SAMUELS, *supra* note 10, at 111; SAMPSON, ET AL., *supra* note 79, at 150.

107. FRANKENA & PAUTLER, *supra* note 9, at 142.

108. GILBERT & SAMUELS, *supra* note 10, at 151; FRANKENA & PAUTLER, *supra* note 9, at 51.

109. GILBERT & SAMUELS, *supra* note 10, at 152.

110. Richard Zerbe, Jr., *Seattle Taxis: Deregulation Hits a Pothole*, REG. (Nov.-Dec. 1983), at 43, 46.

111. "Supply and demand analysis is inapplicable to the cruising taxicab market. The condi-

source observed, "It is not certain . . . that a 'market' in the pure economic sense even exists."¹¹² Moreover, visitors from other cities may be unaware of the prevailing price for taxicab services, or whether the passenger is protected from exorbitant pricing by a regulatory authority.¹¹³

Absence of a competitive market exists not only at cabstands, but in the cruising market as well. Competition in the cruising market is unlikely unless a number of taxis congregate in a single location at the same time the patron is present.¹¹⁴ One commentator lamented the absence of a traditional competitive market in the taxi business, noting that time is of the essence in the procurement of taxi services:

Commuters almost always grab the first cab that drives by, as opposed to shopping for a taxi like, say, a restaurant, where the choices are arrayed and where the business with the best or most efficient service wins. All of which means that the fruits of a free market—namely that competition allows the best to thrive and prompts the worst to go broke—are lost. Ultimately, deregulation in the cab industry provides an incentive for all involved to offer the cheapest service allowable.¹¹⁵

The spatial nature of the industry inhibits price shopping, thereby creating somewhat inelastic demand.¹¹⁶ Professor Chanoch Shreiber put it best:

Unlike other atomistic markets, a taxicab market in which cruising is the main method of operation will seldom give rise to pricing competition. In most industries sellers are at a fixed location, and customers have the ability to shop around for price and return to the seller offering the best terms. A seller can thus, by reducing his price expect to gain more business, since some customers shopping for price will switch to him from his competitors. Not so in the case of taxicabs. An individual cab operator, acting independently, cannot gain more passengers if he alone reduces his price below the going market rate.¹¹⁷

Professor Shreiber goes on to point out that because a prospective

tions for reaching equilibrium, specified in supply and demand analysis, cannot exist in the case of taxicabs, and the point of interaction between the supply and demand for taxicab rides is not an equilibrium position." Shreiber, *supra* note 90, at 298.

112. GILBERT & SAMUELS, *supra* note 10, at 151.

113. FRANKENA & PAUTLER, *supra* note 9, at 50.

114. James Foerster & Gorman Gilbert, *Taxicab Deregulation: Economic Consequences and Regulatory Choices*, 8 *TRANSP.* 371, 383 (1979).

115. Christopher Georges, *D.C.'s Checkered Cabs: Why Washington's Taxis Are America's Worst*, *WASHINGTON POST*, Mar. 21, 1993, at C1, C2.

116. Richard Coffman, *The Economic Reasons for Price and Entry Regulation of Taxicabs: A Comment*, 9 *J. TRANSP. ECON. & POL'Y* 288 (1975); David Williams, *Information and Price Determination in Taxi Markets*, 20 *Q. REV. ECON. & BUS.* 36, 37 (1981).

117. Chanoch Shreiber, *The Economic Reasons for Price and Entry Regulation of Taxicabs*, 9 *J. TRANSP. ECON. & POL'Y* 268, 270 (1975).

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passenger who values his or her time will not likely turn down the first available cab on the basis of price, this will have an “upward pressure on the price.”¹¹⁸ A consumer hailing a cab from a sidewalk has an incentive to take the first taxi encountered, because both the waiting time for the next cab and its price are unknown.¹¹⁹ Paradoxically, in an open entry regime, prices tend to rise while vehicular utilization rates tend to fall.¹²⁰ Potential patrons for whom price is a determinative factor, but time is not, may take the bus, subway, or some other form of public transport, where and when it is available. However, little cross-elasticity of demand appears to exist between the taxicab and mass transit industries, for most taxi demand is time sensitive.¹²¹

B. IMPERFECT INFORMATION & TRANSACTIONS COSTS.

The free market competitive model assumes consumers have “perfect information.” Yet consumers buying taxi service in a deregulated market often have little comparative pricing or service information, for the opportunity costs of acquiring it are high. As one source observed, “there is little incentive for price comparison for the occasional taxi user, as transaction costs (in time and effort) are high in relation to the potential savings (less than \$1 for a \$5 to \$6 trip).”¹²²

It is, quite simply, difficult for a consumer to assess the quality of transportation service at the time it is ordered, for transportation is in the nature of a “credence good”—one that cannot be examined prior to consumption.¹²³ A prospective patron can tell something about a taxi visually by the make and model of the automobile, as well as its dents, scrapes and paint job. But not until s/he enters the taxi will s/he know how long the trip will take or how circuitous the trip will be, how smooth and comfortable the ride will be, how knowledgeable and courteous the driver may be, and whether the price will be a fair one.

The efficient acquisition by consumers of useful information on pricing is problematic in the cab stand and cruising markets, for reasons explained above. Comparative shopping on the basis of price is difficult even if fares are posted because of the number of variables which comprise the total price—drop, mileage, wait time, baggage, and additional passenger charges.

Economist Alfred Kahn has observed several problems emerging from destructive competition, including consumers having a “limited abil-

118. *Id.* at 271.

119. Teal & Berglund, *supra* note 4, at 38.

120. Foerster & Gilbert, *supra* note 114, at 378.

121. Shreiber, *supra* note 90, at 82.

122. Teal & Berglund, *supra* note 4, at 50.

123. DEMPSEY & GOETZ, *supra* note 2, at 276.

ity to judge the quality of products and hence to keep it at acceptable levels even when they have a wide range of competitive suppliers to choose from."¹²⁴ Given that comparative shopping by patrons for the best price/service combination is severely circumscribed by the absence of a true competitive market, regulation of prices and services can significantly reduce consumer transactions costs, thereby increasing the number and variety of taxi trips.¹²⁵

C. EXTERNALITIES.

An external effect of a transaction is the positive or negative impact upon a person not a party to it.¹²⁶ The negative externalities of taxicab service are felt by other users of finite road and highway resources, and the environment. Again, Professor Shreiber observes that "[t]axicabs impose various external costs. Mainly, they increase traffic congestion and raise the level of air pollution. . . . The price of a ride in a system of free entry will cover only the private cost. The social cost per ride, which includes the externalities, will necessarily exceed the price."¹²⁷

It has been argued that restrictions on entry increase efficiency by reducing the street congestion and air pollution caused by an excessive number of vehicles.¹²⁸ Garrett Hardin, in his powerful essay, "The Tragedy of the Commons," provides insight as to the economic forces leading a rational wealth maximizer to advance his own economic interests by externalizing his costs:

Picture a pasture open to all. It is to be expected that each herdsman will try to keep as many cattle as possible on the commons. Such an arrangement may work reasonably satisfactorily for centuries because tribal wars, poaching, and disease keep the numbers of both man and beast well below the carrying capacity of the land. Finally, however, comes the day of reckoning, that is, the day when the long-desired goal of social stability becomes a reality. At this point, the inherent logic of the commons remorselessly generates tragedy.

As a rational being, each herdsman seeks to maximize his gain. Explicitly or implicitly, more or less consciously, he asks, "What is the utility to me of adding one more animal to my herd?" This utility has one negative and one positive component.

(1) The positive component is a function of the increment of one animal.

124. ALFRED KAHN, II *ECONOMICS OF REGULATION* 176 (1971).

125. Gallick & Sisk, *supra* note 9, at 117, 119, 127.

126. Dempsey, *supra* note 3, at 17.

127. Shreiber, *supra* note 117, at 274.

128. See FRANKENA & PAUTLER, *supra* note 9, at 38, 42 ("[T]he operation of taxicabs on congested streets slows down other road users, increasing their time and money costs of travel."). *Id.* at 38.

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Since the herdsman receives all the proceeds from the sale of the additional animal, the positive utility is nearly +1.

(2) The negative component is a function of the additional over-grazing created by one more animal. Since, however, the effects of overgrazing are shared by all the herdsmen, the negative utility for any particular decision-making herdsman is only a fraction of 1.

Adding together the component partial utilities, the rational herdsman concludes that the only sensible course for him to pursue is to add another animal to his herd. And another. . . . [b]ut that is the conclusion reached by each and every rational herdsman sharing a commons. Therein lies the tragedy. Each man is locked into a system that compels him to increase his herd without limit — in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedoms of the commons. Freedom in a commons brings ruin to all.¹²⁹

In an environment of excessive competition created by excessively liberalized entry, the city streets are commons, the taxi companies are herdsmen, and the taxis themselves are cattle. Every additional taxi on the street brings the taxi company additional revenue (particularly where driver leasing creates an intermediate market between the taxi firm and its customers),¹³⁰ although average taxi revenue will fall for all taxis as the streets become congested with more vehicles than necessary to meet aggregate passenger demand. Since each individual taxi company has an incentive to increase the size of its fleet beyond the collectively rational level, according to Hardin, “[r]uin is the destination toward which all men rush, each pursuing his own best interest in a freedom that believes in the freedoms of the commons.”¹³¹

As we shall see in greater detail below, excessive taxicab entry has a negative impact in terms of industry productivity and profitability. But Hardin’s main thesis is not about the economic decline of herdsmen, but of the negative externality of another sort — pollution. He says:

In a reverse way, the tragedy of the commons reappears in problems of pollution. Here it is not a question of taking something out of the commons, but of putting something in. . . . The calculations of utility are much the same as before. . . . Since this is true for everyone, we are locked into a system of ‘fouling our own nests,’ so long as we behave only as independent, rational, free-enterprisers.¹³²

The pollution impact of allowing an excessive number of underutilized automobiles on the streets for any environmentally conscious com-

129. Garrett Hardin, *The Tragedy of the Commons*, SCIENCE, Dec. 13, 1968, at 1243.

130. See Teal & Berglund, *supra* note 4, at 54.

131. See Hardin, *supra* note 129.

132. *Id.*

munity is manifest. Hardin further points out that one means of avoiding the tragedy is by ascribing private property rights, or in effect, "de-commonizing" the commons. Licensing is one mechanism for creating such property rights, for no rational herdsman will overgraze land which is his, nor will a taxi company flood the streets within his certificated service territory with an excessive number of vehicles.¹³³

Still another externality involves the impact taxi service has upon a city's image, for the economy of a city as a whole may be adversely affected by poor or highly priced transportation services. The taxi is the first and last impression a city will make on visiting tourists, conventioners, and businessmen. A city's hotels, restaurants, airport, convention and business traffic, are dependent upon ubiquitous, reasonably priced, and efficient on-demand taxi service.¹³⁴

Further, non-discriminatory pricing based on average costs can serve a significant social objective of assuring reasonably priced service to less affluent passengers or more remote communities, in effect requiring cross-subsidization by more affluent patrons or dense markets. In reviewing taxi regulatory issues, the U.S. Department of Transportation has observed, "[c]ross-subsidization, per se, is not automatically frowned upon if designed to meet some public policy objectives."¹³⁵

D. CROSS-SUBSIDIES AND CREAM SKIMMING.

Most governmental authorities insist, by regulation or local ordinance, that licensed taxis operate as "common carriers." That is, taxis are required to provide service to low-density areas or at nonpeak times without pricing discrimination (i.e., the same distance-based fare be charged to all on an "average cost" basis).¹³⁶ Thus, dense markets cross-subsidize low-density and impoverished areas; peak traffic cross-subsidizes off-peak service.

Unlimited or excessive entry causes owner-operators to gravitate to high-peak high-density traffic, predominantly at the airport and hotel cabstands. As one source noted:

When gypsy, or unlicensed, taxis siphon business and profits they severely limit the profits that licensed carriers need to sustain other required services. The possibility of opening entry to a taxi market also raises fears that newcomers would focus on these more lucrative areas, and experience in some cities has validated these fears.¹³⁷

133. See generally, Dempsey, *supra* note 3, at 17-21.

134. GILBERT & SAMUELS, *supra* note 10, at 153-4.

135. U.S. DEP'T OF TRANSP., *supra* note 4.

136. See Gallick & Sisk, *supra* note 9, at 117.

137. GILBERT & SAMUELS, *supra* note 10, at 153; See generally Suzuki, *supra* note 20, at 129.

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Deregulation results in some trips becoming very expensive while others decrease in price, with the cost of service no longer averaged over space and time. Professor James Foerster and Gorman Gilbert observed:

Persons with a low ability to pay, but a high need for transportation, may no longer be able to use taxi service.

These results might occur because there will no longer be any geographic or inter-temporal cross-subsidization. . . . The elimination of whatever cross-subsidies now exist without income transfers could lead to socially undesirable results.¹³⁸

And, as noted above, given that demand for taxi services is often time sensitive, economic regulation can reduce the transaction costs of comparative shopping.¹³⁹

E. ECONOMIES OF SCALE AND SCOPE

Given the minuscule economic barriers to entry, one intuitively would not expect there to be economies of scale in the taxicab industry. Yet the per passenger overhead costs of marketing, advertising, dispatching, accounting, and cab maintenance generally decline as the size of the company's fleet grows. An ability to provide ubiquitous service also significantly enhances the marketability of the firm's product in the radio-dispatch market, for passengers thereby enjoy shorter waits, better service, and one-stop shopping, reducing customers' transaction and opportunity costs.

Economies of scope are also present in the taxicab industry. A company which dedicates its primary business to the radio-dispatch market can easily park temporarily idle cabs in hotel and airport queues. A taxi company can easily dedicate capacity to the express document delivery business.

F. THE ABSENCE OF SOUND ECONOMIC CONDITIONS.

Absent regulation, few economic barriers impede entry in the owner-operator cruising and cabstand markets — all one needs is a chauffeur's license and a down payment on car. An open entry regime tends to put too many taxis on the roads when they are least needed, thereby injuring the economic health of existing firms and their drivers. Professor Shreiber observed:

138. Foerster & Gilbert, *supra* note 114, at 385.

139. "Given that the demand by riders is generally for immediate service, the aggregate search performed by riders and drivers would tend to be extremely costly." Gallick & Sisk, *supra* note 9, at 118; "[R]egulation can increase the number and variety of taxi trips by reducing search costs." *Id.* at 119.

In the absence of legal restrictions, the number of cabs most probably will vary in the opposite direction to general business conditions. Very little skill is required to be a cab driver, and not much money is needed to buy or rent a car that can be used as a cab. The absence of barriers to entry makes cab operation the natural occupation to turn to for those that are unemployed. The disadvantage of such fluctuations is that they will bring about a larger supply of cabs when there is less demand for them (i.e., in times of recession) and a smaller supply of cabs when the demand for them rises (in times of prosperity). Moreover, cyclical fluctuations will tend to hurt those who make cab driving their permanent job — their income will necessarily decline sharply in times of recession. Restrictions are needed to provide some income stability for these drivers, who will anyway suffer in times of recession because of the decrease in demand.¹⁴⁰

Thus, the supply of labor and equipment by the industry appears to have an inverse relationship with the level of economic activity.¹⁴¹

Professor Shreiber wrote his pragmatic assessment of the economic characteristics of the taxicab industry in 1975. He was criticized at the time because the competitive model was not rejected on the basis of empirical testing.¹⁴² Yet, as we shall see, the empirical results of deregulation confirm, rather than reject, Professor Shreiber's analysis.

Professors Lester Telser of the University of Chicago and William Sjostrom of the University College Cork have argued that various modes of transport are subject to core theory, which "really amounts to saying that competition just isn't possible in some industries"¹⁴³ Core theory emerged from game theory, and as we shall see, offers a fascinating insight into the question of why the taxicab market fails to perform the way one would expect under neo-classical economic theory.

Game theory is broken down into two general types of "games", or market environments — cooperative, and non-cooperative. The former are those in which the players (buyers and sellers in a market environment) can communicate and form coalitions so as to best meet their individual needs. Players make decisions as to which coalition they should enter based on individual needs; any large-scale benefit which arises for the players is simply a by-product. In non-cooperative "games," (such as the infamous "prisoner's dilemma") players are unable to communicate, and therefore any decisions made are not based on mutuality.¹⁴⁴

140. Shreiber, *supra* note 117, at 275-76.

141. Williams, *supra* note 5, at 36.

142. Richard Coffman, *supra* note 116, at 290.

143. Timothy Smith, *Why Air Travel Doesn't Work*, FORTUNE, Apr. 3, 1995, at 41, 46; See William Sjostrom, *Antitrust Immunity for Shipping Conferences: An Empty Core Approach*, 8 ANTITRUST BULL. 19 (1993); William Sjostrom, *Price Discrimination by Shipping Conferences*, LOGISTICS & TRANSP. REV. 207 (1992).

144. See ROBERT AXELROD, THE EVOLUTION OF COOPERATION (1984).

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Core theory is a subset of cooperative game theory; a core is formed when the coalitions are aligned in such a way that no player can advance his needs by defecting to another coalition or operate on his own. By contrast, an empty core arises when players can continuously form new coalitions which bring better players. Whether a core exists or not depends on the number of players in the game, and the market environment, or rules of the game.

Several economists have described various alternatives for which a taxi trip reflects an empty core.¹⁴⁵ Professor John Shepard Wiley, Jr., proffers an illustration of a market with an empty core:

For example, say that three strangers are willing to pay up to \$7 each for a cab to the airport. Two cabs stop nearby. Each cab can carry one or two passengers, and each driver is willing to make the trip (with either one or two passengers) for a minimum of \$6. Given these demands and costs, the worst-off or excluded player can block any arrangement by tempting some players to abandon others for a more attractive arrangement. Suppose, for instance passengers A and B force driver X down to her minimum \$6 total fare, thus yielding for A and B a fare of \$3 each. As a result, passenger C is stuck paying at least \$6 to travel alone with driver Y. But driver X could gain an added \$2 by dumping B and offering C a ride for \$5—which C should accept because a \$5 fare is cheaper than a \$6 fare. This new coalition between X, A and C however, is vulnerable in turn to raiding by the excluded players, Y and B. Now passenger B faces a trip alone with driver Y at a fare of at least \$6, and both will improve their lots if they attract passenger C with a \$4 fare offer, which Y and B split between themselves and which C will prefer to the \$5 that C pays as a member of the existing X-A-C coalition. This coalition instability occurs for every possible combination of players.¹⁴⁶

As Professor Abigail McWilliams points out, an empty core exists when each and every coalition can be outbid by a rival coalition, so that the market cannot achieve stability; quantity and price fluctuate constantly.¹⁴⁷ With an empty core, the market finds itself mired in unsatisfactory results, unable to achieve competitive equilibrium. Another source summarized this illustration of dysfunctional economics more succinctly:

Imagine, for instance, a market in which a taxi holds two people, and only two. Three people are waiting at a taxi stand, bound for the same destination, and two taxis show up. How much does it cost a taxi to make the trip

145. See e.g., George Bittlingmayer, *Decreasing Average Cost and Competition: A New Look at the Addyston Pipe Case*, 25 J.L. & ECON. 57, 81-82 (1983).

146. John Shepard Wiley, Jr., *Antitrust and Core Theory*, 54 U. CHI. L. REV. 556, 560-61 (1987).

147. See Abigail McWilliams, *Rethinking Horizontal Market Restrictions: In Defense of Cooperation in Empty Core Markets*, Q. REV. ECON. & BUS. 3 (1990).

doesn't depend on the number of passengers. One taxi driver can try to make the same amount of revenue by offering the third passenger a fare of \$20, but that passenger will likely take a bus or not travel at all, rather than pay that much. So the second driver tries to upset the first driver's arrangement, undercutting his fare for two passengers. You can see what happens: Any price agreement struck by a coalition of two passengers and one taxi can be upset by a slightly better offer from the other taxi (or the other passenger), cascading until it is no longer profitable to operate one of the taxis.¹⁴⁸

Professor Telser found six prerequisites for an empty core: (1) demand is uncertain or periodic; (2) plant capacities are large relative to demand; (3) plants exhibit increasing returns to scale; (4) plants have fixed capacities; (5) there are avoidable fixed costs; and (6) it is costly to store the product.¹⁴⁹ Several modes of transport exhibit these characteristics including, as noted from the hypotheticals, unregulated taxicabs. The remedy advanced by Telser is that some measure of cooperation be allowed to producers in these markets, although such intra-industry collusion would be antithetical to contemporary antitrust notions.

Of course, a long-recognized alternative remedy to destructive competition has been economic regulation, which allows the market to stabilize along a more satisfactory axis.

VI. BIPOLAR VIEWS ON REGULATION AND DEREGULATION

Unfortunately, much of the political debate over whether taxicabs (and, indeed, any other mode of transportation) should be regulated or deregulated has become highly ideological and polarized. The proponents and opponents of deregulated entry have two vastly different views of what such a change in regulatory policy would produce.¹⁵⁰

148. Smith, *supra* note 143, at 45-46.

149. LESTER TELSER, *ECONOMIC THEORY AND THE CORE* (University of Chicago Press 1978); *COMPETITION, COLLUSION AND GAME THEORY* (Aldine and Atherton, 1972); *Cooperation, Competition, and Efficiency*, 28 J.L. & ECON. 271 (1985);

150. Some proponents of regulation of have urged that entry controls are necessary to:

- Ensure taxicab owners a satisfactory income;
- Ensure the financial responsibility of taxicab owners;
- Prevent traffic congestion;
- Protect mass transit systems; and
- Avoid destructive competition among taxi owners and operators;

Edmund Kitch, et al., *The Regulation of Taxicabs in Chicago*, 14 J.L. & ECON. 285, 321-25 (1971). U.S. DOT URBAN MASS TRANSP. ADMIN., *THE APPLICATION OF THE FEDERAL ANTITRUST LAWS TO MUNICIPAL TAXICAB REGULATION* 32 (1983).

Opponents of regulation have argued that these limitations:

- Increase taxicab fares;
- Unfairly limit competition; and
- Raise regulatory costs.

U.S. DOT URBAN MASS TRANSP. ADMIN., *supra*, at 32.

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Proponents of deregulation argued that eliminating pricing and entry regulation of the taxicab industry would lower prices, improve service, and provide a wider variety of price and service options dictated by consumer demand, thereby fostering efficient resource allocation.¹⁵¹ As one source observed, "the argument is often made solely on ideological grounds: the competitive free market in search of profit will always provide better and more efficient services."¹⁵² More specifically, it has been alleged that deregulation would:

- Produce more taxi service and faster response times;
- Create service innovations and service expansion to poorly served neighborhoods;
- Lower fares; and
- Reduce government costs by eliminating oversight of pricing, service and entry.¹⁵³

Most of these predictions have been based on free market economic theory which has driven much of deregulation in transportation since the late-1970s, insisting that government creates distortions which thwart market incentives for productivity, efficiency, and lower consumer prices.¹⁵⁴ Unfortunately, as we have seen, the taxi industry fails to reflect the perfect competition model described in micro-economic textbooks. Professor Roger Teal, who has written extensively on the subject of taxicab deregulation, offered an explanation for the wide divergence between free market predictions of what deregulation should produce, and the empirical reality of what it actually has produced:

The emphasis placed by industrial organization principles on actual conditions in markets (and on the distortions which monopoly power creates in real-world markets) proves more useful than simple micro-economic theory

151. "Students of economics and urban transportation frequently cite the limitation on the number of taxicabs in most American cities as a clear case of unwise government policy. They argue that a limitation on the number of cabs can only operate to raise the price and decrease the supply of taxicab service as compared to that which would otherwise be provided." KITCH, ET AL., *supra* note 150, at 285. ("The authors of this article share the academic view.") *Id.* See also ROGER TEAL & MARY BERGLUND, EXPLAINING THE IMPACTS OF TAXICAB DEREGULATION IN THE USA 2 (1986); ROGER TEAL, ET AL., URBAN TRANSPORTATION DEREGULATION IN ARIZONA 26 (1983); GILBERT & SAMUELS, *supra* note 10, at 146.

152. Rosenbloom, *supra* note 13.

153. FRANKENA & PAUTLER, *supra* note 9, at 75; PRICE WATERHOUSE, ANALYSIS OF TAXICAB DEREGULATION AND RE-REGULATION I, 6 (1993); Teal & Berglund, *supra* note 4, at 39. In contrast, opponents of deregulation contend that deregulation will:

- Result in poorer service;
- Reduce safety;
- Produce less accountability; and
- Produce less reliability.

PRICE WATERHOUSE, *supra* at I.

154. See, e.g., PAUL DEMPSEY, THE SOCIAL & ECONOMIC CONSEQUENCES OF DEREGULATION (1989); DEMPSEY & GOETZ, *supra* note 2; PAUL DEMPSEY, ET AL., *supra* note 1.

for analyzing the impacts of taxicab deregulation. Simple models of competitive behavior involving atomistic producers selling to completely-informed consumers are often used, but these theoretical generalizations of ideal types provide no useful or interesting explanations for the results observed in the dominant taxi markets — telephone orders and cabstands.¹⁵⁵

Similarly, Sandra Rosenbloom, a scholar whose earlier literature embraced the unregulated free market position on this subject, concludes:

Unfortunately, an examination of empirical data on regulatory reform of the taxi industry to date shows few of the benefits claimed by proponents. . . .

[M]ost anticipated economic outcomes did not materialize. The irony is that free-market private taxis simply don't act like entrepreneurs in a free market.¹⁵⁶

VII. EMPIRICAL RESULTS OF OPEN ENTRY IN THE TAXICAB INDUSTRY

Yet we need not rely on the theoretical assumptions of what unlimited entry will produce. We have empirical results which we can assess to determine what deregulation of the taxicab industry has produced. Before 1983, some twenty-one cities deregulated taxicabs in whole or part.¹⁵⁷

The experiences of these cities reveal that taxicab deregulation resulted in:

1. A significant increase in new entry;
2. A decline in operational efficiency and productivity;
3. An increase in highway congestion, energy consumption and environmental pollution;
4. An increase in rates;
5. A decline in driver income;
6. A deterioration in service; and
7. Little or no improvement in administrative costs.

Let us examine each of these results.

A. ENTRY

Deregulation proponents were correct in their predictions that removing entry restrictions would result in increased entry into the industry. Because of the low cost of entry into the taxicab business (i.e., a driver's license, and a down payment on an automobile),¹⁵⁸ deregulation

155. Teal & Berglund, *supra* note 4, at 47 [citation omitted, and the King's English spelling employed in the original].

156. Rosenbloom, *supra* note 13.

157. U.S. DEP'T OF TRANSP., *supra* note 6, at III.

158. Shreiber, *supra* note 117, at 275.

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produced a sharp increase in the number of new taxis on the road, rising an average of 23% in the deregulated cities.¹⁵⁹ In Phoenix, the number of taxis in active service increased by more than 50% in the first year of deregulation.¹⁶⁰ In Atlanta, which deregulated in 1965, the number of vehicles more than doubled, from approximately 700 before deregulation, to 1,900 in 1970.¹⁶¹

Most new entrants were independent owner/operators or small firms, who concentrated their taxis at cab stands at hotels and airports, venues which already were well served prior to deregulation.¹⁶² Hotels and airports guarantee a patron if the driver is willing to wait at the increasingly lengthy queues.¹⁶³ A driver need not invest in a radio dispatch system to serve hotels and airports.

The cabstand market quickly became saturated, forcing the established companies to focus on the radio dispatch telephone order market, which has relatively higher entry costs in terms of dispatching equipment, facilities and personnel, and requires a sufficiently large fleet to provide city-wide service.¹⁶⁴ Thus, the deregulated taxi industry divided into two sub-industries—a large number of independent owner-operators serving the cab stands, and a small number of larger companies focusing on the

159. PRICE WATERHOUSE, *supra* note 153, at 11. See also PARATRANSIT SERVICES, INC., THE EXPERIENCES OF U.S. CITIES WITH TAXICAB OPEN ENTRY 29 (1983); U.S. DEP'T OF TRANSP., TAXI REGULATORY REVISION IN OAKLAND AND BERKELEY, CALIFORNIA 49 (1983) ("[U]nchecked growth could eventually lead to increased financial difficulties for the companies.").

160. U.S. DEP'T OF TRANSP., URBAN TRANSPORTATION DEREGULATION IN ARIZONA VII (1984); ROGER TEAL, ET AL., URBAN TRANSPORTATION DEREGULATION IN ARIZONA 8 (1983).

161. FRANKENA & PAUTLER, *supra* note 9, at 144; MULTIPLICATIONS, INC., DECONTROL AND RECONTROL: ATLANTA'S EXPERIENCE WITH TAXI REGULATION I (1982) (Prepared for the International Taxicab Association). The following chart provides data on the number of taxi permits in selected cities before and after entry deregulation:

TAXICAB PERMITS BEFORE AND AFTER OPEN ENTRY		
City	Before	After
Atlanta	700 (1965)	1,538 (1983)
Fresno	70 (1979)	45 (1983)
Indianapolis	502 (1972)	466 (1974)
Milwaukee	308 (1979)	351 (1983)
Phoenix	300 (1981)	425 (1983)
Sacramento	110 (1982)	168 (1983)
San Diego	409 (1978)	915 (1983)
Seattle	129 (1979)	230 (1983)
Spokane	100 (1980)	80 (1983)

FRANKENA & PAUTLER, *supra* note 9, at 144.

162. TEAL & BERGLUND, *supra* note 151, at 8; PARATRANSIT SERVICES, INC., *supra* note 159, at 43.

163. See Teal & Berglund, *supra* note 4, at 40.

164. TEAL & BERGLUND, *supra* note 151, at 28.

telephone order market.¹⁶⁵

Because the oversaturation of the market caused inadequate profitability (resulting from more taxis serving the same, or a declining, number of patrons), taxi companies have suffered a very high turnover rate.¹⁶⁶ For example, 40% of the new taxi companies serving the Phoenix airport failed during the first fifteen months of deregulation.¹⁶⁷ Within eighteen months of an entry moratorium in San Diego, a third of taxi firms not affiliated with the two largest companies left the industry.¹⁶⁸

Nonetheless, a large number of potential entrants are ignorant of marketing conditions, and/or willing to accept subsistence earnings in order to be self-employed.¹⁶⁹ Entering the taxi business is one of the few opportunities for self-employment by individuals with minimum skills and little capital.¹⁷⁰ Inadequate profitability has also dissuaded investment in large taxi firms, so that most of the new entry has been at the owner-operator level, again, satiating an oversaturated cabstand market. Except in Phoenix, in the fully deregulated cities, no new taxi companies have emerged with more than twenty-five cabs.¹⁷¹

Deregulation produced relatively small structural changes in the radio dispatch segment of the industry, reflecting the relatively higher entry costs associated with the purchase of radio equipment, dispatch person-

165. *Id.* at 30.

166. *Id.* at 28-29.

167. *Id.* at 9; TEAL & BERGLUND, *supra* note 151, at 41.

168. TEAL & BERGLUND, *supra* note 151, at 41.

169. Teal & Berglund, *supra* note 4, at 29; GILBERT & SAMUELS, *supra* note 10, at 149.

170. The taxicab business, however, does have its risks. According to a report by the National Institute for Occupational Safety and Health, cab drivers have the highest homicide victim rate among several professions. As the below chart shows, the rate is almost four times that of police officers and almost twenty times the rate for firefighters.

Occupation	Number of Homicides	Rate per 100,000 workers
Taxicab driver-chaffeur	140	22.7
Sheriff-bailiff	36	10.7
Police and detective	86	6.1
Gas station, garage worker	37	5.9
Security guard	115	5.5
Stock handler, bagger	95	3.5
Supervisor, proprietor-sales	372	3.3
Sales counter clerk	183	0.1
Bartender	20	2.3
Logging	6	2.3
Hotel Clerk	6	2.0
Salesperson, vehicles	17	2.0
Salesperson, other	73	1.7
Butcher, meatcutter	12	1.5
Firefighter	8	1.3

Laura Meckler, *Job Risks High for Cabbies*, ROCKY MTN. NEWS, July 9, 1996, at 20A.

171. TEAL & BERGLUND, *supra* note 151, at 8.

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nel, marketing, and a fleet sufficiently large to provide ubiquitous city-wide service where there may be "economies of scope."¹⁷² Thus, in most cities in which entry has been deregulated, the large incumbent firms still dominate the industry, although their market share has declined as the new entrants have swarmed to dominate the cabstand markets.¹⁷³

The robust entry of new firms and entrepreneurs into the taxi industry, accurately predicted by deregulation proponents, has been among the most significant impediments to the achievement of consumer benefits predicted to result from deregulation:

Low entry costs, an inherent characteristic of a totally deregulated taxi industry, represent the factor which is probably of greatest significance in preventing a more successful outcome to taxi deregulation. Because capital requirements to enter the deregulated industry are minimal, virtually any self-motivated individual can become a taxi operator. Individual operators cannot effectively compete in the telephone order market, however, so they quickly oversubscribe the airport and cabstand markets, causing full-service companies to abandon these markets except for passenger drop-offs. This results in a reduction in economies of scope for the full-service operators. With demand for taxi service stagnant or even declining, operator productivity inevitably declines with many more operators in the market.¹⁷⁴

B. OPERATING EFFICIENCY AND PRODUCTIVITY.

Putting more taxis on the streets rarely produces more patrons. In fact, most deregulated cities have faced stable or declining demand as measured by the number of daily trips per cab or the trips per shift.¹⁷⁵ Passenger demand declined significantly in the deregulated cities, falling for example, 34% in Phoenix, 37% in San Diego, and 48% in Seattle.¹⁷⁶ This is not at all surprising, given the higher prices and deteriorating

172. Teal & Berglund, *supra* note 4, at 49.

173. *Id.* at 40, 47.

174. ROGER TEAL, AN OVERVIEW OF THE AMERICAN EXPERIENCE WITH TAXI DEREGULATION 14 (1989).

175. PARATRANSIT SERVICES, INC., *supra* note 159, at 29, 33; TEAL & BERGLUND, *supra* note 151, at 16, 27; TEAL, ET AL., *supra* note 151, at 13.

176. INT'L TAXICAB ASS'N, DOES TAXICAB DEREGULATION MAKE SENSE? 6 (1984). "By any measure, the productivity of the Phoenix taxi industry has declined significantly since deregulation. . . . [T]he number of passenger trips per active taxi per day has declined by about one-third for the entire industry, while the number of trips per shift has decreased by one-quarter (the difference reflects lower utilization of taxis by operators after deregulation." TEAL, ET AL., *supra* note 151, at 13-14. In San Diego, the number of vehicles increased by 30%, while each vehicle provided only 85% as much service per day. In Seattle, deregulation produced more than a 50% increase in the number of taxis, but each vehicle was providing only 76% as much service. Stalians, *supra* note 7, at 5.

levels of service deregulation produced.¹⁷⁷

After deregulation, taxi productivity, measured by the number of revenue trips per day or trips per shift, fell by at least one-third.¹⁷⁸ As Professor Teal observed, "The decline in taxi productivity after deregulation is a natural consequence of an increase in the number of vehicles in the industry, stable or declining taxi demand, and the lack of productivity-enhancing service innovations such as shared-ride taxi services."¹⁷⁹

Putting more taxis on the roads merely increases the number of empty taxis and the length of the queues at the taxi stands.¹⁸⁰ As noted above, new entrants tend not to have radio dispatch equipment and gravitate toward the already well served hotel and airport cabstands, competing for a constant or decreasing number of passengers.¹⁸¹ As one source observed, "When transportation demand is stable or declining and attractive substitutes to the deregulated modes exist, the impacts of deregulation may be largely confined to increased competition within existing industries with few or no corollary benefits to consumers and providers."¹⁸²

That source went on to point out that, "Opportunities for productivity improvements in urban common carriage transportation are highly limited by the basic economics of the industries inasmuch as costs for most factor inputs can hardly be reduced."¹⁸³ The one variable cost in which there is some play is driver wages, which, as we shall see, have plummeted (although not enough to offset the steep drop in driver productivity caused by unlimited entry).

C. HIGHWAY CONGESTION, ENERGY CONSUMPTION & ENVIRONMENTAL POLLUTION

Putting more, and emptier, cabs on the streets not only increases highway congestion and wear and tear on the asphalt, it burns more gasoline and produces more carbon monoxide, ozone, and other pollutants. For example, after Atlanta deregulated, 300-400 taxis lined up at airport queues; waits of three to four hours were not uncommon, and waits of up to six hours were reported.¹⁸⁴

Given the Damocles Sword contained in federal Clean Air Act

177. GORMAN GILBERT, EFFECT OF OPEN ENTRY AND VARIABLE FARES ON THE COST OF TAXICAB SERVICE TO RESIDENTIAL AREAS 2 (1984).

178. Teal & Berglund, *supra* note 4, at 46.

179. *Id.* at 52.

180. See FRANKENA & PAUTLER, *supra* note 9, at 8.

181. GILBERT, *supra* note 177, at 2.

182. TEAL, ET AL., *supra* note 151, at 27.

183. *Id.* at 13-14.

184. MULTIPLICATIONS, INC., *supra* note 161, at 32, 37.

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Amendments of 1990, threatening draconian cuts in federal money for states and communities which fail to meet the carbon monoxide, ozone, particulate and other pollutant standards, the problems of adding more, but emptier, vehicles to city streets should be manifest. Thirty-two of the thirty-five busiest airports in the United States are located in metropolitan areas which have been designated nonattainment for ozone and carbon monoxide.¹⁸⁵ The two means of transport responsible for the most vehicle miles traveled to airports, automobiles and taxis, are also the most significant sources of pollution.¹⁸⁶

D. PRICE

One would expect that excess capacity would drive prices down, as it allegedly has, for example, in the deregulated airline industry.¹⁸⁷ Paradoxically, precisely the opposite has occurred in the deregulated taxi industry. As Price Waterhouse observed, "prices rose following taxi deregulation in every documented case."¹⁸⁸

Professor Roger Teal of the University of California studied pricing at nine cities which deregulated (i.e., Fresno, Kansas City, Oakland, Phoenix, Sacramento, San Diego, Seattle, Tacoma, and Tucson). He concluded, "In every city in this study taxi rates are now higher in real terms than before deregulation, often by a substantial amount."¹⁸⁹ Before deregulation, in none of these cities did rates rise as rapidly as the Consumer Price Index [CPI]; after deregulation, price increases exceeded the CPI in each of these cities.¹⁹⁰ Professor Teal concludes, "taxi rates may have increased as much as 10 per cent more in the deregulated cities than they would have done under continued regulation."¹⁹¹

At San Diego, Seattle and Portland, prices increased 35% during the first 18-24 months of deregulation.¹⁹² One source summarized the results

185. Annalynn Lacombe, *Ground Access to Airports: Prospects for Intermodalism*, 48 *TRANSP. Q.* 381, 383 (1994).

186. *See id.* at 383-84.

187. *DEMPSEY & GOETZ*, *supra* note 3. Actually, estimates of consumer savings resulting from airline deregulation have been grossly overstated. *Id.* at 243-63, 281-95.

188. *PRICE WATERHOUSE*, *supra* note 153, at 8.

189. *Teal & Berglund*, *supra* note 4, at 37, 42. This confirms his earlier research on the experience of deregulation in seven U.S. cities. *TEAL & BERGLUND*, *supra* note 151, at 11. "The important policy lesson to be learned from the Arizona experience is that favorable impacts do not necessarily follow the removal of institutional barriers to competition in the transportation industries." *TEAL, ET AL.*, *supra* note 160, at 27.

190. *Teal & Berglund*, *supra* note 4, at 37, 42; *TEAL & BERGLUND*, *supra* note 151, at 14-15.

191. *Teal & Berglund*, *supra* note 4, at 37, 44.

192. *PAT GELB, EARLY RESPONSES TO TAXI REGULATORY CHANGES* 16 (1981); *S.B. COLMAN, RECENT DEVELOPMENTS IN THE REVISION OF TAXI REGULATIONS IN SEATTLE AND SAN DIEGO*, *TRANSP. RES. REC.* 20 (1980); *See Paratransit Services, Inc.*, *supra* note 159, at 34. Prices rose 60% in San Diego. *Staliens*, *supra* note 7, at 1, Address before the 50th Annual Convention

of higher taxi fares in Seattle: "[t]he high fares led to a large number of cabs, long cab lines, refusals to serve short trips, and quarrels among drivers concerning positions in the taxi queue, but did not lead to an above-normal profit because of free entry."¹⁹³

Cabstand rate increases were even more pronounced.¹⁹⁴ This is because there is, and can be, little comparative shopping at the cabstand because of the formal and informal pressure patrons feel to take the next taxi in the queue under the "first in, first out" rule.¹⁹⁵ Because of the overcapacity created by unlimited entry, queues lengthen, discouraging drivers from competing on the basis of price.¹⁹⁶ Therefore, there is little effective competition. In an economic environment of declining productivity created by excessive entry and stable or declining demand, taxi operators can survive only if they can increase the revenue derived from each trip, which places upward pressure on taxi fares.¹⁹⁷

Moreover, airport travelers and hotel patrons are frequently tourists or out-of-town businessmen with little information about local taxicab regulatory practices or rates, and whose travel expenses are often paid by a third party with pre-tax dollars.¹⁹⁸ Further, some of the economics literature reveals that much of passenger demand for taxi service is relatively inelastic with respect to fare changes.¹⁹⁹ Thus, most passengers who need a taxi pay the rate, even if inflated.

One source described the impact of price increases on low-income individuals:

The increase in taxicab fares in residential areas produces a particularly bitter impact on low-income persons. A major and increasing proportion of residential taxicab business originates in low-income or minority neighborhoods. . . . [t]his is not surprising since residents in these areas are often dependent on taxicab service for mobility. These trips are for essential purposes, such as trips to grocery stores and medical facilities. In contrast, the trips from airports and downtown hotel stands are made by persons who are clearly more affluent businesspersons, vacationers, and conventioners.

of the New Zealand Taxi Proprietors' Federation, Wellington, New Zealand, Aug. 30, 1988. Another study found that partial deregulation produced no price or service innovations of significance in Portland, while administrative costs increased. See U.S. DOT URBAN MASS TRANSP. ADMIN., TAXI REGULATORY REVISION IN PORTLAND, OREGON: A CASE STUDY (1982).

193. FRANKENA & PAUTLER, *supra* note 9, at 129.

194. TEAL & BERGLUND, *supra* note 151, at 16.

195. Gelb, *supra* note 192, at 17; TEAL & BERGLUND, *supra* note 151, at 5, 23-4 (1986); TEAL, ET AL., *supra* note 160, at 8.

196. PRICE WATERHOUSE, *supra* note 153, at 8; TEAL, ET AL, *supra* note 160, at 24.

197. INT'L TAXICAB ASS'N, *supra* note 176, at 5.

198. See U.S. DEP'T OF TRANSP., TAXI REGULATORY REVISION IN SAN DIEGO, CALIFORNIA 102 (1981).

199. FREDERIC FRAVEL & GORMAN GILBERT, FARE ELASTICITIES FOR EXCLUSIVE-RIDE TAXI SERVICES (U.S. DOT, 1978); Teal & Berglund, *supra* note 4, at 50.

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Increasing fares to residential areas means that the impact of more taxicabs is borne disproportionately by low-income persons. In other words, *those who can least afford to pay would be charged the most. . . .*

Those who follow the academic argument of "letting the market decide" taxicab fares are really "letting the poor pay more."²⁰⁰

Neither did deregulation result in lower fares in the telephone dispatch markets, and it appears to be correlated with somewhat higher prices.²⁰¹ This occurred because of the loss of cabstand business to new entrants, and the resultant loss of economies of scope associated therewith.

Even the local patron may refrain from price shopping. Forty percent of all resident users take a taxi trip one or fewer times a month.²⁰² Patrons employing taxi services so infrequently have little incentive to take the time to engage in comparative price shopping.²⁰³ Of course, higher prices may force some low-income riders either to reduce the number of their taxi trips, or decline spending their limited money purchasing other necessities, as much taxi demand appears to be price inelastic.²⁰⁴

Deregulated cities experienced growing complaints of price gouging and overcharging, particularly at the cabstands.²⁰⁵ A study of pricing in Washington, D.C., in June, 1985, which then had open entry and more taxi cabs per capita than any other city in the nation,²⁰⁶ revealed that taxi drivers overcharge their patrons 36% of the time, and the average overcharge was 22%.²⁰⁷ In Seattle, overcharging of up to 50% above the average fare was reported.²⁰⁸

Firms which have lowered prices generally have not stimulated lower price responses by competitors, nor have their market shares appreciably

200. GORMAN GILBERT, EFFECT OF OPEN ENTRY AND VARIABLE FARES ON THE COST OF TAXICAB SERVICE TO RESIDENTIAL AREAS 6-7 (1984) [emphasis in original].

201. Teal & Berglund, *supra* note 4, at 44; TEAL & BERGLUND, *supra* note 151, at 15.

202. *Id.* at 23.

203. Teal & Berglund, *supra* note 4, at 50.

204. *Id.*

205. See PARATRANSIT SERVICES, INC., *supra* note 159, at 10.

206. One study performed in 1970 reviewed taxi entry regulation by 30 cities with a population of 325,000 or more. It revealed that the number of licenses varied from 0.2 in Phoenix to 11.3 in Washington, D.C. (which had no entry restrictions), and that the number of licenses per square mile ranged from 0.4 in Phoenix to 139.3 in Washington, D.C.; Utterback, *A Summary of Recent Taxicab Studies* 12 (City of Milwaukee, Legislative Reference Bureau, 1975) in U.S. DOT URBAN MASS TRANSP. ADMIN., THE APPLICATION OF THE FEDERAL ANTITRUST LAWS TO MUNICIPAL TAXICAB REGULATION 31, n.31 (1983) .

207. Sheldon Shane, *Calling All Cabs*, TRAVEL-HOLIDAY MAGAZINE 46 (Feb. 1985); PARATRANSIT SERVICES, INC., THE QUALITY OF RESIDENTIAL TAXICAB SERVICE IN WASHINGTON, D.C. 19 (1985).

208. GELB, *supra* note 192, at 18.

increased.²⁰⁹

We have explored several reasons why excessive capacity in the taxicab industry has not resulted in lower fares, as we would intuitively expect. Professor Roger Teal has succinctly summarized three supply factors and four demand factors which militate against lower fares. The supply factors are:

“Monopoly” profits earned under regulation were significantly less than estimated;
Deregulation did not create a competitive industry structure in the telephone order market; and
There is no apparent cost basis with on which to predicate price reductions.²¹⁰

On the demand side, Professor Teal offered these explanations:

Demand for taxi service is characterized by imperfect information and strong name recognition;
The demand for taxi service may be inelastic;
Per capita demand for taxi service is either stable or suffering from long-term decline; and
Leasing partially insulates taxi firms from the passenger market.²¹¹

E. INCOME

In the deregulated cities, driver income decreased despite higher fares. The fare increases imposed by taxis under deregulation have not offset the sharp decline in productivity (the reduction of revenue trips per day) caused by excessive entry.²¹²

The shift from employee drivers to owner-operator or lease drivers results in a loss of minimum wage guarantees for taxi drivers.²¹³ Most taxi drivers in deregulated cities earned less (often despite spending more hours behind the wheel) than before deregulation.²¹⁴

For example, under deregulation in Phoenix, drivers worked an average of 10-14 hours per day, six days a week, earning only about \$2.00-\$4.00 per hour.²¹⁵ In San Diego, driver wages declined 30% from pre-

209. Teal & Berglund, *supra* note 4, at 44.

210. *Id.*

211. *Id.* at 37, 48.

212. See TEAL, ET AL., *supra* note 160, at 14; ROGER TEAL, TAXICAB REGULATORY CHANGE IN SAN DIEGO, TAXICAB MANAGEMENT 28, 32 (Fall 1986); Teal & Berglund, *supra* note 4, at 46.

213. Teal & Berglund, *supra* note 4, at 46.

214. PAT GELB, EFFECTS OF TAXI REGULATORY REVISION IN SAN DIEGO, CALIFORNIA (U.S. Dep't of Transp., 1983); PAT GELB, EFFECTS OF TAXI REGULATORY REVISION IN SEATTLE, WASHINGTON, (U.S. Dep't of Transp., 1983); TEAL & BERGLUND, *supra* note 151 (unpublished manuscript), at 17-18; Teal & Berglund, *supra* note 4, at 46.

215. TEAL, ET AL., *supra* note 160, at 14.

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deregulation levels, to only \$135 a week.²¹⁶ Such poor pay is for a job which has the highest homicide rate of any profession.²¹⁷

F. SERVICE

As we have seen, most of the new entry unleashed by deregulation has been by small companies in the airport and hotel cabstand market — a market traditionally well served—in effect, “cream skimming” the least costly market. The telephone dispatch market, upon which most local residents rely, is generally left with the same, or poorer (and more highly priced), service as before, since taxis in the larger firms are now dissuaded from entering the end of a longer queue at the cabstand market, and forced to focus on the higher-cost radio dispatch market. The radio dispatch firms have lost between 10% to 25% of their business because of the need to abandon the cabstand markets, which were the least expensive markets to serve (for it requires neither dispatching operations nor equipment dead heading).²¹⁸

As we have seen, excessive entry leads to declining productivity, and because fare increases failed to keep pace, declining profitability. A carrier facing profit erosion can reduce costs by “lowering the quality of taxi services (for example, employing a small or deteriorated vehicle, reducing insurance coverage, or driving recklessly).”²¹⁹ Not only has deregulation generated little service innovation,²²⁰ it is not unusual to see several service problems arise when the regulatory system collapses, including:

- Excessive fares;
- Circuitous routing; and
- Refused service.²²¹

Most cities which deregulated experienced a deterioration in service. The taxi refusal and “no show” rates increased, particularly in low income areas,²²² although there were many short haul refusals at cabstands as well (probably by drivers who had sat in the queue too long and needed a long trip and a decent fare to compensate them for their inactivity).²²³

216. TEAL, *supra* note 212, at 32; Teal & Berglund, *supra* note 4, at 42.

217. *Death On the Job*, THE ECONOMIST Dec. 3, 1994, at 39.

218. Teal & Berglund, *supra* note 4, at 54.

219. Gallick & Sisk, *supra* note 9, at 120.

220. “Exclusive ride taxi service remains the only service offered in the deregulated cities.” Teal & Berglund, *supra* note 4, at 46. See TEAL, ET AL., *supra* note 160, at 13; Rosenbloom, *supra* note 13.

221. ROBERT RUSSELL, RECENT TAXICAB DEVELOPMENTS IN LOS ANGELES, IN PROCEEDINGS OF THE CONFERENCE ON TAXIS AS PUBLIC TRANSIT 65 (Univ. of California, 1978) (describing the illegal activities of taxi “bandits” which emerged after a major taxi company fell into bankruptcy). See generally, Suzuki, *supra* note 20, at 129.

222. See PARATRANSIT SERVICES, INC., *supra* note 207, at 24.

223. See PRICE WATERHOUSE, *supra* note 153, at 15.

The “no show” rate at Seattle increased 35% after deregulation; the “no show” rate at San Diego increased from 5% in 1976 to 18% in 1979.²²⁴

The oversupply of cabs reduced the earning potential of drivers, causing a decline in the quality of the drivers, and leading them to engage in overcharging and discourteous behavior.²²⁵ Indianapolis, among the first cities to deregulate entry in the taxi industry, experienced the following problems:

After the first winter the independent operators found they had no money to maintain or repair their vehicles. Insurance cancellation notices received by the City . . . increased from “one or two” per month to “about one hundred fifty” per month. Complaints to the City about cab service “tripled”

Added to these difficulties was a reported rise in the amount of crime by taxi drivers and operators. . . [t]he reported rapes and robberies committed by taxi drivers also increased.²²⁶

Reviewing the Indianapolis experience, the U.S. Urban Mass Transportation Administration concluded, “adding new owners into a highly competitive supply-rich market is beneficial neither to the public nor to the taxi operators.”²²⁷

Customer complaints in Fresno, California (where deregulation lasted only eighteen months), tripled, and they ranged from price gouging to the poor upkeep of the vehicles.²²⁸ In San Diego, many drivers refused short trips, and drivers at the end of the queue sometimes sought to serve passengers at the head of the line — often generating physical altercations.²²⁹ In Phoenix and San Diego, the visitor and convention bureaus pushed for re-regulation.²³⁰ The Washington state legislator who led the successful fight for taxi re-regulation said, “taxicab riders have been getting ‘raped’ by poor service and expensive fares ever since Seattle area taxicabs were deregulated”²³¹ Another source summarized the Seattle community’s response to the problems created by taxicab deregulation:

224. TEAL & BERGLUND, *supra* note 151, at 10.

225. MULTIPLICATIONS, INC., *supra* note 161, at 40.

226. U.S. DOT URBAN MASS TRANSP. ADMIN., THE INDIANAPOLIS EXPERIENCE WITH OPEN ENTRY IN THE TAXI INDUSTRY 9-10 (1980). Drug and prostitution rings were also operated by the unregulated taxis. *Id.*

Taxi drivers also often are victims of crime. Statistically, taxi drivers and chauffeurs suffer the highest homicide rate of any profession, even higher than policemen. *Death On the Job*, *supra* note 217, at 39.

227. *Id.* at 15.

228. See PARATRANSIT SERVICES, INC., *supra* note 159, at 10.

229. Rosenbloom, *supra* note 13.

230. See Shane, *supra* note 207, at 46; PARATRANSIT SERVICES, INC., *supra* note 159, at 23.

231. Doug Underwood, *Taxi Regulation Is Back in Laps of Local Governments*, SEATTLE TIMES, Feb. 26, 1984, at 52.

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The troubles in the cab lines—large increases in fares, substantial variation in fares among taxis, much longer taxi lines, refusals by drivers to carry passengers short distances, and minor violence—convinced area officials, hotels, and the tourist industry that this market was not suited to full-scale decontrol.²³²

After deregulation, both Washington, D.C., and Atlanta, Georgia, experienced increasing problems with drivers who had a language problem and poor knowledge of city streets, were overcharging customers, and were dishonest by not taking the most direct route.²³³ Service quality deterioration under deregulation also prompted calls for entry regulation by Congressional and media leaders in Washington, D.C.²³⁴ The *Washington Post* recently had this to say about taxi service in the *de facto* deregulated District of Columbia market (one out of four D.C. cabs operates with an illegal permit, and bribes for the issuance of inspection stickers and operating permits were under criminal investigation):

[T]he District's cab fleet averaged 10 accidents a day last year — around 3,800 annually. That's more crashes than there are *cabs* in Los Angeles, Philadelphia, San Diego and San Antonio combined. . . .

[D]rivers routinely overcharge passengers, bribe their way through safety inspections, swap cars and drive without insurance. . . .

Though ours is the nation's 19th largest city, Washington harbors at least three times the number of cabs of any other city in America except New York and Chicago. (Only one, New York, has more cabs—11,500.) Since this massive oversupply means fewer fares per driver, many cabbies make ends meet by cutting corners—for instance, refusing trips to out-of-the-way places, overcharging or skimping on repairs.²³⁵

Atlanta suffered many of the same problems under deregulation:

The taxi industry . . . has historically been criticized by city visitors for the poor condition of its vehicle fleet, the sloppy appearance of drivers and their negative attitudes, apparent driver lack of knowledge of the city, and frequent instances of overcharging. Officials of local commerce and trade organizations consistently complained that the industry was an embarrassment to

232. Richard Zerbe, Jr., *Seattle Taxis: Deregulation Hits a Pothole*, REGULATION, Nov./Dec. 1983, at 43, 47. At the Seattle Amtrak station, "There were reports of physical intimidation, of drivers who lied about the availability of bus service, who were slovenly, vulgar, and rude — and so on." *Id.* at 46. "The Sea-Tac airport has had even worse problems in its cab lines Many [drivers] refused short-haul customers. . . . Drivers were less knowledgeable, cabs dirtier." *Id.* at 46.

233. PARATRANSIT SERVICES, INC., *supra* note 207, at 14, 20; MULTIPLICATIONS, INC., *supra* note 161, at 18-19.

234. U.S. DEP'T OF TRANSP., *supra* note 4, at 130.

235. Christopher Georges, *D.C.'s Checkered Cabs: Why Washington's Taxis Are America's Worst*, WASH. POST, Mar. 21, 1993, at C1, C2.

the city and lobbied strongly for reform.²³⁶

As a result, in 1981, Atlanta reimposed entry controls.²³⁷

Poor profitability made it impossible for many taxi companies to invest in new cabs, causing the average age of vehicles to grow.²³⁸ For example, Washington, D.C., with the most taxis per capita of any city in the nation,²³⁹ also suffers from the oldest fleet.²⁴⁰ Seattle's average fleet age increased 50% during the first three years of deregulation.²⁴¹ Charges of inadequate equipment maintenance, lack of cleanliness, and poor appearance also have been levied.

The taxi operator is the first introduction to the city that a convention, vacation or business traveler has, and the last impression he has prior to departure. Consequently, the convention and hotel industries often lead the charge for re-regulating the taxi industry.

G. ADMINISTRATIVE COSTS

Although one would intuitively expect government administrative costs to fall under regulation, in fact, the U.S. Department of Transportation case studies reveal that such costs either did not change or increased.²⁴² In several instances, consumer complaints led to enhanced governmental scrutiny of the industry, and correspondingly increased administrative costs. For example, under deregulation, Seattle estimated it spent more money that it ever had in enforcing the remaining vehicle regulations.²⁴³

VIII. SUMMARY OF THE EMPIRICAL RESULTS OF TAXI DEREGULATION

After concluding several exhaustive studies of the empirical results of taxicab deregulation, Professor Roger Teal concluded:

Taxicab deregulation cannot be demonstrated to have produced, in most cases, the benefits its proponents expected. Prices do not usually fall, improvements in service are difficult to detect, and new price-service combinations have not been developed. There is little evidence that either

236. MULTIPLICATIONS, INC., *supra* note 161, at 34.

237. Rosenbloom, *supra* note 13.

238. PRICE WATERHOUSE, *supra* note 153, at 15.

239. A 1979 telephone survey revealed that Washington, D.C., had five times the number of taxicabs per capita as the next highest city, Atlanta. Washington had 14.7 per 1,000 residents, while Atlanta had 2.8. U.S. DEP'T OF TRANSP., *supra* note 4, at 61-62.

240. PARATRANSIT SERVICES, INC., *supra* note 207, at 11.

241. Rosenbloom, *supra* note 13.

242. PRICE WATERHOUSE, *supra* note 153, at 16; PARATRANSIT SERVICES, INC., *supra* note 159, at 45.

243. Rosenbloom, *supra* note 13.

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consumers or producers are better off. The one important exception is new entrants to the industry, who now have an opportunity to serve a market to which they were previously denied access. Even for them, however, deregulation is a mixed blessing. Many have been unable to survive in the more competitive unregulated environment, and those who have survived are apparently obtaining low earnings.²⁴⁴

A more recent study by Price Waterhouse of twenty-one cities which deregulated reached similar conclusions:

[T]he benefits of deregulation were devaluated by unanticipated and unattractive side effects:

Although the supply of taxi services expanded dramatically, only marginal service improvements were experienced by consumers. Within a year of deregulation, the supply of taxi services increased an average of 23%. Because most new entrants were independent operators and small fleet owners with limited capability to serve the telephone-based market, most new service was concentrated at already well-served locations—such as airports and major cabstands. Customer wait times at these locations, already short, were reduced further. Response times in the telephone market were similar to pre-deregulation performance. Trip refusals and no-shows, however, increased significantly.

Prices rose in every instance. Paradoxically, the influx of new entrants did not invoke the price competition typically experienced in other newly-deregulated industries. Prices rose an average of 29% in the year following deregulation. There appear to be two sources of this unexpected event. First, fare increases prior to deregulation had consistently lagged cost increases. Veteran operators thus corrected prices at the first opportunity. Second, new entrants generally charged higher fares than veteran operators. The cabstand markets on which these operators focused their services are generally price insensitive and, because of the first-in first-out nature of the taxi queues, comparison shopping is discouraged. For these reasons, the new entrants had no incentive to introduce price competition.

Service quality declined. Trip refusals, a decline in vehicle age and condition, and aggressive passenger solicitation associated with an over-supply of taxis are characteristic of a worsening in service quality following deregulation.²⁴⁵

Given the failure of deregulation to produce consumer pricing and service benefits, coupled with its propensity to injure carrier productivity and profitability, most communities which have experimented with deregulation have rejected it, and re-regulated, in whole or part, their taxi industry. Of the twenty-one cities which deregulated prior to 1993, the experience with deregulation was so poor that only four of the smallest cities in the group (i.e., Berkeley, California, Spokane, Washington, Ta-

244. Teal & Berglund, *supra* note 4, at 54; See also TEAL & BERGLUND, *supra* note 151, at 30-31.

245. PRICE WATERHOUSE, *supra* note 153, at II-III [emphasis in original].

coma, Washington, and Springfield, Illinois) retained a fully unregulated system.²⁴⁶

Cities which continued to embrace deregulation tended to have one of the following characteristics: (1) a relatively smaller population; (2) less reliant on airport activity; or (3) had implemented other measures which created barriers to market entry.²⁴⁷ In contrast, “[c]ities which had a relatively large population, a high level of airport activity, and conditions conducive to low-cost market entry tended to have a negative experience with deregulation. As a result, these cities either fully or partially re-regulated taxi services”²⁴⁸ The wave of re-regulation was led by the largest cities with the most airport activity among the group that had deregulated.²⁴⁹

IX. THE NEED FOR GOVERNMENTAL PLANNING & OVERSIGHT

Taxicabs are an essential part of the urban transportation infrastructure, and some would argue, in the nature of a public utility.²⁵⁰ As we have seen, the unregulated taxi market suffers from the absence of a competitive market, imperfect information, significant transactions costs, externalities, cream skimming, the loss of economies of scale and scope, and destructive or excessive competition, collectively producing demonstrable deleterious economic and social consequences. While deregulation produces a significant increase in new entrants, it appears to cause declining operational efficiency and productivity, an increase in highway congestion, energy consumption and environmental pollution, a decline in driver income, a deterioration in service, and paradoxically, an increase in passenger rates, with little or no improvement in administrative costs. Any objective assessment of the empirical evidence would conclude that the costs of taxicab deregulation outweigh its benefits. Virtually every major

246. *Id.* at I-III, 19.

247. *Id.* at 6.

248. *Id.* at 8.

249. *Id.* at 17.

250. One source provided a comprehensive rationale for economic regulation of the taxicab industry:

Government regulation is deemed necessary because taxicabs supply a service which is considered publicly indispensable and because taxicab firms often operate as monopolies or oligopolies. Moreover, in theory, government regulation of monopolies can keep prices at a reasonable level. Early common law established that certain businesses could harm those who wanted or needed service by refusing to serve them or by charging exorbitant prices, thereby justifying public regulation of such businesses.

Taxicabs, as public utilities, are required to serve every customer in their service area at reasonable rates and without unjust discrimination. Public utilities are also prohibited from entering a new market, supplying a new service, or abandoning an existing market without the consent of a public authority. The “public interest” is the determining factor in most governmental decisions involving public utilities.

BARKER & BEARD, *supra* note 8, at 33.

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city which has tasted economic deregulation of the taxi industry has lived to regret it, and reversed course.

The fundamental question is not whether taxis should be regulated, but how they might best be regulated. That requires careful oversight by the regulatory body to assure the *appropriate ratio of taxis to passengers to ensure prompt, safe, and reasonably priced service for the public, while allowing efficient and well managed firms to earn a reasonable return on investment.*²⁵¹ Too few taxicabs results in excessive waiting times (and opportunity costs) for passengers. Too many taxicabs results in lower productivity and lower profitability for service providers, despite higher fares for consumers.

If there is a legitimate criticism to be levied at regulators, it is that they too often skirt this difficult task. As one commentator said of the New York medallion system:

The main deficiency of the New York system of price/entry regulation was the total lack of any planning. Neither the fares nor the number of medallions issued was determined on the basis of what was needed to achieve economic efficiency in city transport. . . . The shortcomings of the New York City system of price/entry regulation is a result of poor administration, and not of any inherent deficiencies of a system of regulation.²⁵²

Generally speaking, taxi demand is a function of two major variables — the overall economic activity in the market (including population, employment and income), and the relative price and quality of service of taxis vis-à-vis alternatives modes of transport (automobiles and public transportation). The appropriate level of taxis per thousand citizens should be determined in light of the unique transportation needs of each city, ascertained on the basis of the density of its population,²⁵³ street congestion, air pollution, and perhaps such factors as the price and availability of downtown parking,²⁵⁴ the number of automobiles per capita, the

251. See generally, DEMPSEY, *supra* note 2, at 220-27.

252. Shreiber, *supra* note 90, at 278-79.

253. The following chart provides data on population densities in selected cities:

POPULATION PER SQUARE MILE IN SELECTED CITIES

City	Population/Square Mile	Land Area (Sq. Miles)
Chicago	12,251	227.2
Denver	3,051	153.3
Los Angeles	7,426	469.3
Philadelphia	11,734	135.1
Phoenix	2,342	419.9
San Francisco	15,502	46.7
San Diego	3,428	324.0
Seattle	6,154	83.9

American Almanac (1993-94).

254. The following chart provides data on the number of parking spaces per employees for selected cities:

number of hotel rooms, the distance of the airport from downtown,²⁵⁵ the volume of passenger traffic derived therefrom, and the economic health of existing taxi firms.²⁵⁶

For example, in the mid-1970s, taxis carried a million passengers a day (one fifth as many passengers as the subways) in a huge urban city like New York, with its rush hour grid lock.²⁵⁷ Cities like New York, Boston, Philadelphia, Detroit or Chicago are densely concentrated urban centers where streets are congested and private automobile parking is expensive. Many residents do not own an automobile, nor need they, given the well developed public urban transit systems. Taxi service consumption would likely be at a much higher level in an Eastern city (built for the horse and carriage) than in a Western city (built for the automobile), like Denver, Salt Lake City, or Dallas, with their suburban sprawl, relatively uncongested streets, and relatively plentiful and inexpensive

RATIO OF PARKING SPACES/EMPLOYEES IN SELECTED CITIES

City	Parking Spaces	Employees	Ratio of Spaces/Employees
Charlotte	36,000	50,000	1/1.4
Dallas	77,034	117,000	1/1.5
Denver	33,200	102,000	1/3.1
Minneapolis	62,500	140,000	1/2.2
Phoenix	22,669	24,000	1/1.0
Portland	43,914	94,000	1/2.1
Salt Lake City	27,500	58,000	1/2.1
Seattle	48,557	156,000	1/3.2

Denver Downtown Partnership, Inc.

255. The following are the approximate driving distance of the airport from downtown in selected cities:

AIRPORT DISTANCE FROM DOWNTOWN IN SELECTED CITIES
(in miles)

Airport	City Served	Distance to Downtown
Dulles	Washington, D.C.	26.5
Denver International	Denver	24
Houston Intercontinental	Houston	22
DFW International	Dallas	17
K.C. International	Kansas City	17
John F. Kennedy	New York	15

256. In assessing the economic health of existing firms, the following data provide some indication of national industry average performance:

SELECTED NATIONAL TAXICAB PERFORMANCE DATA (1993)

Average Annual Miles Per Taxi	51,224
Average Paid Miles Per Trip	6.3
Average Annual Trips Per Taxi	8,359
Average Annual Passengers Per Taxi	13,883
Average Cost Per Mile	\$0.943

Industry Sources.

257. Shreiber, *supra* note 90, at 278.

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parking.²⁵⁸

New entry should be modest, measured and monitored. In deciding which among several applicants should be allowed to operate in the market, a prudent regulatory authority might choose the applicant which, for example, has a sound financial base and a seasoned and experienced managerial team, a minimum fleet size with centralized radio dispatch to serve the entire community adequately,²⁵⁹ trained and experienced drivers, adequate insurance, and a young, safe and environmentally sound fleet of cabs. On the last point, there is significant concern as to whether a number of cities will be able to comply with Federal Clean Air Standards. If not, they stand to lose hundreds of millions of dollars in Federal grants.

The regulatory authority might also phase-in additional taxicabs over a period of years, regularly monitoring their impact upon the public in terms of price, safety and service (including customer complaints, service response times, and such), and upon the health of the industry. If the regulatory authority found that the problems of destructive competition, described above, were emerging, it might well reduce the number of taxicabs to be licensed during the prescribed forthcoming period. Thus, the regulatory authority must be careful to expand entry on a phased-in basis only very gradually, and monitor the results closely.

In the final analysis, the suitability of taxicab service and pricing is a

258. The following chart provides data on the distribution of vehicles-to-population of a sample of 741 cities:

DISTRIBUTION OF THE CABS-TO-POPULATION RATIO, 1970	
<u>Cab licenses per thousand population</u>	<u>Proportion of Sample Jurisdictions %</u>
Under 0.2	10
0.2 to under 0.4	20
0.4 to under 0.6	23
0.6 to under 0.8	16
0.8 to under 1.0	10
1.0 to under 1.2	8
1.2 to under 2.0	9
2.0 and over	5
Median licenses per thousand = 0.57	

J.D. WELLS & F.F. SELOVER, CHARACTERISTICS OF THE URBAN TAXICAB TRANSIT INDUSTRY (1972).

259. The city officials of Indianapolis, which experimented with open entry in the early 1970s, concluded that "they should have required a minimum of ten vehicles per owner and radios in each cab." U.S. DOT URBAN MASS TRANSP. ADMIN., *supra* note 226, at 9-10. Another source concluded, "all taxicabs should be required to be affiliated with a fleet large enough to serve all parts of the city 24 hours a day (e.g., 25 vehicles) and that every taxicab be required to have a two-way radio and meter. Gene Stalians, *supra* note 7, at 11, Address before the 50th Annual Convention of the New Zealand Taxi Proprietors' Federation, Wellington, New Zealand, Aug. 30, 1988.

peculiarly local issue, best tailored by local governments based on their unique populations, spatial densities, road congestion, air pollution, and airport and hotel traffic. For that reason, whatever the national ideological infatuation with comprehensive infrastructure deregulation, Congress should instead embrace an alternative national political movement—one which champions devolution, or reversing the 20th Century megatrend of power flowing from the states to Washington—in favor of local control.²⁶⁰ In this area, the state and local governments should be left alone to foster the unique local public and private transportation system that suits them best.

260. Michael Barone, *Power to the States*, U.S. NEWS & WORLD REP., Jan. 23, 1995, at 40.