February 27, 2009 Attachment A

TECHNICAL MEMORANDUM

To: Mark Kellogg, Arlington County Division of Transportation
Fr: Adam Millard-Ball, Nelson\Nygaard Consulting Associates
Re: The Economic Rationale for Taxicab Regulation

SUMMARY AND CONCLUSIONS

This memorandum presents both the theoretical and empirical rationale for regulating entry to the taxi market, and for regulating taxi fares. The main findings are:

- **There is a very strong theoretical basis for regulating taxi fares** where street hails or taxi stands account for a significant share of the market, primarily due to the lack of price competition as consumers take the first cab available. In practice, most cities that deregulated fares have reintroduced fare regulation, because expected price competition did not appear and patrons found different fares confusing.

- **The theoretical basis for entry control is somewhat ambiguous.** Economists tend to argue in favor of free entry in order to improve availability and promote competition. However, there is a theoretical rationale for entry control to promote economies of scale; mitigate congestion; permit cross-subsidization of service to unprofitable lower-demand neighborhoods; and increase regulatory leverage.

- **In practice, deregulation of entry has had negative impacts and most cities have reversed course**, at least where street hails or taxi stands account for a significant share of the market**.** The increase in taxi supply following deregulation has usually been due to single-cab independent operators. This has not led to economists' predictions of improved service quality, as the independent operators focus on already well-served locations such as hotel stands and airports rather than the dispatch market. However, the independent operators have tended to exacerbate congestion, reduce driver earnings, increase fares (to compensate for longer waiting times between trips), and undermine the financial viability of dispatch service by other firms.

- **Entry control can be achieved through a number of mechanisms.** A hard cap on taxi permits or medallions, whether set by formula or through a Public Convenience & Necessity process, is the most obvious way to limit entry to the taxi industry. However, some cities have had success with other entry control mechanisms, such as franchising (Los Angeles), or minimum fleet sizes and other requirements that make it difficult for independent operators to cherry pick taxi stand and airport markets (Sacramento, Charlotte).

- **Fare and entry regulation address different market failures.** Fare regulation seeks to mitigate the consumer's problem of incomplete information and an inability to shop around. Entry controls seek to mitigate an oversupply of taxis, particularly from independent operators. Thus, the two forms of regulation are complementary.

INTRODUCTION

Taxicab service is notoriously difficult to regulate. It is challenging to define, let alone achieve in practice, the optimum tradeoff between conflicting goals. How can any local government ensure availability while avoiding a glut of cabs? How can it promote competition while avoiding firms cherry-picking the most profitable market segments? And how can a city or county keep fares affordable while ensuring a reasonable income for drivers and a return on investment by firms?

In practice, Arlington County's Public Convenience and Necessity (PC&N) process to regulate entry, together with its commitment to enforcement and the commitment of its local operators to high quality service, have all contributed to avoiding major problems with the taxi industry. This memorandum asks whether the same results could be achieved through a less restrictive regulatory regime. In particular, it analyzes the likely impacts following a relaxation of fare regulations or entry controls, and examines two case studies where deregulation has been attempted (and, in most cases, reversed).

Taxi regulations generally fall into one of four categories:

- Safety regulations
- Fare regulations
- Entry control
- Service quality regulations

This memorandum focuses on fare regulations and entry controls, and does not consider safety or service quality regulations. Safety regulations, such as basic vehicle and driver licensing requirements, have generally been retained even in cities that otherwise fully deregulated. Service quality regulations, meanwhile, often take the form of an additional layer on top of entry controls.

The findings here are based primarily on a literature review. The case studies draw on interviews with taxicab regulators in peer cities and first-hand experience from previous Nelson\Nygaard work.

THE DEREGULATION WAVE

The late 1970s and through the early 1980s saw a wave of deregulation in the taxicab market in many U.S. cities. Paring back or abolishing entry controls, fare regulations and other provisions were seen as a powerful way to encourage competition and free enterprise, improve service, and decrease user costs for all manner of services.

The taxicab industry was just one of many transportation sectors (most notably the airline industry) which was the focus of this trend in deregulation. In many cities taxis had been seen as an over-regulated cartel, dominated by large cab companies protecting their monopoly against individual entrepreneurs. Many of the regulations, such as controlling the total number of taxis through permits or medallions, were seen simply as setting up insurmountable barriers

to entry rather than rules protecting the riding public. By 1984, at least 22 cities had significantly deregulated their taxi markets[1].

Since then, both theoretical studies and empirical evidence have drawn attention to the drawbacks with this laissez-faire approach. While some authors continue to argue for complete deregulation,[2] a general consensus has emerged that at least some regulation is needed to address market failures within the taxi industry. Considerable debate, however, still continues on the nature of this regulation, and these issues are addressed in the remainder of this memo. One author summarizes the issue thus:

> *The real questions are how severe are the market failures in the taxi industry, and to what extent should government agencies act to compensate for these market failure conditions." Good regulation should therefore preserve the natural benefits of competition, and enhance rather than dampen it.*[3]

Fare regulation and entry controls are the two main tools with which taxicab regulators have sought to respond to specific market failures. The following sections focus on each in turn.

FARE REGULATION

Theoretical Rationale

Under perfect competition, taxicab fare regulation would be unnecessary. Fares would be set at the market clearing price where supply equals demand. Several market imperfections, however, characterize the taxicab industry, meaning that an efficient outcome is unlikely to be achieved in the absence of fare regulation.[4] Even many economists who advocate for open entry accept the rationale for fare regulation, for reasons such as:

- **Difficulties in comparing rates.** A diner, for example, can inspect several restaurants for selection and price before choosing, and if dissatisfied can leave at any time. A diner also knows through experience what a good meal is worth. A taxi patron, on the other hand, has an extremely limited ability to shop around for rates, particularly if he or she is hailing a cab on the street or at a hotel taxi stand. Passengers are unlikely to turn away the first cab, as they do not know when the next one will come along, or what price it will charge.[5] People take cabs because of their speed, and time spent 'comparison shopping' takes away from that benefit.
- **Lack of fare information.** Patrons, particularly visitors, often do not know what a "good rate" is, since the total price of a taxi can be made up of a confusing combination of the

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[1] Cervero, Robert. Deregulating Urban Transportation, *Cato Journal*, Vol.5, No. 1 (Spring/Summer 1985).

[2] For example, Boroski, John and Mildner, Gerard (1998), *An Economic Analysis of Taxicab Regulation in Portland, Oregon*; and Buckeye Institute (1996), *Taxicab Regulation in Ohio's Largest Cities*; and Kramer, John and Mellor, William (1996), *Opening Portland's Taxi Market*.

[3] Gilbert, Gorman (1992), *How to Make Regulation Work*. Paper presented at the International Conference on Taxi Regulation, Montreal.

[4] See, for example, Schaller, Bruce and Gilbert, Gorman (1996), "Fixing New York City Taxi Service," *Transportation Quarterly,* 50(2); Gallick, E. C. and D. E. Sisk (1987). "A Reconsideration of Taxi Regulation," *Journal of Law, Economics, and Organization* 3(1): 117-128; Shreiber, C. (1975). "The Economic Reasons for Price and Entry Regulation of Taxicabs," *Journal of Transport Economics and Policy* 9(3): 268-279.

[5] Boroski & Mildner, 1998, op. cit.

first mile fee ("flag drop") the additional mile fee, the waiting time fee, and may be subject to minimum fee and surcharges as well.

- **Lack of service quality information.** Taxis are a "credence good" – one that cannot be examined prior to consumption.[6] Passengers do not experience the service quality until the end of the ride, by which time they cannot change their decision. Unlike in most other markets, then, passengers cannot easily comparison shop based on different combinations of price and quality. Moreover, if the market consists primarily of independent operators, there is little chance that the customer will encounter the same taxi again.
- **Temporal and spatial variation.** Pencils are an example of a good where temporal and spatial variations in demand play little role. If a pencil remains unsold on Tuesday, it is still available for purchase on Wednesday. If pencil demand rises sharply in Virginia and falls in Maryland, suppliers can redirect their shipments accordingly. Taxicab service, however, is only valuable in a particular place at a particular point of time – a vacant cab must be used at the moment, or else the service goes to waste. Thus, the "right" (market clearing) price will vary considerably depending on the location and time of service. Airlines can manage these variations through complex yield management, but such price unpredictability would negate some of the most important benefits of taxi service (convenience and predictability), and would raise equity issues if per-mile fares were markedly different depending on a passenger's origin or destination.

These issues primarily concern the street hail and taxi stand market. They have less relevance to the telephone dispatch market, where comparison shopping is possible and the market tends to be served by larger operators who compete on service quality as well as price. In some larger cities, taxicabs are divided into two markets: street hail, where fares are prescribed; and telephone dispatch, where fares are unregulated or where the only requirement is to file a (freely chosen) rate schedule with the regulator. New York City is the best-known example, where fares are prescribed for medallion (yellow) cabs but not for car services which are legally limited to serving pre-arranged trips.

In markets such as Arlington County, the same operators tend to serve both markets and benefit from economies of scale as a result. Segmenting the market into street hail and telephone dispatch may not be a practical approach. However, converting prescribed fares to *maximum* fares would allow operators to compete on price for telephone dispatch, although in cities such as San Francisco where this approach is used, anecdotal evidence suggests that discounting below maximum rates rarely happens in practice.

Empirical Experience

Some cities that "deregulated" taxi service in the 1970s and 1980s in fact only removed entry controls and retained fare regulation. Those that did deregulate fares as well, however, have generally failed to realize any benefits in terms of lower fares.

One study calculates that taxi rates in deregulated cities were 8-10% higher than would have been the case if no deregulation had taken place. Fares fell in only one deregulated case study city, Sacramento. While large operators competed on price grounds in San Diego and Seattle, offering lower fares, this did not stimulate price reductions by competitors, nor did the low price

[6] Dempsey, Paul (1996), "Taxi Industry Regulation, Deregulation & Reregulation: The Paradox of Market Failure," *Transportation Law Journal* 24(1): 73-120.

companies experience major growth in market share.[7] Note, however, that it is difficult to separate out the impacts of fare deregulation from abolishing entry controls, as the deregulated cities that have been studied intensively did both simultaneously.

Markets that did deregulate fares often re-imposed fare controls shortly after deregulation, because expected price competition did not appear, and patrons found different fares confusing. Most markets maintained some form of fare regulation, either by setting actual fares or minimum and maximum ranges.

ENTRY REGULATION

Entry controls have been the subject of the most debate regarding the pros and cons of different models of taxicab regulation. There are numerous models of entry controls, which can be broadly divided into two categories:

- **Minimum Standards.** Some cities impose minimum requirements for fleet size, vehicle age, driver training, 24/7 service, or dispatch systems, which in turn make it more difficult to enter the taxi industry.[8] Control on taxi numbers may be an explicit aim, or a byproduct of standards aimed at improving service quality. In either case, they often constitute a "formidable barrier to entering the profession".[9] While "entry control" regulations can be conceptually separated from "service quality" regulations, in practice many measures combine elements of both.
- **Numerical limit.** Other cities impose a numerical limit on the number of vehicles, companies, and/or drivers. The exact number (of companies, vehicles, etc.) is typically determined either through a political process or quasi-judicial process such as Public Convenience & Necessity hearings.

The following subsections focus on numerical limits. However, in most cases the principles also apply to minimum standards approaches to entry control.

Theoretical Rationale

Especially when compared to fare regulation, entry controls have attracted more vociferous critiques on theoretical grounds, particularly from economists. According to one review from think-tank the Reason Foundation, of 28 studies on deregulation of taxi entry controls that were authored by economists, "nineteen concluded that deregulation is beneficial (on net), two conclude that the results are mixed, seven conclude deregulation is net harmful."[10]

Economists' criticisms of entry control focus on the barriers to the establishment of new, innovative service; the potential for the taxi industry to gain monopoly profits through restricting competition; and the negative impacts of undersupply on waiting times and other aspects of

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[7] Teal, Roger (1992), "An Overview of the American Experience with Taxi Deregulation." Paper presented at International Conference on Taxi Regulation, Montreal.
[8] For example, Buckeye Institute (1996).
[9] Trudel, Michel (1996), "The Future of Transportation by Taxi." Paper presented at International Association of Transportation Regulators, Strasbourg, France.
[10] Moore, Adrian & Balaker, Ted (2006), "Do Economists Reach a Conclusion on Taxi Deregulation?" *Econ Journal Watch* 3(1), p. 117.

service quality. Others oppose entry control for more pragmatic reasons, doubting the ability of regulators to set the "correct" number of taxis.[11]

An alternative theoretical view, however, does support the case for entry controls on several grounds:[12]

- **Economies of scope and scale.** Larger firms can take advantage of economies of scope and scale in the dispatch market. They can provide shorter response times with less deadheading (since they are more likely to have a vacant cab available nearby), and spread investments in dispatch over a larger number of taxis.[13]
- **Congestion.** Unrestricted entry may exacerbate traffic congestion and competition for limited curb space, particularly at hotels and other locations where there is the promise of profitable airport trips. At high demand locations, there is no customer benefit from an additional taxi in line, as waiting times are effectively zero in the first place, but there are negative impacts on congestion. Additional cabs also reduce the revenue earned by the remainder of the fleet – thus, cutting driver earnings for no customer benefit.
- **Regulatory leverage.** Entry controls provide regulators with greater ability to ensure compliance with existing regulation, as effective sanctions (such as denial of a permit or permission to expand) become more feasible. If entry controls are coupled with or take the form of minimum fleet sizes, the regulator's task also becomes much simpler. It is relatively straightforward to effectively regulate a few medium- to large-sized fleets; almost impossible to do the same for dozens of independent operators.
- **Permit cross-subsidization.** In the absence of barriers to entry and a competitive market, new operators will continue to enter the market until it is no longer profitable to do so; in economic terminology, new entrants will compete away the surplus. Under entry controls, however, taxi operators will earn a higher return than would be the case under a full competition. This creates the opportunity for the regulator to require that operators undertake some potentially unprofitable activities, such as serving lower-demand areas or time periods.

Entry controls can be seen as striking a balance between meeting demand and preserving competition, while not allowing "ruinous competition" of too many competitors in a limited market, which drives down compensation for drivers and companies, and results in a lack of investment in vehicles and infrastructure. Rather than providing the most possible service, a regulated entry market theoretically provides a guaranteed quality of service for the passenger while providing an adequate profit for owners and drivers.[14]

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[11] Beesley, M. E. and S. G. Glaister (1983). "Information for Regulating: The Case of Taxis," *Economic Journal* 93(371): 594-615.

[12] See, for example, Dempsey 1996, op. cit.; Trudel 1996, op. cit.; Shreiber 1975, op. cit. See also Cairns, R. D. and C. Liston-Heyes (1996), "Competition and Regulation in the Taxi Industry," *Journal of Public Economics* 59(1): 1-15. Cairns and Liston-Heyes provide a mathematical proof that a more efficient outcome can be achieved through regulating both entry and fares.

[13] Gentzoglanis, Anastassios (1992), *The Taxicab Industry: Theoretical and Empirical Evidence from (De)Regulation*. Paper presented at the International Conference on Taxicab Regulation, Montreal.

[14] Gilbert 1992, op. cit.

Empirical Experience

Argued on grounds of theory alone, the case for entry controls is somewhat ambiguous; there are strong arguments both for and against. More compelling, however, is the empirical evidence, which points firmly in favor of entry controls – at least where there is a substantial street hail or taxi stand market. Many U.S. cities that deregulated their taxi industry have been forced to reverse course and re-regulate in the face of destructive competition, deteriorating service quality, longer waiting times and higher fares. In general, the supply of taxis increased markedly following the abolition of entry controls. However, this was not accompanied by better service quality through competition, nor did deregulation increase the overall market for taxi service.

The explanation for this lies in the atomized structure of many taxi markets post-deregulation. The increase in taxi supply largely came from an increase in the number of independent operators, who often drive their own vehicles and rely on street hails and taxi stands rather than a dispatch system. Independent operators tended to "cream skim" and increase supply in locations where waiting times for passengers are already minimal; thus, they simply added to the number of cruising taxis or the number of taxis waiting at stands and "loitering" nearby.

In turn, operators were forced to raise fares, work dangerously long hours or reduce service quality as their number of trips per shift plummeted. In Sacramento, for example, waiting two to four hours for a passenger at hotel stands was not uncommon. Other side effects included increased refusals (as drivers did not want to take a short trip after a long wait for a fare) and even physical violence between drivers over the right to serve a particular customer.

Most established fleet owners were already supplying as many taxi vehicles as the market—which in their case was the market for leasing taxis to drivers—could bear, which often was less than their authorized number of vehicles. Hence they did not increase their fleet sizes after deregulation. Instead, fleet owners and drivers suffered due to longer wait times at airports and taxi stands, with negative impacts on neighborhood dispatch and other business segments. In some cases, these fleet drivers simply abandoned the street hail and cab stand market to focus exclusively on dispatch, weakening the financial viability of these firms and reducing the economies of density.[15] In Atlanta, most new entrants focused on the airport, and service to minority neighborhoods decreased even though total supply almost doubled.[16]

Thus, deregulation of entry controls contributed to problems such as:[17]

- Proliferation of small cab companies and independents, who are not usually covered by central dispatch systems
- Poor availability of cabs in neighborhoods
- Poor availability of cabs by phone
- Excessive supply of cabs at major downtown and airport pick-up locations

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[15] Teal, R. F. and M. Berglund (1987). "The Impact of Taxicab Deregulation in the USA," *Journal of Transport Economics and Policy* 21(1): 37-56.

[16] Schaller, 2007, citing Frankena, Mark. W. & Paul A Pautler. *An Economic Analysis of Taxicab Regulation*. Federal Trade Commission, Washington, D.C., 1984.

[17] Dempsey 1996, op. cit.; Teal & Berglund 1987, op. cit.; Avants, Sandi; Gilbert, Gorman; Lupro, Barbara (1996), *Peer review of Seattle Taxicab Regulations*; British Columbia Taxi Study Panel (1999), *A Study of the Taxi Industry in British Columbia.* Report to the Minister of Transportation and Highways.

- Inconsistent and misleading fares, resulting in customer confusion and a downturn in customer satisfaction due to perceptions of over-charging
- Increased fares, because the oversupply of taxis reduces the earning potential of individual drivers, who respond by increasing fares
- Less experienced drivers with a poorer grasp of local geography, and sometimes English communication skills
- Poor condition of vehicles

Two studies offer particularly useful overviews of the experience with entry deregulation. First, Teal and Berglund[18] examine nine deregulated cities (San Diego, Seattle, Oakland, Fresno, Phoenix, Tucson, Sacramento, Kansas City and Tulsa). In general, they find that fares did not fall in real terms, but rose by up to 10% more than they would have done under continued regulation. Nor do the authors find evidence that service quality improved, with slight reductions in response times accompanied by an increase in refusal rates. In a follow-up article, Roger Teal concluded: "Ignorance of true market conditions, and the belief that they will succeed where other have failed, continually bring new entrepreneurs into this market."[19]

The second study, by Price Waterhouse and commissioned by the International Taxi Cab Foundation,[20] analyzed taxicab deregulation in 21 US cities. It found that only four of 21 cities had maintained their open entry regulations a decade after deregulation, as the cities rushed to correct some of the unintentional or unwanted effects of deregulation.

The effects of deregulation "have ranged from benign to adverse, depending on local conditions and markets," the Price Waterhouse study concluded, with smaller cities generally benefiting most. While the supply of taxis increased dramatically, the study found that there were increases in fares averaging 29% in the first year, and only marginal improvements in availability. Service quality declined, with more trip refusals, lower vehicle quality, and aggressive solicitation because of over-supply. Consequently, most cities that had fully deregulated taxi service have since reverted to some form of control over market entry. "Market imperfections peculiar to the taxi industry, including unusual product supply (e.g. first in, first out queues at cabstands) and consumers' lack of knowledge of taxi price and quality, tend to negate the improvement in price and performance associated with deregulation in other industries," the study concludes.

It should be noted that there are two conditions where deregulation of entry controls does <u>not</u> appear to have had adverse effects:

- First, where telephone dispatch accounts for almost the entire market, independent operators will usually not survive, and so the problems of open entry can be avoided.
- Second, deregulation of only the total number of vehicles, without also deregulating other controls on companies, appears to result in less fluctuation in total market. This was the experience in Charlotte, where company minimum fleet size and other company requirements remained in place. In practice, this approach can be considered a form of entry control.

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[18] Teal & Berglund 1987, op. cit.

[19] Teal, Roger (1992), "An Overview of the American Experience with Taxicab Deregulation," paper presented at International Conference on Taxi Regulation, Montreal.

[20] Price Waterhouse (1993), *Analysis of Taxicab Deregulation and Reregulation.* Kensington, MD: International Taxicab Foundation.

FARE AND ENTRY REGULATION

The previous two sections have provided a theoretical and empirical rationale for both fare and entry regulation. This section asks whether both are necessary, or whether a city that retains fare regulation can safely deregulate entry, and vice versa.

In short, fare and entry regulation address different challenges and help to mitigate different market failures. Thus, the presence of one type of regulation does not negate the fundamental reason for the other.

Figure 1 summarizes the key challenges that we might expect from different combinations of fare and entry regulation. **Regulating entry control but not fares** might be expected to address the oversupply of taxis, but not the fundamental reasons for fare regulation discussed above, such as the lack of information among consumers and their inability to "shop around." Moreover, without fare regulation, entry control may lead to higher fares due to reduced competitive pressure.

In practice, it is difficult to identify many cities that use this option, as fare regulation is more widespread than entry control. One former example was Charlotte, NC which deregulated fares in 1982 while retaining "soft" entry controls (mainly consisting of service requirements such as central dispatch, which were difficult for independent operators to meet). Following complaints over the years, particularly from the business, convention and hospitality industries, Charlotte strengthened its taxi regulations in 2000, including the reintroduction of prescribed fares. Atlanta in the 1980s provides another example,[21] although there is little information on the impacts of fare deregulation in this example.

Regulating fares but not entry, as discussed above, does help to avoid some of the negative impacts of unregulated entry, namely higher fares and incentives for overcharging. In other words, fare regulation helps mitigate some of the impacts of an oversupply of cabs, but does not address the fundamental problems of oversupply and its impacts on driver earnings, industry investment and quality of service. Two current examples of this approach are Washington, DC and Indianapolis;[22] the problems of an oversupply of cabs in Washington, DC are well known in Arlington County, as they partly manifest themselves through illegal pickups in neighboring jurisdictions.

[21] Frankena, Mark and Pautler, Paul (1984), *An Economic Analysis of Taxicab Regulation.* Federal Trade Commission

[22] These two cities are classed by Schaller (2007) as open entry, but both regulate fares.

Figure 1 Challenges With Different Combinations of Fare/Entry Regulation

	Regulated Fares	**Unregulated Fares**
Entry Control	Entry controls or fares could be set too high or too low if the regulator has inadequate information	Monopoly profits: Limited competition will increase fares and profits at the expense of consumers Key market imperfections not addressed, such as inability of customers to comparison shop
No Entry Control	Excess entry, particularly independent operators at airports and hotel stands	Excess entry and higher fares None of the market imperfections are addressed

CASE STUDIES

Seattle

In Seattle, taxis were nearly completely deregulated in 1979, quickly resulting in many more cabs on the city's streets. All of the growth was among independents (one-cab operators). By 1995 there were 210 independents and 7 companies operating a total of 637 licensed cabs. Concern about an over abundance of cabs led to a moratorium on new taxicab permits.

Despite the fact that there were more cabs on the street, there was also extreme dissatisfaction with how the system had evolved, particularly within the business community and hospitality/convention industry. Complaints of poor service, rude and unkempt drivers, inconsistent fares, and of vehicles in poor condition were cited. A peer review completed by Sandi Avants, Gorman Gilbert and Barbara Lupro in 1995[23] recommended re-regulation of portions of the industry, citing two major problems:

- The difficulty in enforcing any standards among an "atomized industry structure" with 217 separate operators, most of who were independent with no business locations.
- Open entry discouraged investment in dispatching, new vehicles and other infrastructure improvements by cab companies, through forcing competition with independents that did not bear these costs.

Avants, Gilbert and Lupro recommended that the city re-regulate its industry to improve the quality of taxi service by:

- Adopting a uniform fare
- Adopting either standards for taxi cab operators to meet, or having them compete for the franchise to operate based on quality of service
- Regulating the age of vehicles
- Regulating non-taxi vehicles ("for-hire cars")
- Requiring driver training

The city instituted these changes and more in revisions to its municipal code in 1996, instituting new standards for vehicles, drivers and owners. In 2000 the city amended the regulations to make them even more rigorous.

<u>Creating associations to replace independents</u>

The new regulations sought to correct the problems of so many owner/operators by forcing independents into associations of no fewer than fifteen vehicles. Under the legislation, these associations gained additional responsibilities that also provided incentives for larger agglomerations of vehicles and drivers under one umbrella, such as:

- Maintaining an office location
- Operating a central dispatch service (added in 2000)
- Staffing phone service for all hours that vehicles operate

[23] Avants et. al. 1996, op. cit.

- Collecting and storing comprehensive records on affiliated drivers, vehicles (insurance, registration, repair records) and passenger complaints, etc.

Under the legislation, these associations become responsible to ensure that their drivers and vehicles were meeting all new regulations as well.

Creating a better work force

The legislation sought to solve the complaints of driver rudeness, appearance and lack of knowledge through several measures: The new legislation required drivers to:

- Pass a test of geographical knowledge and driving regulations
- Have a good command of English
- Wear a uniform specific to the association
- Pass criminal background checks
- Meet a lengthy list of dress and conduct standards at all times

Controlling vehicle quality

The new ordinance disallowed any vehicles more than seven years old (decreased from 8 in 2002). It also required annual inspections of vehicles, and as of 2001 required all vehicles to be connected with a central dispatch system.

Impact of re-regulation

Re-regulation had the predicted impact in solving problems of driver appearance and training, vehicle condition, and the general “image” of Seattle cabs. It also vastly decreased many of the problems associated with independents, including congestion at downtown stands and lack of availability for passengers telephoning for service. Forcing independents into associations, increasing fees and introducing barriers to entry through requiring associations to make significant capital expenditures had the effect of increasing the number of cabs a company needs to remain viable, and gradually decreasing the number of smaller companies.

The allowed number of taxis allowed in Seattle has not changed since 1990, and that number is enshrined in the municipal code, and can only be change through an involved political process. This lack of flexibility to respond to market demand remains an issue with the current Seattle taxi regulations, and over time may become a problem, although undersupply of taxis does not seem to be an issue currently.

One measure of success is that taxis are not perceived to be an issue in Seattle anymore. One of the only examples of recent media coverage of the taxi industry was the recent success of an Elvis impersonator to challenge the strict uniform laws in the City. In a slight, and amusing, swing away from strict regulation, the City Council passed, in December 2003, a measure that now allows taxi drivers to dress up as a "readily identifiable and generally well known public figure, personality or fictional character."

Taxi regulators are happy with the current system, and the business and hospitality interests who spurred the changes by all accounts remain please with the result. Mel MacDonald, Seattle director of revenue and consumer affairs said:

"Because of the self-policing that's starting to go on, it actually costs us a little less to regulate than it did five years ago. Taxis are one of those issues that you never feel like you quite have solved, but I think any city would feel happy to accomplish what we have"[24]

San Diego

In tenor with the times, San Diego deregulated its taxi industry between 1976 and 1978. Pete Wilson, future Republican governor of California, was Mayor of San Diego, and the City Council included a Libertarian, so the political mindset was aligned to the appeal of deregulation as a free market improvement on the existing system. The existing system was perceived as broken, or at least very badly damaged, particularly after a long strike by the drivers of Yellow Cab, the dominant company in the market. With drivers and policy-makers in agreement, the city sought to create a more entrepreneurial system.

The Council's response was to do away with the existing system that required a determination of need at the council level to add more taxis to the taxi fleet, thereby freeing the system to grow to meet demand. It also opened entry to individual operators for the first time. Finally, it deregulated price.

The impact of the legislation was to put more taxis on the street, with virtually all the growth in one-car owner/operators. However, the new system had several defects that made the regulation of the industry more difficult. Under the new system, each taxi vehicle was permitted and tracked separately, in contrast to the prior system of regulating companies and fleets. This had the perverse impact of increasing the work of the regulators in a de-regulated environment, and a long backlog of applications formed immediately.

Over time, other problems with the system of deregulation became obvious. Without large companies policing their taxi drivers, there was no way to ensure that quality standards would be upheld. Though staff had recommended driver training requirements and more enforcement as a part of relaxed entry requirements, those recommendations were turned down by policymakers. Predictably, as has been seen in other case studies, independent drivers began piling up at prime locations, particularly the airport and the zoo. Complaints from the business community and the visitor industry followed.

Re-regulation

In 1983, amid an increasing crescendo of complaints, and a new set of politicians in local office, San Diego largely re-regulated its system. It imposed price controls, initially setting a maximum fare from the airport, and also setting maximum fare rates throughout the city. In 1983 the city also imposed a one-year moratorium on new taxi permits and transfer of permits, a moratorium that became permanent in 1984 at a total of 870 permits. Finally, it also created a driver exam and driver certification program. San Diego therefore had an unregulated system for only the briefest of windows.

[24] Dramatic Turnaround for Seattle's Taxicabs, Boston Globe, March 19, 2000

In their resolution in May 1983, the City Council cited the reasons for the moratorium and other changes as: "Passenger confusion and complaints have resulted from variable pricing, overcharging, condition of cabs and attitudes of drivers."[25]

The moratorium was not lifted until 2001, when the city authorized an additional 135 permits. Since then, the permits have been distributed by a combination of methods intended to ensure wide distribution of new permits: 50% by RFP to companies; 25% by lottery to existing drivers; and 25% by auction. Moreover, the legislation specifically prevents issuance to any company holding more than 40% of existing permits. The same legislation specified that in the future "increases in the number of taxicab permits will be based on a formula computed annually".

The situation today in San Diego is not very different from the traditional regulated taxi environment in which a few large companies dominate the market, and there are substantial barriers to entry that help keep the ownership structure relatively constant. San Diego's 2001 effort to add taxis to the market was accompanied by testimony from current drivers that additional competition would decrease already low driver wages, and sympathetic media portrayals of the cabbies plight have appeared to back up this assertion.[26] While the system digests the first addition of cabs in two decades, there has been no further action on the assumed annual increase in taxis through a formula based system.

Sacramento

In the early 1980s, the taxi industry in the City of Sacramento was a highly regulated, closed system, with a limited number of permits issued each year. The majority of permits were owned by a handful of companies. In response to concerns of a monopolistic system and the interest expressed by drivers to form an independent cooperative, the City Council approved a major policy shift in taxi regulation to an open-entry system. Permits were required for drivers and vehicles, but focused on basic safety issues and there was no cap on numbers. Taxi firms were free to set their own rates, providing they were posted on the vehicle and filed with the City.

Problems with Deregulation

By the early 2000s, the problems of this deregulated system had come into sharp focus, and downtown businesses, the hotel and convention industry, and taxi drivers themselves were vociferous in their complaints. Issues highlighted included:

- **Wide discrepancies in fares and perceived overcharging**. There was a threefold difference between the lowest and highest rates charged by different operators. High minimum fares (up to $12) added to perceptions of overcharging for shorter trips.
- **Driver and vehicle quality.** Specific complaints included the cleanliness, mechanical quality and age of vehicles, and the appearance of drivers and their knowledge of city geography.
- **Dispatch and response times.** The largest operator, Yellow Cab, estimated average response times to telephone orders in suburban areas at 30 minutes – much higher than the average in comparable cities.

[25] City of San Diego, Resolution 4-258464, May 16, 1983.
[26] Lamb, San Diego CityBEAT, June, 2003 (www.sdcitybeat.com/article.php?id=1005)

- **Driver earnings.** Some independent operators reported clearing $60-$70 per day, after gas and expenses, for a 12-hour day. Some worked even longer hours, sometimes sleeping in their cabs. Rather than driving, much of this time was spent waiting in line for taxi stands at hotels.
- **On-street parking.** Taxi stands close to downtown hotels were invariably full, and adjacent metered spaces were used as unofficial "staging areas" by taxis waiting in line. This reduced the number of spaces available for retail customers and other short-term parkers.

One of the root causes was the structure of the industry, with an abundance of independent owner-operators and small firms. As shown in Figure 2, more than half the fleet was affiliated with firms of 12 vehicles or less – a size far too small to support an efficient dispatch service, leaving drivers with few alternative sources of business to downtown hotel stands. (The airport falls under the jurisdiction of Sacramento County, which uses a concessionary arrangement.)

Figure 2 Sacramento Taxi Industry Structure, 2003

Number of Taxis in Firm	Total Firms	Total Taxis
1	42	42
2	16	32
3	6	18
4	4	16
5	2	10
6	4	24
8	2	16
9	1	9
12	1	12
76	1	76
98	1	98
TOTAL	**80**	**353**

Source: 2003 Sacramento Vehicle Registration logs

Re-regulation

A temporary moratorium on taxicab vehicle permits was adopted by City Council in July 2003 pending a comprehensive study. While the moratorium stopped the overall number of cabs increasing, it did not appear to reduce them, since a secondary market arose in vehicle permits, with owners selling a vehicle with the permit attached. This permit could then be re-registered by the purchaser.

In 2006, a comprehensive package of reforms was adopted by City Council. Rather than capping taxi numbers through a formula or Public Convenience & Necessity process, Sacramento opted to use minimum fleet sizes to make it more difficult for independent operators to enter the market, and to ensure that all fleets had dispatch capability. Critically, firms or associations were held responsible for violations committed by their drivers, easing the City's regulatory burden and making firms and associations take a more active management role. Some of the specific regulatory changes included:

- **Firm/association permits.** Sacramento introduced a new class of firm or association permits, in addition to driver and vehicle permits, allowing regulation at the fleet level. Requirements included a minimum fleet size of 25 vehicles, 24-hour dispatch capability, and accessible taxicabs.
- **Fare regulation.** Sacramento instituted maximums for fare rates (flag drop, per-mile and per-hour), and eliminated the high minimum fares previously charged by most operators.
- **Vehicle standards.** Vehicle standards were made more stringent, based on the San Diego model, and a third party inspection procedure was introduced.
- **Enforcement.** Responsibility was passed to the City's Code Enforcement team, and a system of administrative hearings instituted to avoid requirements to pursue any code violations in court. In addition, the City made a concerted enforcement effort in association with the regulatory changes.

"Overall it's been a huge success," said one City staffer. Despite their initial complaints, independent operators grouped into associations by the deadline. Staff report that associations are "complying with everything that we asked for…the association model is working well because the managers are trying to clean up the associations." However, there may still be some oversupply, as cab numbers have increased by about 25% since the moratorium was lifted.