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Publication of this paper sponsored by Committee on Traveler Behavior and Values.

Early Responses to Taxi Regulatory Changes in Three Cities

PAT M. GELB

Taxi regulatory changes and preliminary responses to them in San Diego, California; Portland, Oregon; and Seattle, Washington, are discussed. The full effects of the regulatory and industry changes are being evaluated. Each city relaxed its entry restrictions in some way; all provided for increased latitude in rate setting, but the specific provisions have varied. The impetus for regulatory revision was generally similar—to transfer the responsibility for regulating entry and establishing rates from the city government to the marketplace. The regulators hope to produce a greater range of improved taxi services by increasing competition and providing for flexible rate structures. Implementation of the new regulations and the earliest responses in terms of local industry size and rate structures are the main topics here. Preliminary analysis suggests that these first responses relate to conditions in the local setting. Problem areas identified during the implementation phase are highlighted, and a number of transferable implications that suggest themselves to other regulatory entities are presented. Findings of the analyses of the effects of the regulatory changes on the supply of and demand for taxi services are anticipated soon.

This paper reports on taxi regulatory changes in San Diego, California; Portland, Oregon; and Seattle, Washington. The implementation and effects of these changes are being evaluated by De Leuw, Cather and Company under contract to the Transportation Systems Center (TSC) of the U.S. Department of Transportation as case studies under the Urban Mass Transportation Administration (UMTA) Service and Methods Demonstration program. Each city adopted its new taxi regulations during 1979, so sufficient time has elapsed to permit identification of the early responses in terms of industry and rate structures while the analysis of operating and ridership data proceeds.

The impetus for regulatory change was similar in each city. Local regulators had experienced difficulties in administering their taxi regulations. In one case, alleged misconduct in the approval of a rate increase precipitated a citywide scandal that ultimately involved the indictment of every city council member. The regulators also began to doubt that the existing code provisions offered any guarantees of a balance between supply of and demand for taxi services or between operating costs and rates of fare. Population ratios were insufficiently sensitive to demand, whereas the data required to demonstrate the need for rate increases were difficult to interpret, costly to assemble, and required the regulators to rely on documentation supplied by the regulated service providers. Concepts like percentage rate of return on invested capital and ratios of overall operating costs to revenues appeared simply to guarantee that taxi rates would go up with costs.

The regulators also doubted that the existing laws served to preserve adequate levels of service. Financial difficulties had plagued the local industries during the 1970s, but one city rate analyst had demonstrated that taxi ridership had declined with each recent rate increase and asserted that rising fares produced a net loss in revenues. Some of the existing regulations inhibited taxicabs from serving a wider transportation market by preventing shared riding, fixed-route services, or differential pricing. Limited entry was charged with contributing to monopoly values in taxi licenses and suppressing competition, which impeded the very kinds of pricing and service innovations that these regulators saw as essential to the salvation of a declining industry.

The following sections describe the regulatory revisions and industry characteristics before and after the changes in each city. The responses to date across sites as well as of some of the problems that have arisen during and since the implementation phase are both discussed. The final section summarizes some transferable implications that have been found for other regulatory entities.

Evalution is in progress of the full effects of the regulatory changes on taxi operators in terms of trips per shift or fare or lease revenues or on taxi riders in terms of taxi availability or response times. At this writing, the collection of operation and ridership data was nearing completion in San Diego and had just begun in Seattle. (The Portland case study is a lower-level monitoring effort.)

SAN DIEGO

Regulatory Changes

The taxicab regulatory revisions adopted in San Diego have two major elements: (a) effective January 1, 1979, the previous ceiling on taxi permits was removed and entry was opened at a specified rate of new permits per month to independent owner-operators as well as to companies; (b) beginning August 1, 1979, competitive pricing, by which operators could charge individual rates up to an established maximum, replaced the citywide standard rate of fare. The council authorized issuance of 6 new permits per month between January and July 1979 and 15 permits per month from July 1979 to early 1981. It set the maximum rate of fare for exclusive-ride service at $1.50 drop and $1.50/mile. No maximum was imposed for fixed-route service, which was to be charged on a per-capita basis. Operators are required to file all rates with the San Diego paratransit office.

As of October 1980, the San Diego council removed the maximum rate and voted to permit customers and drivers to bargain for rates below the operators' filed rates for all types of services. Thus an operator's filed rate effectively becomes an individual maximum rate.

Additional code changes removed the previous certification requirement of public convenience and necessity and included specific code categories for all paratransit modes; changed the applicable regulatory fees; codified an appeals procedure for denial, suspension, and revocation of permits; and reassigned various regulatory responsibilities. The major features of the regulatory changes are summarized in Table 1.

Industry Characteristics

Prior to regulatory revision, the San Diego taxi industry was dominated by a single large operator, Yellow Cab, which held 280 (68 percent) of the total 411 licenses in 1978. Some 62 independents had obtained licenses in the wake of the 1976 Yellow Cab bankruptcy; 59 of these were still operating in 1978. The remaining 72 licenses were held by nine relatively small fleet operators with 5-15 taxis each; two of these were county-licensed fleets that held three limited city certificates.

Available evidence indicates that the number of outstanding licenses had exceeded the previous population-based ceiling of one license per 3000 residents at least as early as 1969. There was a waiting list of 230 applicants for new taxicab licenses, which included some 30 applications from existing operators. Most were independents; many had originally signed the list as part of an organized strike action against Yellow Cab during 1976 and continued to advocate open entry. The multicertificated operators opposed it; then they argued that the average number of trips per shift had declined since before 1976 and that demand was not sufficient to sustain additional suppliers.

Applicants have continued to file for new San Diego permits at a steady pace since open entry was established. During 1979, 75 taxicabs were put into service, which increased the license total by 18 percent. There were 629 San Diego taxicabs by the end of 1980, which raised the 1979 license total by 30 percent and produced an increase of 53 percent over the 1978 level. There were 180 firms at the end of 1980 compared with 69 firms in 1978. The number of permits held by fleet operations had more than doubled, whereas the number of independently held permits (in companies with one or two taxis) had more than tripled. Table 2 shows the distribution of permits by operator type before and after open entry.

License transfers (sales) have continued under open entry because of the long wait for new permits obtained through the applicants' list. Nine transfers were recorded during 1979 and 27 during 1980; six companies also went out of business during 1980 for which there is no record of a transfer. All the transfers have been from independent owner-operators; 15 were members of the original group of independents licensed in 1977. A few so-called transfers were consummated as soon as the new permit was obtained by applicants who apparently were not com-

Table 1. Major taxi regulatory changes, San Diego.

Category	Past	Revised (1979)
Entry requirement	Public hearing (city council); certification of public convenience and necessity; council resolution; limit on total permits according to population ratio established by council policy	Permit process (city manager or paratransit office); rate of permit issuance determined by council policy, currently set at 15 new permits/month
Right of appeal on denial, suspension, or revocation of permit	Not specified	Written appeal to city manager within 10 days; procedure on appeal requires hearing
Taxicab fare rate	Standard rate; public hearing on operator petition; council resolution	Rates by type of service; maximum rate (council resolution) for taxi services, up to which operators may charge individual rates, removed October 1980; public hearing (operator petition); necessity to file rates (paratransit office); bargaining below filed rates
Shared-ride rate	Meter to be reactivated after first passenger's destination	To be charged on per-zone basis
Equipment and specifications	Taxi meters required; identifying color scheme required; driver and vehicle identification number to be displayed; two-way radio communication required by council policy	Same, except two-way radio communication/dispatching capability required by code of all taxicabs operating under permits or certificates granted after October 31, 1976, and exterior rate posting required
Public liability	Insurance by authorized carrier required; minimum amounts to be set by council	Self-insurance permitted with council approval; minimum amounts to be set by city manager

Table 2. Distribution of taxi permits by operator type before and after open entry, San Diego.

	Certificates, Dec. 1978		Permits			
			Dec. 1979		Dec. 1980	
Item	No.	Percent	No.	Percent	No.	Percent
Operator type						
Large fleet (Yellow Cab Company only)	280	68	280	58	281	45
Midsize fleet (companies of 3-28 taxis each)	72	18	93	19	161	25
Two-taxi firms	0		10	2	50	8
One-taxi firms	59	14	104	21	137	22
Total	411		487		629	
Net change since 1978				+18		+53

mitted to beginning a taxi business and who may have applied for the permit with the intent of selling it.

With the exception of one operator who held limited permits and who died during 1979, no preexisting San Diego fleet operation has failed or decreased its permits since open entry. Indeed, all the original fleets have added permits, either by direct application to the city or by acquisition of independent permits. Nine new fleets have emerged that have 3-18 permits each, which accounts for 60 new permits in all. One county fleet has obtained three city permits. Five of the six companies that went out of business during 1980 were originally independents. Of the original group, 39 (66 percent) were still operating at the year's end, however; 12 of these had burgeoned into fleet-type or two-taxicab firms.

Changes in Fare Structure

Before variable pricing, San Diego taxi rates were established through procedures common to many municipalities throughout the country. Operators petitioned the council for changes, and the council evaluated their requests on the basis of operator information supplemented by its own notions of fairness. The San Diego council has enacted changes on an overall average of once every three years between 1956 and 1977. The average 3.5-mile trip fare had risen 146 percent from $1.40 in 1947 to $3.45 in 1978.

The city's prerevision standard rate was $0.80 drop, including the first 1/7 mile, and $0.70/mile. This was supplemented by a $0.30 gasoline surcharge in effect prior to variable pricing. As of August 1979, operators could file individual rates up to the maximum of $1.50 drop and $1.50/mile and refile as often as they wished. (Rates must be posted on the exterior of the taxi.)

The multicertificated firms had sought a rate increase prior to the new legislation. Although early in the public-discussion phase the independents claimed that they could make a profit at the pre-1977 rate of fare, more independents than fleets filed higher rates under the new maximum. To date, independents have filed more rate changes than fleet operators have, and both the highest and the lowest rates have been those of the independents. The most common San Diego rates are $1.20 drop and $1.00/mile (filed by the major fleet and others) and $1.00 drop and $1.00/mile (filed by the largest association of owner-operators and others). These rates represent an average 35 percent increase over the prerevision rate for a 3.5-mile trip.

The city council further modified its rate regulations as of October 1980 by lifting the maximum rate of fare and providing for operators' filed rates to act as an individual maximum under which bargaining would be permitted. This provision legalized several practices that had existed informally. It was common practice for passengers to bargain with drivers for fares lower than the posted rate; some rates were allegedly filed high with this in mind. Also, an association of independent owner-operators has offered discount scrip to its customers as a promotional gimmick. This sort of innovation, although it was precisely what the regulators sought to encourage, was illegal prior to this latest code revision.

A new airport taxi-rate policy has been established that is expected to restrain any sudden rise in city taxi rates. Owing to the queue problems attendant on variable pricing at the airport, the port district voted to limit taxi rates to a range plus or minus 20 percent of the weighted average of all city taxi rates. Operators who file city rates outside this range would therefore have to possess a dual-metering capability to continue their airport operations. In protest against this policy, a few operators filed (and some reportedly attempted to charge) exorbitant rates in an attempt to influence the weighted average. (It should be noted that the operator costs involved in changing rates--for recalibrating the meter and changing the exterior decal--are not negligible. Operator estimates of these costs vary from $50 to $75 per taxi.) Airport taxi problems will be discussed in more detail later.

SEATTLE

Regulatory Changes

Effective June 1, 1979, the city of Seattle removed its previous numerical limitation on taxi licenses and opened entry continuously to qualified applicants. There is no waiting list for new licenses. Vehicle safety and equipment standards were raised, and the groundwork was laid for an ongoing process of stiffening taxi-driver qualifications. The standard rate of fare was replaced by open rate setting by which taxi operators may file individual rates and change them as many as four times a year. Rates must be filed with the Department of Licenses and Consumer Affairs (DLCA); there is no maximum rate. Minimum operating requirements were eliminated as was the requirement that operators maintain trip sheets.

The 1979 legislation realized taxi-licensing reforms that had been pending since 1974. Milestone interim legislation had been adopted in 1977, which permitted contract rates and established taxi license reciprocity with King County, a measure that eased entry to the lucrative airport market for city-licensed taxis. The major features of the past and the revised regulations are summarized in Table 3.

Industry Characteristics

Prior to regulatory revision, Seattle had 240 regularly licensed taxicabs for the 1978-1979 license year. In addition there were 68 licenses involved in litigation following their revocation by the city for failure to meet the minimum operating requirement and the subsequent appeal of this action by the operators. These taxicabs were allowed to operate without a license pending the outcome of the appeal. There were also 92 King County reciprocal licenses, which made a total of 400 taxicabs, including those with the disputed licenses. Finally, there were 29 standby licenses issued without fee, for use in the case of a disabled vehicle or temporary loss of a regular license. These were not counted as regular licenses.

The majority (73 percent) of the 400 licenses were held by three large service companies of individual member-owners. There was one large fleet-type operator who had 27 licenses (7 percent), whereas the rest were held by many small firms and independents not affiliated with any association. Two of the service companies had a structure similar to that of a cooperative, in which members held stock in the corporation and shared the costs of dispatching and other joint services. The third service company's cabs were held primarily by one owner, who rented service to smaller firms.

The Seattle license ceiling was frozen at the existing number of permits in February 1977 as part of the interim legislation. Prior to 1977, licenses were limited by a ratio of one per 2500 population. Available evidence indicates that this ceiling had been exceeded due to the "grandfathering in" of taxicabs that were operating under licenses granted prior to September 1966. On the other hand, some 50 licenses that had not been renewed could have been issued for the 1978-1979 license year. The large numbers of revoked and renewed licenses indicate that the actual supply of Seattle taxicabs was well below the permit ceiling.

Comparing Seattle taxicab licenses before and after open entry is complicated by the fact that new licensing rules and categories apply to the postrevision estimates. The categories of county-reciprocal and standby licenses no longer exist, whereas the elimination of the minimum operating requirement removes the distinction that affected the disputed licenses. At the close of the first license year following open entry (September 1980), there were 522 outstanding licenses. The service companies' share of total licenses had dropped to 62 percent, and the number of independent firms that had one or two taxis each and were not affiliated with any association had risen to 81. Fifteen firms had 3-10 permits each, and the one large fleet operator (who concentrated on the airport) held 35.

By February 1981, halfway through the 1980-1981 license year, there were 497 licenses. The service companies' share of the total was relatively unchanged at 61 percent, whereas the large fleet operator had failed to renew more than a third of its city licenses. (Reports were that it was consolidating its operations in the county.) The smaller fleets retained 83 licenses (17 percent), whereas unaffiliated owner-operators who had one or two taxis accounted for 87 (another 17 percent). These data are summarized in Table 4.

The open-entry legislation prohibits transfers of licenses in Seattle, so there is no incentive for license holders or companies to retain the license after termination of a business. Such licenses are not routinely turned back to the city, however; many cancellations are only discovered through nonrenewals during the next license year. Thus, recorded cancellations tend somewhat to underrepresent taxi-business failures in Seattle. There were 16 cancellations during the 1979-1980 license year; these included representatives of all types of Seattle operations. The 1980-1981 files include 11 cancellations to February 1981; nine were from two of the major service companies.

Changes in Fare Structure

Prior to regulatory revision, Seattle taxi rates were established in a manner similar to those in San Diego and other municipalities. Between 1932 and 1974, the council had approved a fare increase every five to seven years; rates were subsequently increased in 1974 and 1976. The 1976 increase was enacted as a temporary measure and extended every six months through the adoption of open rate setting. This increase provided for a \$0.90 drop charge including the first 1/7 mile and \$0.70/mile. The cost for the average 3.5-mile taxi trip rose from \$2.35 in 1970 to \$3.25 in 1979 (up 38 percent). (Note that the Seattle consumer price index rose 90 percent over the same period.)

Since variable pricing went into effect, the most common Seattle rates have been \$1.00 drop and \$1.00/mile (two of the major companies charge this rate) and \$1.00 drop and \$1.20/mile, charged by the largest service company. Some 22 percent of the small fleets and independent operators are currently charging significantly more than the most frequently charged rate, however; the daytime exclusive-ride rates now vary from \$1.20 drop and \$0.90/mile to \$2.00 drop and \$1.50/mile. All the Seattle service companies and many of the independents have filed discounts for elderly passengers, and some offer lift-equipped vehicles and nighttime service at a premium. Whether all these rates are actually used is not verifiable with current data sources.

Table 3. Major taxi regulatory changes, Seattle.

Category	Past	Revised (1979)
Entry requirement	Licensing required; numerical limit on total licenses (frozen at 1977 level)	Licensing required; no limit on total licenses; "Seattle taxicab plates" as defined to be issued with each license; license fee, \$60 (replacement plates, \$15)
	Holders of valid King County licenses may obtain city license for \$25 and vice versa; fee for first jurisdiction's license, \$100; total for both licenses, \$125 (adopted in 1977)	Joint licensing suspended prior to adoption of open entry by county and not yet reinstated
	Minimum operating requirement of 10 miles/day, 230 days/year	Minimum operating requirement removed
Public liability	Insurance to specified limits from an insurance company required	Insurance limits increased to those required by state law; city not required to be named as additional insured; self-insurance permitted
Rate regulation	Standard rate of fare as established by city council; contract rates may differ from standard rate	Open rate setting; rates to be filed with DLCA director and must be meter-based; changes permitted up to four times per year; contract rates may differ from filed rates; zone-based fares for shared riding provided January 1981
Other requirements	Trip sheets to be kept for each shift operated and maintained on file for five years	Trip-sheet requirement removed; exterior rate posting required February 1981

Table 4. Distribution of taxi licenses by operator type before and after open entry, Seattle.

Item	Licenses by License Year					
	1978-1979		1979-1980		1980-1981[a]	
	No.	Percent	No.	Percent	No.	Percent
Operator type						
Service companies (more than 30 cabs each)	292	73	323	62	305	61
Large fleet (one firm)	27	7	35	7	22	4
Small fleets (3-10 taxis each)			83	16	83	17
Two-taxi firms	81	20	18	3	16	3
One-taxi firms			63	12	71	14
Total	400		522		497	
Net change since 1978-1979				+31		+24

[a]To February.

Sea-Tac Airport recently adopted a ceiling for airport taxi rates 10 percent above the weighted average of all King County taxi rates. Although the ceiling is administered more liberally than it is in San Diego (operators are permitted to round awkward per-mile amounts to the next $0.10), the rule has produced similar responses. That is, a few operators have filed high bogus rates with the county in an attempt to influence the average. The airport switched to the median rather than the average rate for computing the ceiling and now threatens to return to the old, exclusive-franchise approach if the new rules prove infeasible. (Airport issues are taken up again later in this paper.)

PORTLAND

Regulatory Changes

Portland's regulatory changes were both less dramatic than those adopted in Seattle and San Diego and less long-lived. Portland adopted three successive waves of revisions during 1979 and 1980. Effective March 21, 1979, the previous population-based ceiling on taxi permits was removed and entry opened to new operators on the basis of specified service standards and a finding that the public interest was served by the addition of a new supplier. Unaffiliated independents were effectively excluded, however, since the new law required that applicants operate sufficient taxis to provide citywide service, and this was interpreted in practice as no fewer than 10 taxis. Authority for determination of operator qualifications and other taxi regulatory functions was vested in a new official, the taxi supervisor, whose responsibilities consolidated functions formerly divided among the council, the chief of police's office, the business license division, and the traffic bureau.

The March 1979, regulations codified flat rates for shared-ride trips between the airport and downtown and wholly within downtown in addition to the council-established maximum for exclusive-ride service. The new regulations also permitted operators to develop discount or other contractual rates for special groups or services.

In October 1979, the Portland council increased the maximum rate for exclusive-ride service from $1.00 drop including the first 1/9 mile plus $0.90/mile and $0.25/extra passenger. The new maximum was $1.00 drop including the first 1/12 mile plus $1.20/mile and $0.50/extra passenger. All operators filed this rate within a matter of weeks, although one continues to offer a 10 percent discount to elderly and handicapped patrons. The flat rate for trips between the airport and downtown was also increased from $3.00 to $4.00/person. (One individual can still elect to pay the three-person minimum of $12.00.) The downtown flat rate was subsequently eliminated, evidently from lack of use. City staff report that a variety of contract rates is currently available.

Industry Characteristics

All outstanding taxi permits in Portland had been held by companies or associations of owner-operators. In 1978 these included Broadway Cab, which held 113 permits; Radio Cab, which held 102; and New Rose City Cab, which held 11. The total of 226 permits was less than the 253 that would have been permitted under the prerevision ceiling of one license for every 2900 residents. Moreover, some of these permits were unused. Permit holders who wished to leave the industry would typically sell their license back to the association, which would hold it until a buyer was found. Since the licenses reportedly accrued monetary value under entry restrictions, few were ever returned to the city.

The Portland taxi industry was apparently depressed. Owners of taxis driven by hired drivers reportedly operated at an average loss, whereas owner-drivers did only slightly better, receiving no return on their capital investment and lower wages than those paid to hired drivers. In keeping with these conditions, there was no waiting list for new taxi permits and few requests for permits following open entry.

One new firm, Portland Cab, entered the local industry during open entry and obtained seven licenses in May and five additional licenses in December 1979. One of the existing firms also acquired three new licenses. These changes brought the total of outstanding licenses to 241 by the end of March 1980.

Further Regulatory Revisions

On April 24, 1980, the Portland council adopted subsequent regulatory revisions that restated some of the previous criteria for entry and reasserted the council's authority for issuing new permits and for other taxi regulatory matters. This step resulted from difficulties in establishing the supervisor's authority. The three existing operators had appealed Portland Cab's second group of five licenses. Although the appeal was eventually dropped, it demonstrated the vulnerability of the supervisor's discretionary authority to continual challenge and moved officials to submit the revised draft to local industry review. The city also sought to clarify ambiguities it has perceived in the language of the March 1979 law.

This revision listed the factors to be considered in qualifying new entrants; this list included the adequacy of existing public transportation and the need for additional service (the burden of proof is on the applicant), the current ratio of taxi licenses to population, the current use patterns of existing taxicabs, and the commitment of the applicant to the local area. The minimum number of taxicabs required for citywide service was increased to 15, 10 of which must be operational at all times. Last, on June 3, 1980, the council stiffened the requirements for taxi drivers' permits and issued a form for operator submission of financial and operating data on a monthly basis.

City staff acknowledge that their recent revisions may be considered by some as a step backward from the 1979 legislation. But they also maintain that the newest changes encourage entry by minimizing the threat of an appeal and clarifying the application requirements. Interest continues to lag, however. The city's newest company, Portland Cab, obtained three additional permits in February 1981. Another operator applied for four permits at about the same time but at this writing has failed to submit the required documentation to support its application.

It should be noted that the Portland reregulation did not take place in response to an avalanche of permit applications but because of problems in the 1979 law. In fact, Portland's experiment with open entry elicited little immediate response, probably owing to the low profitability of the local industry and the exclusion of unaffiliated owner-operators.

DISCUSSION OF FINDINGS

Early Responses to Open Entry and Variable-Rate Setting

The early responses to open entry and variable-rate setting in these three case studies have seemed to vary with conditions in the local taxi industry and setting. Where the taxi industry appeared relatively healthy and a long-standing list of applicants for new permits had existed prior to open entry, as in San Diego, there was a steady stream of new entrants into the local market. In San Diego, the current license total is 53 percent higher than the 1978 level and all types of operators have obtained new licenses. On the other hand, where there were indications of an oversupply of taxicabs and the industry was relatively depressed and where the entry criteria excluded unaffiliated independents, as in Portland, new entry has been understandably slower.

The Seattle case is more complicated, owing to the large groups of disputed and previously unrenewed licenses and the new categories of licenses after open entry. On the basis of 400 regular licenses during the 1978-1979 license year, there was a 31 percent increase in total licenses during the first year following open entry. License issuance for the first six months of the 1980-1981 license year shows a 5 percent drop in permits from the preceding year but is still 24 percent more than the 1978 level. The new licensees include the existing service companies as well as smaller fleet-type operators and numerous unaffiliated independents. Although San Diego shows its greatest proportional increases and turnover in unaffiliated independent operators, in Seattle neither entry nor exit is primarily limited to any particular type so far.

Variable-rate setting has provided some price competition, although the major operators in all three cities have tended to charge similar (although by no means the highest) rates. Where there has been no maximum rate, as in Seattle, or where the maximum was set relatively high, as in San Diego, a wide variety of rates for exclusive-ride service can be observed. In Portland, on the other hand, the maximum rate has evidently been set too low to allow for price competition under it.

Some regulators argue that, during this era of skyrocketing gasoline and insurance costs, taxi rates are lower under variable pricing than they would have been under continued standardization. As Table 5 shows, rates have risen an average of 35 percent for the three cities during this first period of 18-24 months. In comparison, standard rate increases were more frequent and precipitous in all three cities during the six or seven years prior to variable pricing than they had been during the previous decades. Between 1976 and variable pricing, taxi rates rose 33 percent in San Diego, 15 percent in Seattle, and 45 percent in Portland. These changes average to an overall 31 percent increase for the two to four years immediately preceding variable pricing.

Problem Areas

Service Innovations

Although operators report that they are running much longer shifts under open entry than they previously did and there is more-aggressive marketing by some, operating practices have not changed dramatically. The code revisors' objective of achieving taxi-service innovations has yet to be realized. The San Diego paratransit office expended considerable effort to formulate a zone-based fare system and map along with informational brochures for use by local taxi operators. Although numerous San Diego operators filed zone-based shared-ride rates throughout 1979 and 1980, only one is reportedly close to offering non-fixed-route, nonsubsidized, shared-ride service even now. One of the Seattle service companies proposed its own zone-based fare system for shared-ride service. Implementing the service, however, required a new ordinance, since the 1979 law required all fares to be registered on a meter. DLCA spent several months discussing this operator's system as well as alternative proposals with local industry members. A codified approach to shared riding on an advance-reservation basis was adopted in late January 1981 for a nine-month trial period to go into effect during May. One Portland operator reportedly advertised shared-ride service but was unprepared to implement it. No other service innovations have been disclosed.

Airports

Variable pricing has run into problems at the San Diego and Seattle airports. Both airports have an underlying first-in, first-out principle of taxi-queue operation that militates against the incentive for competitive pricing. Moreover, airport taxi riders tend to be visitors who are generally unfamiliar with local taxi rates and trip distances. Although posted signs notify travelers that variable pricing is in effect (and, in Seattle, show average fares), it is still incumbent on the customer to choose an acceptable taxi.

At Sea-Tac Airport, this means rejecting the taxi that is sent up on request from the holding area in order to request another one. At San Diego International, it means waiting until the preferred cab reaches the front of the airport queue. Passengers have therefore been vulnerable to abuses, such as those perpetrated by operators who charge as much as 50 percent above the average fare, or to pressure to take the first taxi sent up. Independents have tended to concentrate on the airport business, and short-haul refusals have reportedly increased as taxi queues lengthen. Both of these kinds of problems raise enforcement needs and passenger complaints, whereas the dramatic increase in applications for airport taxi permits brought attendant administrative problems.

The port of San Diego imposed a six-month moratorium on airport taxi permits while it deliberated proposed solutions. The mayor established a task force of city council and port commission members to hasten the process and encourage dialogue between the two jurisdictions. Recontracting out the service as an exclusive franchise was considered and rejected. In July 1980, the port lifted its moratorium and raised the airport permit fee from \$25 to \$100. Late in September 1980, the port released its proposed solutions, which included the plus-or-minus 20 percent range on rates, a further increase in the permit fee to \$200 annually, and adoption of the city's proposal for full-time starters to administer the taxi queues. These individuals are to be employees of the port, a proposition estimated to cost \$125 000. Airport taxi-permit revenues were reportedly between \$12 000 and \$13 000 annually when the fee was \$25 and are projected to be about \$100 000 when the \$200 fee is in effect. The port will also undertake to develop its own hearing and permit-revocation processes to back up its enforcement efforts. The new rules go into effect April 1, 1981.

Effective March 1, 1981, the port of Seattle also raised its airport permit fee from \$100 annually to \$90/quarter (\$360/year) and implemented the plus 10 percent rate ceiling. In addition, all pick-ups (except as described below) are to be limited to the lower, deplaning drive. Passengers will no longer be able to request particular taxi companies from the airport dispatcher, although they retain the

Table 5. Changes in taxicab rates in three cities.

Item	Rate: Old	Rate: New	Change (%)	Type of Charge
City				
San Diego	\$1.10 drop + \$0.70/mile (standard)	\$1.19 drop + \$1.05/mile (weighted average)	+35	Weighted average for all operators
Seattle	\$0.90 drop + \$0.70/mile (standard)	\$1.00 drop + \$1.10/mile (weighted average)	+45	Weighted average for service companies and large fleets[a]
Portland	\$1.00 drop + \$0.90/mile (maximum)	\$1.00 drop + \$1.20/mile (maximum)	+26	All operators
Avg change			+35	

[a]Two of the service companies charge \$1.00 drop + \$1.00/mile; the third very recently changed its rate to \$1.00 drop + \$1.20/mile.

prerogative of rejecting the taxi sent up from the holding area. Passengers who wish to request a particular taxi will have to telephone the company and then move themselves and their baggage to the upper, enplaning drive to be picked up. It remains to be seen how these procedures will affect airport taxi operations. It should be noted, however, that both airports responded to current problems by adopting retrictions that reinforce the first-in, first-out approach rather than accommodate price competition.

Public Information

A major factor in realization of the benefits that the regulatory code revisors predicted from the new regulations is the public's awareness of the changes and how to take advantage of them. San Diego staff have attempted to assist operators with promotional materials and have described the regulatory changes to citizens' groups. Seattle's efforts have been limited to airport informational signs and a quarterly list of local taxi rates. But city resources were never budgeted to provide for a full-scale public information program, although both administrations recognize the need for such efforts. While open entry and variable pricing have been amply reported in the local press, these accounts tend chiefly to sensationalize the controversy between taxi operators and city administrators, polarizing them as adversaries.

Interjurisdictional Issues

Open entry altered the reciprocity between jurisdictions in the Seattle area. The city of Seattle and King County had had an agreement since the 1977 interim legislation by which a taxi licensed in one jurisdiction could obtain a license in the other for a reduced fee. This legislation was advocated by the regulatory revisors to ease entry to the lucrative airport market for city operators prior to proceeding with open entry and the other changes. When King County chose to retain its license ceiling and public convenience and necessity requirements for one year following the city's adoption of open entry, however, this reciprocity was interrupted. Open entry became effective in King County in June 1980, but reciprocal licensing was not officially restored, although the license fees were adjusted downward to the amount required to obtain both licenses under reciprocity. During the year-long interim and continuing through this writing, operators who wish to do business in both jurisdictions must still obtain each jurisdiction's license independently.

Administrative Issues

Although regulatory revision has released the city councils from some of the chores of taxi regulation, the early phases of it seem to demand an increased commitment in administrative and law-enforcement time. Prior to regulatory revision, city staff were principally engaged in preparing rate recommendations and other data analyses for the city council. Since the changes, staff have assumed the relatively unfamiliar and ongoing functions of qualifying applicants and issuing taxi permits, obtaining and recording rate filings, and undertaking numerous liaison activities to implement the new regulations. As the influx of applicants and operators continues, inspection and enforcement personnel have needed to devote additional time to assigning color schemes, inspecting vehicles, monitoring operations, and investigating compliance. Numerous small operators are more difficult to communicate with than a few large operators. Moreover, with the increasing transition to lease-type operations, some of the city staffs and veteran fleet operators have asserted that responsibility for driver behavior is being transferred from company management to the city. (Data are being collected to provide for estimation of the recovery costs of these administrative efforts in regulatory and license fees.)

There is also some question whether the changes have reduced the councils' involvement in taxi regulation. Relaxation of entry restrictions was extremely controversial and protracted in all cases. The Portland council was involved in a rate review, a court appeal, and a new set of regulatory changes within one year after its initial revisions. The San Diego council has considered proposals to lift the monthly permit limit, remove the maximum fare, do away with financial-reporting requirements, and simplify color schemes as well as to establish a member task force to help resolve airport problems. Seattle's 1979 regulatory revisions supplemented initial changes adopted in 1977; efforts continued throughout 1980 to codify more strict for-hire driver certification requirements, establish a zone-based fare system, and achieve exterior rate posting; these measures were finally adopted early in 1981.

Transferable Implications for Other Regulatory Entities

Achieving the regulatory changes has taken much time, both in terms of elapsed time and involvement of regulators, city staff, and local operators. Subsequent rounds of revision and promulgation of rules have been seen in all cases. Implementation has required that city staff assume additional or unfamiliar administrative tasks. The local taxi industries also spent considerable effort in analyzing or opposing the changes, providing supporting data, and testifying at public hearings.

Abundant resources may be required to provide public information for travelers of the potential benefits represented by taxi fare and service competition. Operator liaison efforts are also needed to smooth implementation and encourage development of service innovations.

Increasing numbers of airport taxi operators and variable pricing have exacerbated problems at airports. The fist-in, first-out taxi-queue principle wakens the incentive for price competition while hindering the patron's ability to respond to lower prices. Modifications to airport taxi regulations have resulted, which include rate ceilings, a moratorium on permits, increased permit fees, and restrictions on taxi movements, whereas some port officials threaten a return to the exclusive-franchise approach. More interjurisdictional cooperation prior to implementing the new regulations might have prevented some of these problems.

ACKNOWLEDGMENT

Grateful acknowledgment is due many people for their cooperation in DeLeuw, Cather's data-gathering and analysis efforts for the case studies reported in this paper. Elaine Balok, previous paratransit administrator; Carol Boland, current paratransit administrator; Victoria Whelan, project coordinator; and John Kay, project assistant--all of the city of San Diego--were generous with their time in providing essential information, as were San Diego city council members Larry Stirling, Leon Williams, and Fred Schnaubelt. The help of other city staff from the paratransit office and San Diego police department should also be acknowledged, as should that of the San Diego Unified Port District, the Harbor Police, the San Diego Association of Governments, and the sheriff's division of licenses.

Considerable assistance and essential information were provided by Regina Glenn, director of the Department of Licenses and Consumer Affairs; Jean Schiedler-Brown, license code revisor; Dave Setterholm, operations supervisor; and Ed Wood, project coordinator, city of Seattle; as well as Robert A. Marr, assistant superintendent of operations, port of Seattle. Seattle City Councilman Randy Revelle offered aid in assembling the historical background on taxi regulatory reform. Pam Holley, taxicab supervisor, city of Portland, has similarly offered much information and her help in describing local regulatory changes and the Portland taxi industry.

Members of the local taxi industries have also been generous in providing needed information. Although the individual operators and drivers with whom I have spoken are too numerous for specific mention, special thanks are due the following individuals, whose acknowledgment may serve to indicate my gratitude for the cooperation of the industry at large: Dan Fox and Larry Johnson, Coast Cab; Jim Barret, Graytop Cabs; Tex Hedrick, Red Cab; Bob Delacott, Jim Evans, and Larry Haver, Co-op Cabs; Mike Marguet, Independent Cab Owners Association; John Harper, San Diego Cab; Wes Walton, Farwest Cabs; Bob Ruddy, La Jolla Cab; and Bill Hilton, Yellow Cab of San Diego.

It should be noted that, although the research is being conducted under the auspices of TSC, neither TSC nor UMTA necessarily supports the conclusions presented in this paper, which are mine.

Publication of this paper sponsored by Committee on Paratransit.

Retrospective View of Dial-A-Ride Service in Rochester, New York

DEBRA A. NEWMAN, DAVID SHARFARZ, AND MARK ABKOWITZ

For one year, the Rochester-Genesee Regional Transportation Authority (RGRTA) offered dial-a-ride service to the general public in four suburbs under two different institutional arrangements. The public operator, Regional Transit Service, and a private operator, Paratransit Enterprises, each provided service in two communities. They also provided demand-responsive service to the elderly and the handicapped throughout Rochester. This unique arrangement was part of the Rochester community transit demonstration, an outgrowth of the earlier Rochester integrated transit demonstration, both projects funded by the Urban Mass Transportation Administration Service and Methods Demonstration program. The community transit demonstration was specifically designed to test cost-effective demand-responsive transit strategies. RGRTA sought competitive bids from paratransit operators and asked communities to fund a share of the operating deficits for postdemonstration services. Thus, the demonstration made it uniquely possible to compare service levels, ridership, and costs for public and private dial-a-ride that served both the general public and the elderly and the handicapped. By the end of the demonstration, three of the four communities found that they could not afford to continue paratransit services by using local subsidies. One town, however, developed an innovative funding strategy and supported dial-a-ride services for five additional months. By 1980, no general market dial-a-ride services were operating, although the cost-effectiveness of private operation was successfully demonstrated. Today, RGRTA supports privately operated paratransit services for the elderly and the handicapped throughout the county. The activities of the demonstrations are reviewed and implications are derived that may be useful to others considering implementing demand-responsive transit service.

The history of paratransit in Rochester can be divided into five phases: (a) growth (August 1973 to April 1975), (b) revaluation (April 1975 to January 1977), (c) retrenchment (January 1977 to November 1977), (d) new demonstration (November 1977 to August 1979), and (e) postdemonstration (August 1979 to May 1980). The timing of each of these phases and the key activities in the four Rochester suburbs most affected by the paratransit operations are shown in Figure 1.

GROWTH

The initial growth period lasted from service initiation in the suburb of Greece in August 1973 until early 1975. During this period, the Greece service area expanded several times, fixed-route bus services were eliminated, the demand-responsive vehicle fleet nearly doubled, operating hours were extended, and dial-a-ride ridership grew steadily. Work and school subscription services were offered in addition to the basic dial-a-ride service. All services were operated by the Regional Transit Service (RTS), the major operating subsidiary of the Rochester-Genesee Regional Transportation Authority (RGRTA), and were advertised under the acronym for personal transit (PERT).