



Milwaukee Taxicabs: Fare Regulation

Prepared by the Legislative Reference Bureau

February, 2014

Report by the Legislative Reference Bureau reviewing taxicab fare regulation, including the identification of current trends and conditions in Milwaukee and the review of fare change systems in other U.S. cities.

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City of Milwaukee, Wisconsin
February 2014

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I. EXECUTIVE SUMMARY

A. Report Intent.

This document has been prepared as a supplementary investigative report to the Common Council's recent discussion and enactment of various taxicab regulations, and as part of the Legislative Reference Bureau's requirement under s.100-52-2-b, of the Code of Ordinances, to provide the Common Council information "*with respect to taxicab meter rates and operating costs*" on or before July 1 of each even-numbered year.

This document serves as a preamble to the LRB's 2014 required report by providing information from which the Common Council may set precedence in taxicab fare regulation, namely: establishing a method by which meter rates may be established or changed periodically using a quantifiable, objective and predictable system in accordance with economic best-practices and to protect the health, safety and welfare of the public.

A necessary first step in the public policy process of taxicab fare regulation is an understanding of the underlying reasons for governmental intervention. Debate over taxicab regulation in Milwaukee in recent months has focused much attention on public opinion and stakeholder rhetoric, but the issue of fare regulation in Milwaukee could also benefit from quantifiable information on the taxicab market and the effects of different fare policies.

Section II of this report is intended to contribute to the Common Council's policy decisions on fare regulation by identifying the economic rationale for regulation of taxicab services.

Section III provides a brief overview of current and historical trends in Milwaukee's taxicab fares. This section also benchmarks Milwaukee's fare with similar cities across the United States.

Fare regulations are further discussed in detail in Section IV. Most economic literature argues that there are grounds for certain forms of governmental intervention in the taxicab market, but many regulations have been ruled unjustifiable or determined ineffective. This report assumes some regulation is necessary and identifies 3 methods traditionally used, including:

1. Quantity or entry controls.
2. Quality or safety controls.
3. Rate controls.

Finally, Section V identifies potential systems for establishing or changing taxicab fares in Milwaukee, including case studies of other cities' systems, and Section 6 identifies considerations for the future of fare regulation in Milwaukee.

B. Key Findings.

- The setting of regulations for taxicabs is a complex task, with a number of market variables coming into play, including time of day or week, service quality, price, consumer demand and taxicab supply.
- Government intervention in the taxicab industry must be grounded in a clear understanding of these market issues and the effects of market regulation.
- Government intervention should be targeted at addressing market imperfections and in protecting the health, safety and welfare of the public.
- The setting of taxicab fares should yield an appropriate number of service providers at all times across different locations, and service providers should be indifferent to the length of potential trips or characteristics of potential customers, eliminating the potential for providers to refuse certain customers.
- Milwaukee's taxicab fares are \$0.15 greater per mile than a 20-city average.
- Between January 29, 1980, and September 14, 2009, the rate for an 8-mile taxicab trip in Milwaukee increased 208% (\$14.85), compared to a 184% increase in the cost of living.
- Changes to taxicab fare structure should be predictable, regular and relatively easy to understand, consisting of time-based, mileage-based and per-ride components.
 - Flat time-based charges should reflect the fixed costs of operating a taxicab and the opportunity cost of the driver's time.
 - Mileage-based charges should reflect the variable costs of using the vehicle, such as the consumption of fuel or vehicle maintenance.
 - Per-ride flag drop charges should reflect expected "empty" driving time.
- Most similar-sized U.S. cities do not codify methods for fare adjustment. Those that

periodically adjust taxicab fares most often do so using an ad-hoc combination of peer-city and economic data.

- Regardless of the method chosen to adjust meter rates, any changes should be made frequently enough to maintain cost recovery for the industry but not so frequently as to create uncertainty or confusion for the public or undue administrative costs for the City.

II. INTRODUCTION

Competition in the taxicab industry takes place in a variety of ways, including through price, availability, timeliness, convenience, quality, vehicle type, payment mechanism or other amenities, both within the industry and among other transportation services.

Because fares, services and other taxi industry issues can be affected by factors other than local regulation (such as market dynamics) or by additional regulations not directly aimed at taxicab fares, this report recognizes that regulatory considerations beyond the scope of taxicab fares exist, not in addition to but in conjunction with fare regulations, while also taking into consideration how fare adjustments may affect other components of competition in the taxicab industry, and vice versa.

A. Why Regulate?

Regulation of the taxicab industry varies across the United States, from complete deregulation to strict standards governing market entry and performance. Opinion on an accepted level of regulation is mixed, but according to the Federal Trade Commission, “*regulation of passenger motor vehicle transportation services should focus primarily on ensuring qualified drivers, safe and clean vehicles, sufficient liability insurance, transparency of fare information, and compliance with other applicable laws.*”

Numerous factors affect the supply, demand and price of taxicabs. To understand the reasons taxicabs are regulated in Milwaukee and to better determine appropriate fare levels, it may be helpful to first discuss associated economic concepts, such as economic efficiency, opportunity costs and economic rents.

Economic efficiency involves the best and most productive use of society’s scarce resources to provide individuals with desired goods and services in the quantities, qualities, places and times they desire. The efficient use of resources is in part a product of opportunity cost.

According to the Merriam-Webster Online Dictionary, opportunity costs are:

The opportunities forgone in the choice of one expenditure over others. For a consumer with a fixed income, the opportunity cost of buying a new dishwasher might be the value of a vacation trip never taken or several suits of clothes unbought. The concept of opportunity

cost allows economists to examine the relative monetary values of various good and services.

Finally, in the context of taxicabs, economic rent is the excess return for a service above the minimum amount a person receiving payment would still have agreed to a deal. That is, except for some unique factor, a taxicab would have taken a lower fare according to what the free market would otherwise dictate. Economic rents are excess returns above “normal” levels (opportunity costs), and are often used as an indicator of market imperfection.

So how do these concepts apply to taxicab fare regulation in Milwaukee? To begin, how one perceives the economic efficiency of a market may dictate how inefficiencies or imperfections, perceived or otherwise, are addressed. There are many schools of thought in economic theory regarding the level of governmental involvement in maximizing economic efficiency and reducing economic rent-seeking, but in general 2 prevailing perspectives exist:

- *Perspective 1:*

The first general ideology is that government should play no role in regulating the private sector. Those who subscribe to this philosophy argue that market forces will balance themselves based on supply and demand.

In general, many economists agree that competitive markets – those with accurate information, mobile resources and where the full costs and benefits of transactions are borne and received by individuals – will achieve economic efficiency, and this is often the case. However, because these competitive ideals are sometimes not met, significant market failures can and do occur. This issue is at the forefront of the second prevailing perspective in government regulation.

- *Perspective 2:*

The second general ideology is that authorities are obliged to intervene in private sector markets to fix imperfections.

Many of these imperfections exist in the taxicab market to some degree and are sometimes grouped into 3 categories: *outside forces* (such as traffic congestion, air pollution or taxi stand crowding), *public interest* (such as safety or availability of services) or *consumer incompetence* (the inability to bargain when hailing a cab or the vulnerability of foreign

consumers, for instance). These factors may prevent the market from achieving a balance between supply and demand, imposing significant costs to society if governments fail to develop economic regulations.

The identification of market imperfections does not imply that government action can or should attempt to improve the market, but identifying them can serve as a first step in policy planning.

B. Regulatory Goals.

Taxicabs are arguably a vital public service, especially for certain groups of consumers, such as the elderly or disabled. They also play an important role as a “back-up” service for unplanned travel, such as for business or emergencies. Because of this, regulations are usually aimed at preventing an over- or under-supply of taxicabs and providing convenient, affordable and safe service.

Despite the complexity and contentiousness of market regulation, economic policies in taxicab fare regulation typically have a number of overall goals in mind. Generally, these include the protection of the health, safety and welfare of the general public. In relation to the taxicab industry in Milwaukee, these goals include both consumer and industry concerns, including:

- *Public Safety:*

Even for many who prefer deregulation of the taxicab industry, vehicle safety and driver knowledge requirements remain reasonable regulations. Public safety goals ensure vehicles are in good mechanical repair, that drivers have adequate knowledge of the industry and that operators have insurance. These regulations often also include service quality standards, such as cab size or cleanliness.

- *Consumer Protection:*

It is difficult to compare the quality of a taxicab service to the fares paid, especially where complex rate structures exist, and for consumers to make informed decisions before booking or hailing cabs, fare regulation may be necessary. Transparency, familiarity and simplicity are often goals of fare regulation.

Example regulations include setting standards for issuing fares (taxi meters) and the requirement that drivers’ names and vehicle numbers be posted in plain view, allowing clients to make complains if necessary.

- *Equity and Consistency of Service:*

If regarded as a public service, taxicabs have certain obligations to the public. These include availability of services at all times, in all areas and in a variety of ways. Taxicabs also have a responsibility to provide these services in a fashion not discriminatory to certain customers (based on gender, race, length-of-trip, etc.).

- *Profitability:*

In the free market, a reasonable profitability of services most often relates to the availability and the quality of services and their supply and demand. Regulated markets help ensure a fair return for work or, stated differently, the ability to recover costs, including fixed, variable and opportunity costs.

Given these general goals, any regulations should encourage both fair standards within the industry and an efficient fare structure for customers. From a customer perspective, for instance, by aligning a fare with the cost of providing each passenger trip, regulators ensure that drivers are indifferent to the length (both distance and time) of the trip they provide. That is, over the course of a shift, a driver will earn roughly the same amount of revenue whether he or she provides a large number of short trips or a few long trips. This benefits the consumer.

From a driver or operator perspective, there should be sufficient incentives (monetary or otherwise) to provide the most efficient trip (i.e., adequate compensation so as to avoid sitting in traffic congestion or purposefully travelling longer routes). These interests are outlined in Table 1 on page 14, and a more detailed look at goals and interests in relation to fare structure is provided in Section IV.

Table 1. Potential interests of specific groups in relation to regulatory goals.

| Regulatory Goal | General Public | Taxi Users | Taxi Providers |
|----------------------------|--|--|---|
| <i>Public Safety</i> | Limits on the number of taxicabs to reduce traffic congestion & pollution. | Driver's "good character." Vehicle in good repair. Operator solvency & insurance coverage. | Safety regulations not overly restrictive. Industry reputation. |
| <i>Consumer Protection</i> | Reduced wait times for potential taxicab trips. Reasonable & equitable taxicab fares. | Calibrated & tamper-proof meters. Ability to negotiate fares & make complaints. | Consumer protection regulations not overly restrictive. Industry reputation. |
| <i>Service Equity</i> | Available at all times, in all areas and in a variety of ways. | Obligation to provide service, regardless of passenger or trip characteristics. | Incentives to honor bookings. Disincentives to passenger fare evasion. |
| <i>Profitability</i> | Fair working standards to encourage industry pride and quality of service. | Fares appropriate to cost of trip. | Adequate fares. Limits on the number of taxicabs. |

C. Regulatory Concerns.

Changes to how the City of Milwaukee regulates taxicab fares should benefit consumers by helping to facilitate competition, innovation, information and an overall responsiveness to consumer preferences, with respect to both price and quality of service. However, the City must also ensure that any new or existing rules do not unnecessarily impede competition in the industry, according to standards set by the FTC's Office of Policy Planning, Bureau of Competition, Bureau of Consumer Protection, and Bureau of Economics.

For instance, in 1984 the FTC sued the cities of New Orleans and Minneapolis for imposing regulations limiting the number of taxicab licenses, increasing fares and eliminating competition "*in violation of the federal antitrust laws.*" These complaints were withdrawn after both cities revised their policies, but they serve as a reminder of the significant weight regulations can have on market dynamics.

Determining an *optimal* fare structure is an extremely complex process involving a number of market factors out of the control of regulating bodies, and a number of municipalities choose not to extensively regulate the taxi industry. This is especially true when sufficient information is not available. In such cases, a regulatory body may determine the *direction* of changes, but some ambiguity will still exist. Further discussion of this topic continues in Sections IV and V.

III. FARE REGULATION IN MILWAUKEE

A. Regulatory Context.

Although regulations vary across the United States, many regulatory agencies can be classified as a “classic regime.” According to a 2012 report,¹ this prototypical North American system – represented by Boston, Chicago and Seattle – most often applies the following controls:

- *Closed-Entry:*
Caps are placed on the total number of taxicabs. Control of vehicle permits is typically with the owner/operator. Permit transfer is allowed.
- *Rate Regulation:*
Meter rates are usually defined in regulation.
- *Driver and Vehicle Quality Regulation:*
The degrees of testing, training, inspection and enforcement vary by jurisdiction.

In such systems, taxicab drivers who do not own licenses typically pay fixed-fee lease rates to taxicab companies for shifts. Drivers then keep actual fares collected as a residual, motivating them to work long hours. The above report also notes that:

In mature regimes, significant value has accrued to taxi permits as the issue of new licenses falls behind civic growth and associated expansion of taxi demand. This in turn affects industry structure. To protect their ability to operate, and possibly to deter entry, larger taxi companies tend to consolidate control of licenses, resulting in relatively few companies.

These are not the only challenges commonly faced by such regulation regimes. Others include:

- *Taxicab shortages:*
Even with an adjustment formula in place, the issue of new licenses tends to be intermittent and contentious, resulting in high permit value and strong industry interest.
- *Poor service to some neighborhoods:*
High-income and high-demand areas are typically favored as taxicab supply becomes restricted. Often, the dispatch market fails as well. For instance, taxicabs may encounter

¹ Hara Associates. April 28, 2012. *Taxicab Regulation in North America*. State of Victoria Taxi Inquiry.

more lucrative flagged fares on the way to dispatched calls. Customers, in turn, begin calling more than one company or searching for alternative backup transportation, resulting in more customer no-shows.

- *Low driver incomes:*

Taxicab drivers often work long hours for low returns. Caps on taxicab numbers have historically been implemented to protect driver income during economic recessions. However, this only applies to those who currently control permits; drivers who do not have permits must pay those who do or bear the substantial cost of acquiring permits on the open market.

- *Lagged meter rates:*

Because changes to meter rates usually require elected official approval, meter rates often go unadjusted for a number of years in the “classic” system. Regulators may offer large increases in meter rates at irregular intervals, which may have negative connotations for users and may adversely affect providers while fares are low.

Finally, because of these and other issues, interest from consumers in the classic system is often isolated or minimal. Few taxicab users may have sufficient stake in the industry to appear at hearings or lobby for improvements. Although not all of these issues are prevalent in Milwaukee, the City may face, to varying degrees, similar challenges in the future.

B. Milwaukee's Experience.

In Milwaukee, code provisions regulating taxicab fares have been in place since 1924. Well into the 1940's, a zone fare system was used, with the City determining the maximum allowable rate and operators competing on price.

Since then, however, as revenues have shifted from meter rates to leasing, most, if not all, taxicab operators have dropped the idea of competing for customers by charging less than the maximum allowable rate. Further, many economists argue that price competition in the taxicab industry does not occur in the free market anyway – especially in the rank and hail portion of the industry – because consumers do not have the opportunity to “comparison shop.”

Like many U.S. cities, because Milwaukee has a history of regulating both fares and entry, authorities must be continually aware of taxicab supply, demand and price (among other variables) to adequately adjust regulations according to the market. These will be discussed in greater detail in Section 4, but for now it will suffice to say that the challenges of a regulated taxicab industry are many.

For instance, as demand increases, prices and/or supply must be adjusted accordingly. Population or economic growth, increased incomes and new technologies may all create extra demand, and the challenge for regulators is to decide which variable of a taxicab fare to change and how much to change it.

The complexity of this workload is one of several reasons the City has come under scrutiny of late regarding taxicab regulations. In a recent Circuit Court decision (currently in Wisconsin Court of Appeals²), Judge Jane Carroll issued a decision against the City's cap of 321 taxicab licenses based upon the absence of a logical and non-arbitrary basis for determining the proper number of cabs. In the case, the plaintiffs argued that Milwaukee's cap on taxicabs:

- Encouraged concentration and consolidation among a few very large companies.
- Limited the entrepreneurial opportunities for existing drivers by creating significant and unnecessary financial barriers to owning and creating new taxi companies.
- Gave existing vehicle license holders a significant economic advantage.

² Ibrahim v. City of Milwaukee. June 18, 2013. Milwaukee County Circuit Court.

- Discouraged entry and innovation in the taxi market, leading to lower levels of service.

In light of these arguments, it may be in the best interest of the City, the public and the industry to develop a quantifiable and justifiable system for monitoring the market and changing fare regulations. Fare regulation then becomes an economic and not a political decision.

Currently, Section 100-52 of the Code of Ordinances dictates the rates public passenger vehicles can charge. Section 100-52-2 further allows applications for fare increases to be made to the Licensing Committee, subject to the approval of the Common Council, “*by at least 10% of the individual classification of permittees,*” and Section 100-49 requires “*every permittee and driver to furnish reasonably safe and adequate service at just and reasonable rates to assure adequate accommodations to the public.*” This is the nexus for fare regulation in Milwaukee.

C. Cost-of-Living Comparisons.

To develop a better sense of how Milwaukee's taxicab fares have changed over time in relation to the economy as a whole, Tables 2 and 3 on pages 24 and 25 present each rate change since 1980 compared to the change in the Bureau of Labor Statistics' Consumer Price Index (CPI) and Employment Cost Index (ECI), respectively, since the previous rate change. The ECI is a quarterly economic report detailing the changes in the cost of U.S. business labor.

Overall, fare increases since 1980 have exceeded CPI increases for the same time period. Between January 29, 1980, and September 14, 2009, the rate for an 8-mile trip has increased 208% (\$14.85) compared to a 184% increase in the cost of living. Over this same period, taxi fares have changed 8 times (on average, every 44 months); the percentage change in the fare for an 8-mile trip exceeded the percentage change in the CPI on 4 of these occasions.

In the 5 periods during which the CPI increased by more than 8%, taxi fares for an 8-mile trip were increased by more than 8% 3 times. Conversely, in the 3 periods where the CPI increased by less than 8%, taxi fares for an 8-mile trip were increased by more than 8% in each period. On average since 1980, for every percentage increase in CPI, taxi fares for an 8-mile trip have increase by \$0.51. Rates compared to ECI changes follow similar trends.

This analysis only looks at the relative increase in fares compared to the CPI and ECI. It does not measure whether fares are appropriate relative to the cost of operating a taxicab or whether fares are appropriate to begin with. Consider also that the CPI and ECI are likely not the only indexes appropriate for determining how fares could be changed, nor does this report suggest that the use of indexes is the best method for determining rate changes. This analysis merely illustrates how regulators might use economics to justify fare regulation adjustments.

D. Additional Complexities.

In addition to the implementation of fare increases typically above the cost of living, an historical cap on licenses has increased the annual cost of leasing or owning a license, discouraging potential taxicab operators. Although recently increased by 100 new permits, over a decade of limited supply has generated monopoly profits for existing license holders and arguably fewer economical transportation options for consumers.

Because entry into the Milwaukee taxicab market is regulated, drivers may have minimal influence over market demand for taxicabs (other than providing new services or identifying new markets, for instance). Additionally, existing large companies over the past decade have had the opportunity to exploit a sort of “artificial market power” through the use of lease agreements with drivers. This practice generates excess profits at the expense of current drivers, smaller competitors and the taxi-using public. These “uneconomic” costs have no productive value to taxicab drivers, as explained by economist Dr. Peter Abelson in a 2012 report:³

The economic costs of taxi operations are the real costs to the community of operating taxis. This is the cost of other goods and services foregone due to the provision of taxi services. This excludes the price of a taxi plate because this does not reflect any use of an economic resource and is not an economic cost. The taxi license price is a transfer payment – a levy on taxi users to sustain the asset values of a piece of paper that has no economic value and provides no economic services.

License cost is an issue for the City not simply because of the interests of drivers or operators, but because consumers are affected: operators are sometimes more involved in protecting the market value of their licenses than providing quality service to the public. Further, many economists agree that if taxicab demand increases, only an increase in supply will keep prices in check. According to an affidavit⁴ from Dr. Samuel R. Staley in the case of Ibrahim v City of Milwaukee:

As long as company and vehicle owners believe the cap will stay in place (and supply will not increase), they will continue to buy vehicle licenses, usually through private sales, until

³ Independent Pricing and Regulatory Tribunal of New South Wales. 2013. *Review of Taxi Fares in NSW: Maximum Fares from July 2013*.

⁴ Staley, Samuel R. October 2012. *Declaration and Affidavit of Plaintiffs' Expert Witness Samuel R. Staley, Ph.D.* Milwaukee County Circuit Court Case No. 11CV015178.

all the monopoly rents are exhausted through bidding...These incentives remain in place as long as the potential revenues earned from owning and operating an independent cab are greater than the cost of leasing a cab from an existing vehicle owner or company.

These issues are evident in Milwaukee, at least anecdotally. For instance, according to the U.S. Bureau of Labor Statistics, the average wage of a taxi or limousine driver in the Milwaukee metropolitan area is \$22,290 (assuming a 40-hour work week). Ironically, despite relatively high taxi fares, it may be difficult for taxi drivers to earn enough to provide an adequate living. This may be attributed to the inflated costs of driving a taxi in Milwaukee.

For instance, in his affidavit, Dr. Staley suggests that purchasing a vehicle permit accounts for over a quarter of the cost of operating a taxi in Milwaukee. Even by conservative estimates, the cost to purchase a license on the private market before Milwaukee's cap on licenses was increased was in the neighborhood of \$80,000. Regarding this cost, Dr. Staley further writes that:

The taxi vehicle permit fee for the City of Milwaukee is \$175, implying that the bids in the private market are direct and measurable evidence of a mismatch between the supply and demand for taxicabs in the Milwaukee market...these higher rents are not a result of consumers willingly bidding up prices for a better quality product. In fact, service quality may well have fallen. On the contrary, these higher revenues generated for current license holders are a near pure artifact of public policy that benefits existing vehicle permit holders at the expense of taxi users and potential entrepreneurs.

While the main focus of this report is fare regulation, quantity, quality and price regulations are not mutually exclusive. Although the salaries of taxicab drivers in Milwaukee are not the primary concern of taxicab regulators, per se, current license lease costs may be an economic rent that needs to be reduced to achieve a more efficient market and reduce costs for the benefit of taxicab users. Because supply, demand and price are so closely associated, both fare and quantity control regulations should be closely monitored.

E. Benchmarking.

As noted above, indexation may be an appropriate way to monitor and make fare changes in relation to the general economy. However, applying annual indexation to fees which are already inefficient only maintains or exacerbates their inefficiency. Before or in conjunction with the development of a system for fare change, City officials may wish to determine the current optimal rate for a taxicab in Milwaukee. In addition to market analysis, a comparison of existing fares to peer cities may aid in this process. Table 4 on page 26 provides a comparison of the total costs charged for an 8-mile trip in Milwaukee, compared to 20 similar U.S. cities.

Figure 1 on page 27 further compares fares for different trip lengths in selected U.S. cities. Finally, Figures 2 and 3 on page 28 compare Milwaukee to a 20-city average of total fare by distance of trip and average per-mile fare by distance of trip, respectively. Overall, Milwaukee's taxicab fares are \$0.15 greater per mile than the 20-city average.

Table 2. Comparison of taxicab rate changes since 1980 to relative changes in the Consumer Price Index.

| EFFECTIVE DATE | RATE COMPARISON | | | 8-MILE TRIP | | CONSUMER PRICE INDEX | | RATE vs. CONSUMER PRICE INDEX~ | |
|----------------------------------|-----------------|-----------|--------------------------|----------------|----------------------|----------------------|---------------------|--------------------------------|----------------------------|
| | Initial Charge | Fraction | Each Fraction Additional | Rate | % Change, Prev. Year | Value* | % Change Prev. Year | Total Rate/CPI | \$ Change per CPI % Change |
| Sep 01, 2013 | \$2.25 | 1/10 | \$0.25 | \$22.00 | 0.00% | 223.252 | 8.59% | \$0.10 | \$0.00 |
| Sep 14, 2009 | \$2.25 | 1/10 | \$0.25 | \$22.00 | 22.22% | 205.601 | 3.22% | \$0.11 | \$1.24 |
| Mar 16, 2007 | \$2.25 | 1/8 | \$0.25 | \$18.00 | 2.86% | 199.194 | 13.05% | \$0.09 | \$0.04 |
| Jan 03, 2003 | \$1.75 | 1/8 | \$0.25 | \$17.50 | 12.90% | 176.200 | 0.92% | \$0.10 | \$2.18 |
| Sep 01, 2001 | \$1.75 | 1/7 | \$0.25 | \$15.50 | 14.81% | 174.600 | 19.51% | \$0.09 | \$0.10 |
| Jan 12, 1995 | \$1.75 | 1/6 | \$0.25 | \$13.50 | 20.00% | 146.100 | 9.03% | \$0.09 | \$0.25 |
| Nov 22, 1991 | \$1.50 | 1/5 | \$0.25 | \$11.25 | 2.27% | 134.000 | 25.12% | \$0.08 | \$0.01 |
| Jul 16, 1985 | \$1.25 | 1/5 | \$0.25 | \$11.00 | 25.71% | 107.100 | 32.71% | \$0.10 | \$0.07 |
| Apr 18, 1980 | \$1.00 | 1/4 | \$0.25 | \$8.75 | 22.38% | 80.700 | 2.54% | \$0.11 | \$0.63 |
| Jan 29, 1980 | \$0.95 | 1/4 | \$0.20 | \$7.15 | -- | 78.700 | -- | -- | Average |
| Rate Change, 1980 to 2013 | \$1.30 | -- | \$0.05 | \$14.85 | 207.69% | 144.552 | 183.67% | \$0.10 | \$0.50 |

* CPI Base Period: 1982-84=100 (Midwest Region, All Urban consumers)

~Based on an 8-mile trip

Table 3. Comparison of taxicab rate changes since 1980 to relative changes in the Employment Cost Index.

| EFFECTIVE DATE | RATE COMPARISON | | | 8-MILE TRIP | | EMPLOYMENT COST INDEX | | RATE vs. EMPLOYMENT COST INDEX~ | |
|----------------------------------|-----------------|-----------|--------------------------|----------------|--------------------------|-----------------------|-------------------------|---------------------------------|----------------------------|
| | Initial Charge | Fraction | Each Fraction Additional | Rate | % Change, Prev. Year | Value# | % Change, Prev. Year | Total Rate/ECI | \$ Change per ECI % Change |
| Sep 01, 2013 | \$2.25 | 1/10 | \$0.25 | \$22.00 | 0.00% | 99.1 | -0.90% | \$0.22 | \$0.00 |
| Sep 14, 2009 | \$2.25 | 1/10 | \$0.25 | \$22.00 | 22.22% | 100.0 | 0.20% | \$0.22 | \$19.96 |
| Mar 16, 2007 | \$2.25 | 1/8 | \$0.25 | \$18.00 | 2.86% | 99.8 | 2.25% | \$0.18 | \$0.22 |
| Jan 03, 2003 | \$1.75 | 1/8 | \$0.25 | \$17.50 | 12.90% | 97.6 | 4.95% | \$0.18 | \$0.40 |
| Sep 01, 2001 | \$1.75 | 1/7 | \$0.25 | \$15.50 | 14.81% | 93.0 | 5.56% | \$0.17 | \$0.36 |
| Jan 12, 1995 | \$1.75 | 1/6 | \$0.25 | \$13.50 | 20.00% | 88.1 | 2.09% | \$0.15 | \$1.08 |
| Nov 22, 1991 | \$1.50 | 1/5 | \$0.25 | \$11.25 | 2.27% | 86.3 | 1.77% | \$0.13 | \$0.14 |
| Jul 16, 1985 | \$1.25 | 1/5 | \$0.25 | \$11.00 | 25.71% | 84.8 | -- | \$0.13 | |
| Apr 18, 1980 | \$1.00 | 1/4 | \$0.25 | \$8.75 | 22.38% | n/a | -- | | |
| Jan 29, 1980 | \$0.95 | 1/4 | \$0.20 | \$7.15 | -- | n/a | -- | -- | Average |
| Rate Change, 1980 to 2013 | \$1.30 | -- | \$0.05 | \$14.85 | 100.00% ('85-'13) | 14.3 | 16.86% ('85-'13) | \$1.04 | \$3.17 |

Private industry workers in the Midwest, as measured in the quarter the rate became effective. Includes wages, salaries, and employer costs for employee benefits. SIC basis between 1982 and 2005 (December 2005=100). NAICS basis between 2001 and 2013 (December 2005=100).

~Based on an 8-mile trip

Table 4. Comparison of Milwaukee Taxicab Meter Rates for an 8-Mile Trip to a 20-City Average* of Comparable Cities.

| City | MSA Population* | Drop Charge (\$) | Drop Charge Increment | Additional Charge (\$) | Add'l Charge Increment | Per Mile Charge (\$) | Per Hour Waiting Charge (\$) |
|---------------------------|------------------|------------------|-----------------------|------------------------|------------------------|----------------------|------------------------------|
| Cleveland | 2,063,535 | 2.75 | 1/8 | 0.28 | 1/8 | 2.24 | 18.00 |
| Kansas City | 2,038,724 | 2.50 | 1/10 | 0.21 | 1/10 | 2.10 | 40.00 |
| Las Vegas | 2,000,759 | 3.30 | 1/13 | 0.20 | 1/13 | 2.60 | 30.00 |
| Columbus | 1,944,002 | 2.75 | 1/9 | 0.45 | 2/9 | 2.03 | 27.00 |
| Indianapolis [^] | 1,928,982 | 3.00 | 0 | 0.40 | 1/5 | 2.00 | 24.00 |
| San Jose | 1,894,388 | 3.50 | 1/10 | 0.30 | 1/10 | 3.00 | 30.00 |
| Austin | 1,834,303 | 2.50 | 1/7 | 0.30 | 1/7 | 2.10 | 25.00 |
| Nashville | 1,726,693 | 3.00 | 1 | 0.13 | 1/15 | 2.00 | 18.00 |
| Virginia Beach | 1,699,925 | 3.25 | 1/8 | 0.30 | 1/8 | 2.40 | 18.00 |
| Providence | 1,601,374 | 2.00 | 1/10 | 0.25 | 1/10 | 2.50 | 25.00 |
| Jacksonville~ | 1,377,850 | 1.75 | 1/10 | 0.18 | 1/10 | 1.80 | 13.80 |
| Memphis | 1,341,690 | 2.00 | 1/9 | 0.20 | 1/9 | 1.80 | 21.00 |
| Oklahoma City | 1,298,565 | 3.00 | 1/5 | 0.45 | 1/5 | 2.25 | 18.00 |
| Louisville | 1,251,351 | 4.10 | 1 | 0.20 | 1/10 | 1.95 | 20.75 |
| Richmond | 1,231,980 | 2.50 | 1/5 | 0.50 | 1/5 | 2.50 | 22.50 |
| New Orleans | 1,227,096 | 3.50 | 1/8 | 0.25 | 1/8 | 2.00 | 22.50 |
| Hartford | 1,214,400 | 3.00 | 1/9 | 0.30 | 1/9 | 2.70 | 36.00 |
| Raleigh | 1,188,564 | 1.95 | 1/10 | 0.25 | 1/10 | 2.50 | 15.00 |
| Birmingham | 1,136,650 | 3.00 | 0 | 2.00 | 1 | 2.00 | 20.00 |
| Buffalo | 1,134,210 | 2.30 | 1/6 | 0.50 | 1/6 | 3.00 | 30.00 |
| 20-City Average | 1,556,752 | 3 | 1/5 | 0.38 | 1/6 | 2 | 24 |
| Milwaukee, WI | 1,566,981 | 2.25 | 1/10 | 0.25 | 1/10 | 2.50 | 21.00 |

* 2012 U.S. Census Bureau Estimates, Metropolitan Statistical Area.

[^]Indianapolis' Ordinance does not mandate a drop charge, but allows companies to set their own "pick-up charge," ranging from \$1.50 to \$5.00.

~Jacksonville rates differ between taxi companies. The rates shown are the lowest available.

Figure 1. Comparison of fares for different taxicab trip lengths in selected U.S. cities.

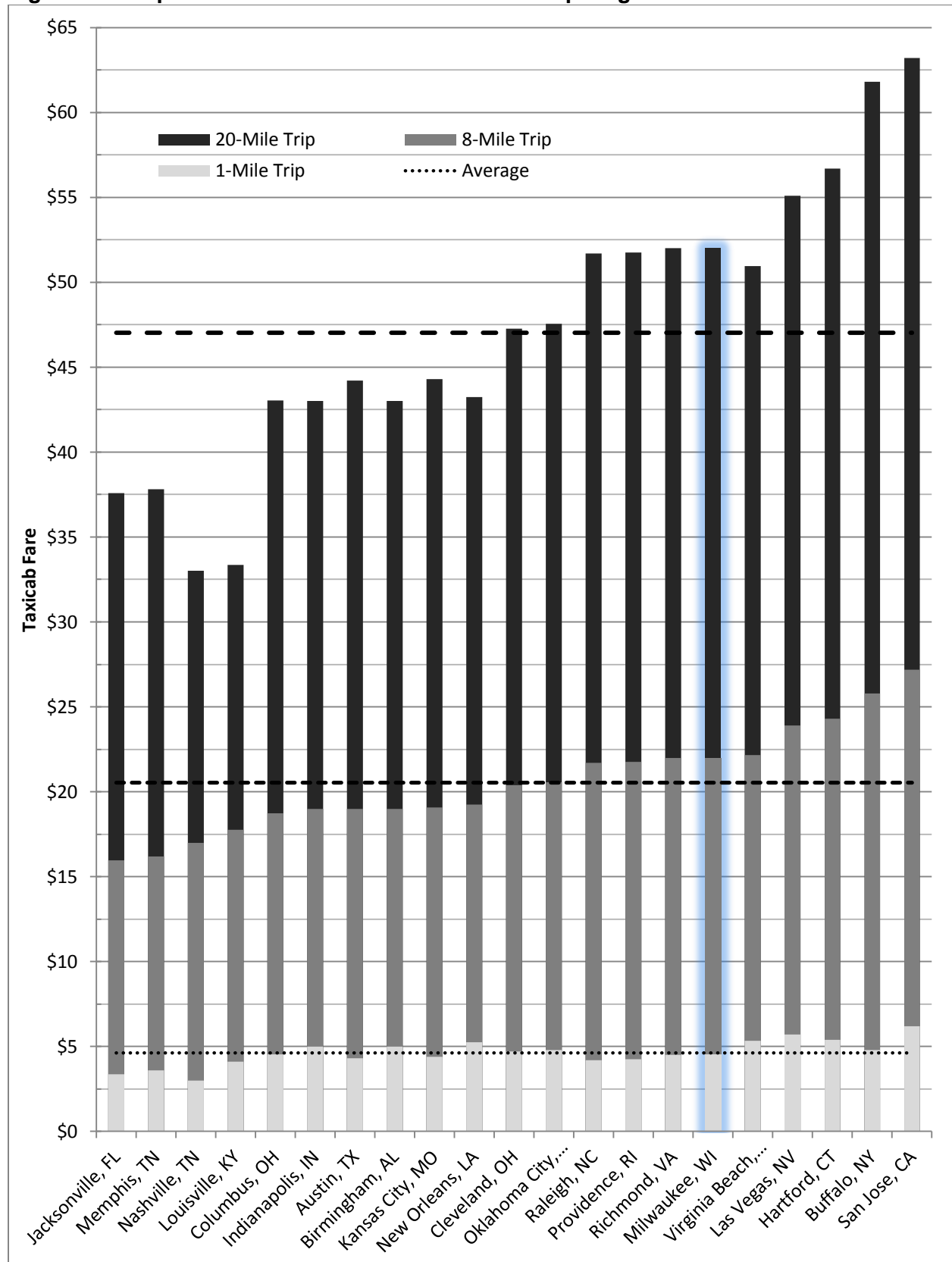


Figure 2. Total fare by distance of trip.

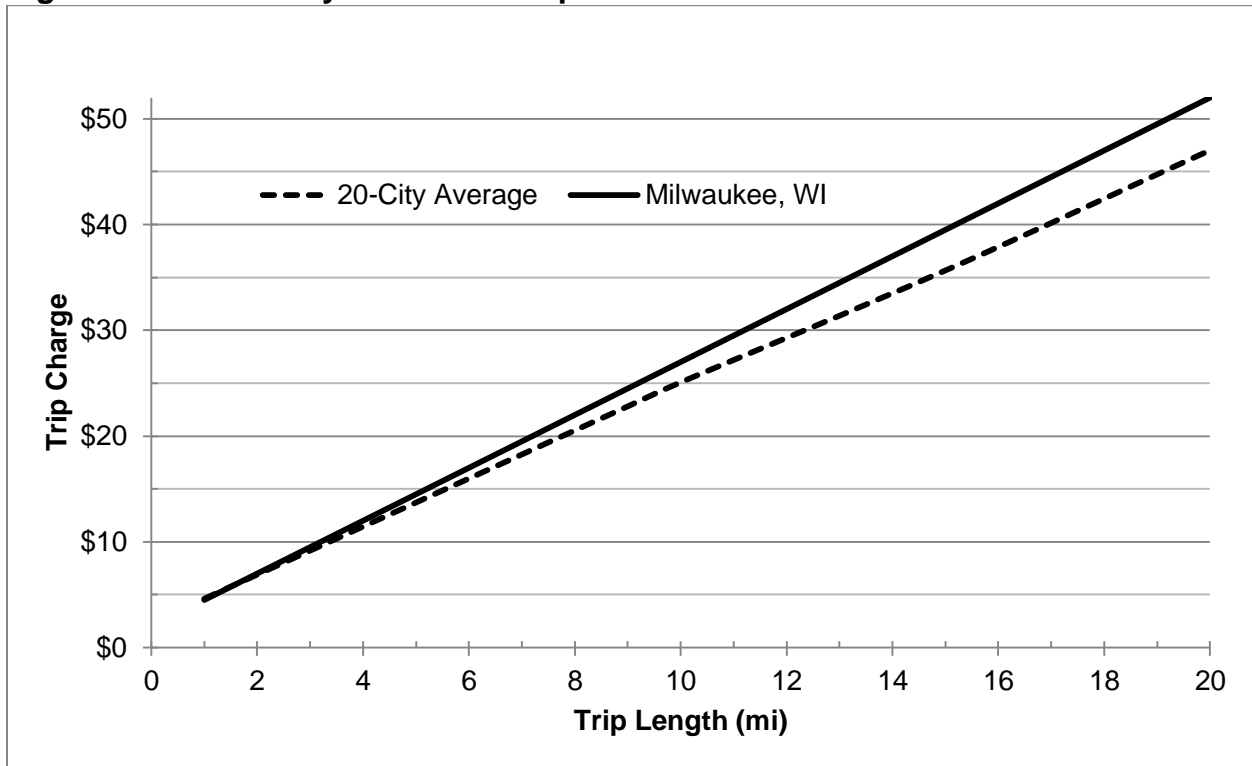
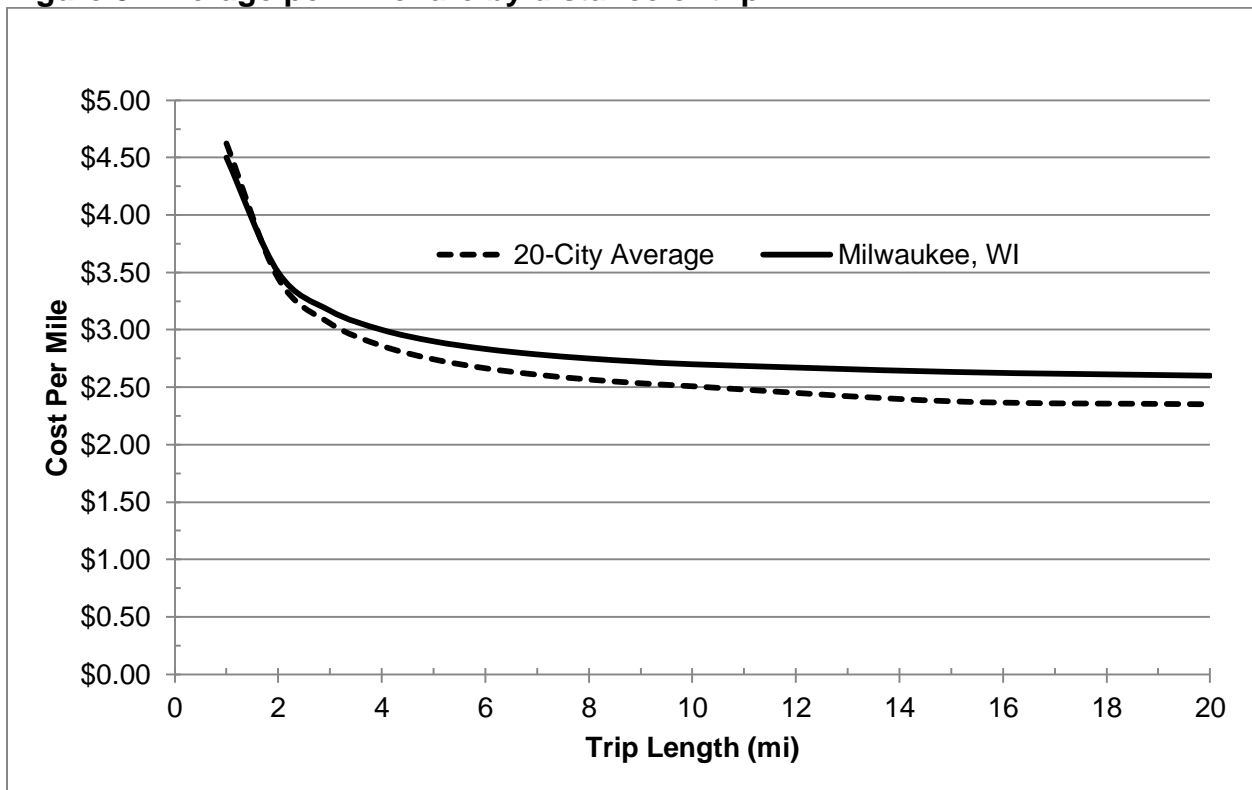


Figure 3. Average per-mile fare by distance of trip.



IV. FARE REGULATION STRUCTURE

A. Forms of Regulation.

Many influences on the taxicab industry, including market forces, are beyond the control or authority of most local regulation, but many factors can be – and have historically been – monitored and regulated by government authorities. The City of Milwaukee is no exception. Generally speaking, 3 forms of direct control exist:

1. Quantity or entry controls.
2. Quality or safety controls.
3. Rate controls.

A complex relationship exists among these controls. For instance, license lease costs are not completely independent of fares, but are a function of supply and demand. Because Milwaukee has over the past 2 decades regulated taxi licenses, drivers have had less opportunity to “shop around” for other licenses when lease fees go up. As a result, when fares increase, license owners can also increase the cost of leasing. Keeping these complexities in mind, each of these forms of direct control is discussed below.

- *Quantity or Entry Controls:*

Since January, 1992, the City of Milwaukee has imposed a cap on the number of new taxicab licenses. This cap – recently increased by 100 licenses – and others like it across the world, have both pros and cons.

Pros: Proponents of caps argue that when used with sufficient understanding of the market, competition will not be impeded. In addition, numerous external costs associated with taxicabs may encourage (and warrant) the use of quantity or entry regulations. These include traffic pollution and congestions, diversion from more efficient modes of transportation or an over-saturation of the market.

Cons: Critics of caps argue that by effectively creating an artificial shortage of taxi cabs, existing license holders receive an artificial or excess return on their investment above what a normal market would produce. This economic rent, they argue, is not the result of the competency of taxicab drivers or their willingness to compete in the industry. Critics further point out that increasing taxicab fares in a quantity-regulated market may encourage the

increase of license lease costs.

- *Quality or Safety Controls:*

It is for the most part widely accepted that governments should play a role in enacting minimum safety and quality standards in the taxi industry.

Pros: Because a customer cannot typically assess how well a taxicab has been maintained or the general competence of its driver, to preserve consumer confidence in the industry, regulators often enforce minimum quality standards.

Cons: In addition to many of the fixed and variable costs associated with owning or operating a taxicab, the cost of meeting quality or safety regulations may drive the need or perceived need to increase fares or, if overly burdensome, may prevent some qualified drivers from entering the market entirely.

- *Rate Controls:*

Assuming rate controls are an accepted form of market intervention, regulation of taxicab fares is predicated on 2 questions: first, are fares appropriate? And second, how are changes in current fares to be made?

Pros: Fare regulations protect consumers, especially those disproportionately affected by rate increases (those with limited transportation options).

Cons: Because markets are so complex, it may be difficult to determine appropriate fares, especially if regulators do not have access to or knowledge of adequate market information

In addition to the forms of direct regulatory controls discussed above, a governing authority's regulations might also affect taxi cabs through indirect measures, such as land use or density controls, through the control of urban form, through the regulation of population or socioeconomic characteristics or by regulating or promoting other forms of transportation.

B. Taxi Fare Structure.

In this report, fare structure refers to the relationship between different components that make up the overall fare charged to a passenger. How one component of the fare structure is changed can affect not only the overall fare, but the level and quality of service provided. Any increase in one component may require an offset in another to ensure fares remain consistent with regulatory goals. An overly complex fare structure may discourage potential customers or promote dissatisfaction due to an inadequate understanding of rates before hailing or booking.

The basic components of a fare structure may include:

- *Flag Drop Charge & Flag Drop Increment:*
Increasing the flag drop charge should improve the services for passengers on short trips by decreasing the incidence of drivers refusing short trips. A corresponding reduction in additional distance and waiting charges should also make travelling longer distances more affordable.
- *Additional Charge & Increment:*
Higher drop rates and lower mileage rates favor longer-distance trips on a cost-per-mile basis. Low drop rates and high mileage rates favor shorter-distance trips. Trip distance rates for those who depend of taxicabs for necessary trips may be an important consideration when setting both the flag drop charge and additional per-increment charges. For instance, low drop rates and high increment rates may discourage taxicabs from serving low-density areas if demand in those locations is for shorter trips.
- *Waiting Time Rate:*
Some municipalities do not implement waiting rates. Those that do either charge the rate when a taxicab is stopped or when it falls below a certain speed. Waiting time rates provide incentive for drivers to operate during peak hours of traffic or in more congested areas.
- *Peak-Hour Surcharge:*
Implementing a peak-hour surcharge or “premium fare” encourages more taxicabs to be on city streets during times or days when demand is the highest. Peak-hour surcharges might be implemented due to customer dissatisfaction with wait times at peak hours or reluctance on the part of taxi drivers to work these hours or days due to security risks or a higher

incidence of fare evasion. Customers facing an increase in fares due to a surcharge should see a corresponding increase in service availability.

- *Booking Fees:*

Booking fees are intended to cover the cost of driving taxicabs to specific locations. Increasing a booking fee improves the incentive for a driver to pick up booked fares, but may also decrease a customer's incentive to honor a booking (because a customer may be able to hail a passing cheaper cab as he or she waits for one that is booked). In addition, increasing booking fees could disproportionately affect disadvantaged groups (such as the elderly or disabled) who rely on booking services rather than hailing.

C. Additional Considerations.

Fare schedule considerations can be viewed in context. For example, from the point-of-view of taxicab owners (those possessing licenses), limiting entry to the market and increasing fares will provide the greatest benefit by raising lease rate income without consequent losses in license values. Would-be-owners would likely also like to see fares raised as an incentive to enter the industry, but these potential license-owners would likely wish to see entry controls eased and license prices depressed, at least until they obtain one.

Finally, taxicab customers are likely to support both an increase in taxicab licenses and a decrease in taxicab fares. Because each party is operating in its own self-interest, none of these perspectives can be viewed as necessarily correct, but they do provide an important basis for discussion of fare regulation.

Overall, the goal of fare regulation may be to achieve balance between these competing interests. For instance, geographic imbalances in service may arise if higher trip densities prompt drivers to cluster downtown, in commercial districts or at airports. To promote services in other areas, the fare structure may need to be adjusted accordingly. Ideally, a fare will be made up of a time-based component, a mileage-based component and a per-ride charge.

The time-based component covers the cost of the operator's time and the economic rental cost of the taxi, regardless of whether the taxicab is running or waiting, and the mileage-based component covers the cost of fuel and maintenance. The per-ride charge covers the average opportunity cost of the taxicab when it is between trips and is the variable to adjust to achieve an optimal passenger waiting time: that is, when the value of a passenger's time is higher, the per-ride waiting time charge should also be higher.

Adding quantity regulations into the mix further complicates regulation. For instance, in the absence of an artificial shortage of taxi cabs, lower fares may encourage the use of taxicabs and increase demand for good drivers. This may in turn reduce the cost of leasing or purchasing a license. Using this example, one can see how overly restrictive quantity controls can push up the costs of providing taxicab services and create pressure for fare increases, even though it may not be in the best interest of drivers to do so.

Many of these complexities are evident in the context of Milwaukee's taxicab regulations. For

instance, as the City eases restrictions on taxicab licenses, operators may begin to relinquish more expensive licenses in favor of less expensive ones and, subsequently, begin to lower license lease costs.

An overall increase in driver and owner income (due to a decrease in costs) may justify decreases in fares to encourage increases in taxicab use (further justifying the easing of taxicab license regulations). This may be met with some opposition, as the financial costs of license leases are paid by drivers via fare revenue; license lease fees are also revenue for operators, and are largely dependent on the supply of drivers and the demand for them.

Supply, in turn, depends on the level of fare revenue a driver can expect to earn, and demand depends on the number of taxicabs available on city streets. As fare revenue and the number of taxicabs on the street changes, one can expect market pay-in rates (license lease costs) to change as well. In the short-term transition to lower license costs, some drivers and owners will see reduced income, but this should, in theory, correct itself as the market adapts. In this way, one can see the complementary relationship between the level of fares and the number of licenses available on the market.

V. FARE CHANGE SYSTEMS

Price regulations of industries take many forms. Many regulations focusing on the adjustment of taxicab fares use market factors, such as supply and demand, but many also set rates to achieve other goals, such as equity of service, without a clear basis for prices. This section considers alternative approaches for setting and changing taxicab fares, including their advantages and disadvantages and selected case studies.

A. Guiding Principles.

Even if current taxicab regulations are equitable and justifiable, changes to these regulations will need to be made as market conditions change. Regardless of how or when fares are changed, any fare assessment will need to be objective. Any change in fare regulations should also:

- Reflect a fair return for the cost of providing the service, including driver labor.
- Be based on a driver following industry leading practices.
- Reflect changes in cost in a significant portion of the industry.
- Protect consumers from the abuse of market power and consider the needs of the public.
- Consider and incentivize both supply and demand of taxicab services.
- Incentivize industry efficiency or service, including taxicab availability and safety.

Rate structures should recognize that passengers are willing to pay different rates for different trip lengths at different times of the day or week, but that unreasonably high pricing for any one type of trip may reduce service or availability to undesired levels. Rate changes should also follow general national conventions to promote and protect out-of-town users. Finally, regulators may wish to consider how easily and cost-effectively rate changes can be implemented.

B. Fare Change Systems in the United States.

Various methods are used in U.S. jurisdictions to regulate taxicab fares. Some cities have deregulated entirely, while others do not codify their method for adjusting fares. Many cities set relatively high maximum fares, but also require taxicab companies to file rate schedules with the regulatory authority, allowing them to compete on price.

Rate adjustment triggers also vary. Some cities periodically review set rates and adjust according to comparable jurisdictions, industry operating costs, price indices or some combination of factors. Some require the industry to request rate changes, and a few cities further put the onus on the industry to provide justification for rate increases. Overall, the methods for setting and adjusting taxicab meter rates vary greatly across the United States.⁵

This report examines the municipal codes of a number of comparably-sized metropolitan areas regarding methods and practices used to set and adjust meter rates. This information is provided in Table 5 on page 40. Few conclusions can be drawn from this analysis other than that methods for adjusting taxicab rates in U.S. cities vary greatly.

This was the same conclusion obtained from a review of 19 different North American regulatory bodies.⁶ This International Association of Transportation Regulators' survey found that in 2008:

- 25 percent of responding jurisdictions did not undertake a regular review of meter rates.
- 47 percent used variable cost elements when adjusting fares (such as fuel costs).
- 26 percent relied on a CPI or similar index.
- 21 percent had no standard approach to adjusting fares.
- In 5 percent of the jurisdictions responding, the industry itself led fare adjustments.

A similar analysis was conducted in 2012 by the City of Houston's Administration and Regulatory Affairs Department (ARA). The ARA surveyed the 50 most populous cities in the United States, of which 19 responded with sufficient data. This survey found that reviews of CPI factors and rate comparisons to other jurisdictions were the 2 most common methods of rate setting. This report also notes that "*stakeholder, board, and governing body input, while not an actual rate-setting method, are factors that strongly influence rates.*"

⁵ Cooper, James, et al. *Taxi! Urban Economies and the Social and Transport Impacts of the Taxicab*. Burlington: Ashgate Publishing Company.

⁶ International Association of Transportation Regulators. 2008. *Taxicab Meter Rate Survey*.

Another method identified in adjusting meter rates is a supply and demand approach. In a small number of international jurisdictions (notably in the States of Victoria and New South Wales, Australia), a user-impact model is used to consider the effect meter rate changes will have on the supply of and demand for taxicabs. Complex algorithms and detailed economic analysis are used to project anticipated taxicab use and adjust meter rates accordingly.

Overall, as discussed above, closed-entry systems typically lead to high permit values and infrequent fare adjustments. For instance, a 2006 survey conducted by the City of Los Angeles found that most cities conducted rate reviews “as requested,” “annually” or “every two years.” Although volatile fuel prices have certainly led to frequent meter rate changes in some jurisdictions, annual review of taxi fares is more the exception than the rule. Those U.S. cities that do adjust meter rates regularly typically do so using the following methods:

- *Deregulation:*

Industry deregulation in the United States has had mixed results. In many cities, deregulation has resulted in an increased supply of taxicabs and fares and a decrease in service quality. Despite theoretical proposals that deregulation would lower customer costs through price competition, hail and rank taxicabs tend to actually increase rates in a deregulated market because customers cannot or do not comparison shop and because increased supply reduces drivers’ earning potential.

According to a 2007 report by the Organization for Economic Cooperation and Development (OECD),⁷ “a key lesson from the U.S. experience is that when deregulation is attempted in the future, administrators of the change will have to pay more attention to ensuring that price competition can be developed at the taxi-stand and airport locations, or that such locations are handled differently from the radio-dispatch segment.”

- *Comparison Cities:*

One of the more simple means of regularly changing taxicab fares is to base local meter rates on those in similar cities. A number of issues arise from this method (What constitutes a comparable city? Are comparable city meter rates accurate?), but aside from deregulation, this is likely the simplest method and certainly one of the more commonly used.

⁷ Organization for Economic Cooperation & Development. 2007. *U.S. Taxi Service Regulation & Competition*.

- *Taxi Cost Index:*

A taxi cost index works like a consumer price index, except that it measures the percent change in the cost of operating a taxi rather than the percent change in the cost of living to the average consumer. A weight is applied to each cost component in the index, often proportionate to the total cost of operation, and meter rates are adjusted to the overall weighted change in operational costs. For example, if fuel costs were half the cost to operate a typical taxi, a 10% increase in fuel would result in a 5% increase in the cost index.

A taxi cost index has numerous benefits. To begin, it is transparent, well-understood and delivers predictable fare changes proportional to the actual costs of operation, such as fuel, equipment, automobile financing or leasing, insurance, maintenance, accident repair, licensing or other expenses. It can also be customized to a specific city and is fairly easy to update regularly using published government data, industry surveys or both. Cost indices also do not typically require extensive consultations or discussions.

However, a taxi cost index does have limitations. An index cannot tell regulators how to adjust specific components of a fare (flag drop, increments, etc.), only how much fares should increase relative to operating costs or overall inflation; it is not an equitable system if fares are inappropriate to begin with. An index applies objective changes to existing fares, which may already contain a significant amount of economic rent.

A taxi cost index also does not consider changes to revenue as a result of taxicab demand, and it may be difficult to find an adequate local index or combination of indices to track changes in the local economy. Finally, regulators may also want to ask if driver incomes under a cost index system would increase at the same rate as operator incomes.

For instance, a 2012 report by the Center for International Economics gives 3 reasons why fare increases might not benefit drivers:

- Increased fares reduce passenger demand.
- Pay-ins to operators might increase.
- Higher earnings may encourage more taxicabs to operate.

- *Full Industry Review:*

In this system, regulators determine rate changes by taking into account the effect taxi

supply and demand have on fares and vice versa. Using indices, comparable cities, industry surveys or other methods, regulators would perform a full industry review.

This method of changing meter rates is the most complex and often involves sophisticated algorithms modeling the market, including expected number of trips, waiting times, peak availability and other variables. While no model can accurately predict the market, this system makes a more concerted attempt at basing fare regulations on industry knowledge. Extensive data collection is required.

A few jurisdictions even attempt to take into account latent demand. This includes demand by individuals who would have traveled by taxi but didn't because of real or perceived notions that it would be too expensive, wait time would be too long, service would be poor, other forms of transportation would be available or they decided not to travel.

Although difficult to measure, latent demand might be captured by differing fares based on time of day, distance, method of acquiring a taxi or other factors. Those authorities that perform full industry reviews often rely on community or industry surveys to provide this information.

For instance, the City of Edmonton, Alberta, city council created a Vehicle-For-Hire Commission to hold non-statutory public hearings and meetings to gain input from the industry, special interest groups and the general public. Other cities have hired consultants to explore rate change regulations, and in other cases, independent government "think tanks" make recommendations to governing agencies based on complex market models, such as with New South Wales, Australia's Independent Pricing and Regulatory Tribunal.

Table 5. Codified methods of maximum fare change in selected U.S. cities.

| CITY (MSA pop.) | CODIFIED PROCEDURE FOR CHANGING MAXIMUM FARES | CODIFIED APPROACH TO MAXIMUM FARE CALCULATION | ADDITIONAL ADJUSTMENTS |
|------------------------------------|--|--|------------------------------------|
| Austin 1,834,303 | Upon joint application for rate change signed by majority of franchise holders. | CPI for Urban Consumers, rates of fares in comparable cities, changes in operating costs. | Fuel surcharge. |
| Buffalo 1,134,210 | Annual review and renewal by the Common Council. | None specified in code. | None specified. |
| Cleveland 2,063,535 | Authority of the Commissioner of Division of Assessments and Licenses. | None specified. Commissioner sets fuel surcharges twice yearly. | Fuel surcharge. |
| Indianapolis 1,928,982 | Max. rates codified. Licensees must file a fare schedule and can change it quarterly. | None specified in code. | None specified. |
| Jacksonville 1,377,850 | Automatic, unless previously adjusted by council or on petition of 35% of operators. | A factor equal to 70 percent of the change in the Consumer Price Index for All Consumers. | Full rate review every 3 years. |
| Las Vegas 2,000,759 | Maximum rates codified. Licensees must file a fare schedule. | None specified in code. | None specified. |
| Memphis 1,341,690 | City Treasurer's authority or at request of a taxi company. City council must approve. | None specified in code. | Location, event & fuel surcharges. |
| Nashville 1,726,693 | Maximum rates codified. Licensees must file a fare schedule. | None specified in code. | Location, event & fuel surcharges. |
| New Orleans 1,227,096 | Reviewed each consecutive odd year. | National peer city comparative analysis. | None specified. |
| Richmond 1,231,980 | "Fixed, prescribed or established by the council." | None specified in code. | None specified. |
| San Jose 1,894,388 | Est. by resolution of the city council or by the director of the Dept. of Transportation. | CPI for Urban Consumers, rates of fares in comparable cities, changes in operating costs. | Fuel surcharge. |
| Virginia Beach 1,699,925 | "Any application" for a fare increase, including justification. | Financial and operating information as requested by the city manager. Public hearing required. | None specified. |
| Milwaukee 1,566,981 | Application by any fleet permittee or by 10% of the individual classification of permittees. | Information with respect to taxicab meter rates and operating costs. | Zone fare permits. |

VI. SELECTED CASE STUDIES

In addition to the study of codified methods of maximum fare change provided above, a review of notable fare change systems in selected U.S. cities was conducted. For the most part, taxicab services in the United States are regulated at the local level, with the Federal Trade Commission primarily focusing its efforts on assisting in deregulation. Legislative and administrative details vary from place to place, but according to the OECD, “*most major cities continue to regulate entry and fares in some manner.*”

A. Houston.

The Houston City Ordinance does not specify requirements for adjusting taxicab meter rates. Historically, when a rate review was requested by the industry, the City would initiate a rate study, including a review of CPI factors, comparable U.S. cities and independent information on taxicab operating costs reported by the TLPA.

A 2012 rate study by the City’s Administration and Regulatory Affairs Department (ARA) recommended the implementation of a more standardized method for determining rate changes, a “Taxicab Cost Index.” The Houston City Council has adopted a similar approach for determining tow rates. In recommending this approach, the 2012 report notes that

The proposed TCI provides a consistent solution for establishing rates, one that is easy to implement, easy to update, easy to understand, easy to replicate and economically appropriate. In addition, the TCI approach is cost-effective, requiring limited resources...allowing for more regular rate reviews.

The report also notes that an index would not require operators or drivers to submit proprietary cost and revenue data.

Before developing its suggested index, the ARA surveyed the taxicab industry to develop a “cost profile” for a typical taxicab operation. The survey was based on a survey prepared by Hara Associates for Calgary and Ottawa, Canada, and asked questions about fuel, insurance, repair, maintenance and other industry costs on a per-mile basis.

The ARA then used this data in conjunction with other cost data – including cost index factors in other cities and operating costs data provided by the TLPA – to develop its index. Weights were

provided for each factor, based on similar models in Ottawa, Canada, and Los Angeles, and TLPA operating data. Table 6 provides the components of the ARA's proposed taxi cost index.

Table 6. Weights and sources for the City of Houston's taxi cost index.

| Factor | Weight | Source |
|----------------------------|---------------|---|
| Repairs & Maintenance | 22% | CPI: Gasoline (All Types) – Houston Metro Area |
| Parts & Equipment | 7% | CPI: Motor Vehicle Maintenance – US City Avg. |
| Insurance | 6% | CPI: Motor Vehicle Insurance – US City Avg. |
| Depreciation/ROI* | 4% | CPI: Used Cars and Trucks – City Size A |
| Driver/Operator Returns I | 25% | Avg. Hourly Earnings – Transit & Ground Trans. – National |
| Driver/Operator Returns II | 25% | CPI: All Items – Houston Metro Area |
| Fees & Miscellaneous | 4% | CPI: All Items – Houston Metro Area |
| Total | 100% | |

*Return on Investment

B. Indianapolis.

Indianapolis is an example of an “open-entry” system where caps on taxicab numbers have been lifted but other regulations remain, such as driver and quality regulations and meter rates. The Department of Code Enforcement licenses, permits and inspects taxicabs in both Indianapolis and Marion County, and the Board of Code Enforcement is the governing body responsible for setting meter rates.

The Board is chaired by the Director of the Department, with 2 members appointed by the Mayor and 2 by the city council. Although fares are capped, fares and demand are not tracked, and public vehicles for hire are allowed to compete with taxicabs for dispatch services. All cabs in a company must charge the same rate, meter rates are not systematically reviewed, and no specific formula is used when rates are adjusted.

C. Las Vegas.

As a city built around tourism, Las Vegas has a unique taxicab system where street hails are not accepted. Regulated at the state level by the Nevada Taxicab Authority (NTA), Las Vegas taxicabs are structured by both time and location to address peak-load and neighborhood service. New entrants into the Las Vegas taxicab industry must also demonstrate the need for their services at hearings, where affected parties, including current operators, may debate public convenience and necessity.

Another unique aspect of the Las Vegas taxicab system is the level of detailed data collection. Regulations addressing a uniform system of accounting provide authorities access to the financial situation of the local industry, allowing the NTA Board to adjust meter rates accordingly. The Board, which oversees all hearings, is composed of 5 members appointed by the Nevada Governor. The NTA is entirely self-funded through the collection of taxicab fees.

D. Los Angeles.

As one of the longest-running franchise systems in the United States, Los Angeles has served as an example by which cities like Austin, Texas have developed similar regulations to help alleviate low service problems in less central locations. In its franchise system, Los Angeles taxicab companies are awarded service areas for up to 10 years based on bids and performance standards; service areas overlap to encourage competition. Like Las Vegas, Los Angeles also has a comprehensive system of data collection.

Performance of the Los Angeles taxicab industry is routinely monitored through company reports based on data from dispatch and telephone systems. A “Taxi Service Index” allows the City to assign performance scores using factors such as on-time response, customer complaints, vehicle inspections or company violations. This allows Los Angeles authorities to put problematic companies on probation or suspension for repeated failure to meet service standards.

The Los Angeles Department of Transportation oversees their taxicab industry under the governance of a Board of Taxicab Commissioners, appointed by the Mayor and confirmed by the city council.

E. Minneapolis.

Historical limits on taxicab numbers in Minneapolis were recently removed in phases, with complete open-entry into the taxicab market as of January, 2011. This was prompted by a long legal struggle, including a suit by the FTC in the mid-1980s. Like Indianapolis, Minneapolis has maintained many industry regulations, including the setting of maximum fares. With the deregulation of entry into the Minneapolis taxicab industry, operators compete on price by offering discounts off metered rates.

Rates are reviewed annually using a formula based on 7 objective factors linked to the cost of living, the cost of taxicab operation and changes in the local market. Fares may only increase by a maximum of 10% and may only decrease by a maximum of 5 percent per year. In recent years, the 10% maximum has been implemented, but some taxicab companies have chosen not to take the increase.

The city's Licenses and Consumer Services Division of the Department of Regulatory Services is responsible for regulation.

F. Nashville.

The Metropolitan Government of Nashville and Davidson County’s Metropolitan Transportation Licensing Commission (TLC) is one of only a few taxicab commissions nation-wide that does not report to local government officials. The TLC has its own board and staff who are Metro Government employees. In 2012, the Metro Government hired a consultant to study its taxicab industry and regulations. The ensuing report⁸ recommended the development of a taxi meter rate model using trip records, driver surveys and operating costs to calculate and update meter rates.

The model suggested in the report categorizes costs as fixed, running and labor, and the report suggested defining the “typical” taxicab in the city. Table 7 shows these taxicab costs in the City of Nashville.

Table 7. Nashville taxicab costs per loaded mile per cost element.

| Element | Cost Per Loaded Mile |
|-------------------------|-----------------------------|
| Vehicle Cost | \$0.11 |
| Lick Cost | \$0.57 |
| Insurance Cost | \$0.19 |
| Maintenance Parts Cost | \$0.12 |
| Maintenance Labor Cost | \$0.08 |
| Fuel Cost, Loaded Miles | \$0.23 |
| Fuel Cost, Positioning | \$0.09 |
| Sub Total | \$1.39 |

Using these cost calculations, the report notes that in typical (average) operations, a Nashville taxicab driver “*should be able to achieve an annual income of \$23,779.*” The costs in Table 7 do not include labor (opportunity) costs; the report notes that these are “*internal to the calculation and need to be increased in line with general measures of earning increases as per other cost elements.*”

⁸ RPM Transportation Consultants. July 2, 2012. *Report on Taxicab and Other Passenger Vehicles for Hire in Nashville*. Metropolitan Government of Nashville and Davidson County.

In addition to measuring costs from the “ground up,” the 2012 report notes that review of these costs over time is a necessary component of the model.

In measuring the extent of cost changes in each of the elements of the cost model, Nashville can identify a total percentage change in future meter reviews that can be applied directly to the meter rate. Thus a future application of the model may identify that costs of production have increased by a measured percentage. The application of that percentage to the meter rate ensures that revenue from taxi operation remains in line with costs. The resultant ‘top down’ analysis provides a rapid review of costs and measurement of appropriate changes to meter rate.

G. Seattle.

The Department of Finance and Administrative Services is the authority responsible for taxicab regulation in Seattle. The City of Seattle was one of the jurisdictions to completely deregulate in the 1970s, but has since reregulated. In 1984, fares were fixed and a moratorium placed on new licenses.

Of additional interest is the inter-jurisdictional cooperative agreement between Seattle and surrounding King County, which includes the region's airport. Current metered fare rates for each jurisdiction are identical, and the regulatory bodies share administrative duties (King County licenses all drivers and Seattle licenses all vehicles). Finally, Seattle is unique in that it has built a fuel surcharge scale into its regulations.

VII. FUTURE CONSIDERATIONS & CONCLUSION

A. New Technology.

“Digital dispatch services” allow consumers to arrange and pay for transportation with both incumbent services and new entrepreneurs to the industry. These systems allow consumers to use new technology to locate nearby vehicles, track their trips and, in some cases, to calculate fares. Smartphones can also be used to pay for trip fares.

According to a FTC letter to the District of Columbia Taxicab Commission concerning changes in municipal regulations:⁹

These technologies and methods may be more responsive to consumer demand, may promote a more efficient allocation of resources (e.g., vehicles and drivers) to consumers, may expand demand for passenger vehicle transportation services, and may reduce consumers’ transaction costs in paying for such services. At the very least, these technologies and methods provide new alternatives for consumers.

Similar to the City’s recent regulatory deliberations due to rideshare services such as Uber and Lyft, the effect of existing regulations on emerging technologies may be misconstrued or outright ignored. As a result, existing traditional service providers may feel that emerging entrepreneurs, such as digital dispatch services, have an unfair competitive advantage.

Regardless of the type of technology, in reviewing or revising regulations to facilitate fair competition in the industry, it should remain a priority for the City to focus regulation primarily on ensuring the safety of customers and drivers and consumer protection. In purpose or effect, regulation should not promote one group over another.

The FTC, in particular, suggests that any new regulatory framework should “*allow new and innovative forms of competition to enter the marketplace unless regulation is necessary to achieve some countervailing pro-competitive or other benefit, such as protecting the public from significant harm.*”

For instance, smartphone technology may be able to facilitate the matching of drivers with customers in much the same way as the phone booking market does currently, and the

⁹ Federal Trade Commission to District of Columbia Taxicab Commission. June 7, 2013. *Re: Second Proposed Rulemakings Regarding Chapters 12, 14, and 16 of Title 31.*

differences between the rank and hail market and the pre-booked market may allow for different regulation of these components of the industry. Government policies may be able to expand the size or scope of the pre-booked taxicab market (the portion of the market requiring less regulation) by, for example, designating pick-up areas for pre-booked taxicabs or establishing kiosks which invite quotes and allow customers to select their preferred service provider.

Conceptually, pre-booked taxicabs are no different than premium-end vehicle-for-hire operations, such as limousines. Because the phone booking market (including smartphone-related bookings) does not suffer from the same constraints to effective competition as rank and hail taxicabs (customers can seek price information from a range of providers and negotiate in an unpressured environment for an experience which meets their specific needs), some argue it may be reasonable to regulate this market no differently from other home service industries, such as home-delivered pizza or home handypersons.

B. Data Collection.

The absence of sufficient data or a model specific to Milwaukee to analyze the impacts of changes to taxicab fares limits the extent to which policy-makers can develop and apply a system for changing fares. Sufficient data is needed to continually and effectively recommend rate changes according to the market and the best interests of the public.

For instance, research and experience suggest it may be unwise to increase rates in a market with under-utilization of vehicles. To develop equitable regulations promoting competition, accountability and customer value, it will be necessary to have objective, transparent information on service performance.

Conducting community surveys on the taxi industry may also help paint a better picture of the latent demand for the industry in Milwaukee. For instance, asking passengers and potential passengers about their experience with or perception of wait times or costs for taxicabs at different times of the day and week might help regulators determine willingness and ability to travel by taxi. Further, a survey of the industry might help the City to determine appropriate rate changes based on taxi use patterns or earning by shift.

In addition to surveys, dispatch technology could certainly provide fare and ride data upon which accurate meter rate policies can be based. According to a November 8, 2013, Milwaukee Journal Sentinel article:

Details on wait times, number and length of rides, fares generated and underserved locations can help drive policies that result in fitting the number of cabs to the needs of the taxi-riding community. Any decisions on adjusting the number of licensed cabs should be built around this evidenced-based decision making.

C. Regulation Jurisdiction.

Most U.S. states and Canadian provinces delegate taxicab regulation to individual municipalities. Some, like Arizona and Nevada, have more stringent state regulations or authorities, and Washington D.C.'s Taxi Commission is appointed by the municipal government through delegated federal authority.

In some cases, regulatory responsibilities are shared between county and city authorities; such intergovernmental cooperation does not seem to have an impact on the local taxicab industry, either good or bad. Such cases are more often found in jurisdictions outside the United States, such as in Canada and Australia. In contrast to regulatory authorities appointed to oversee taxicabs, limousine service in the United States are commonly regulated at the state level.

In practice, intergovernmental cooperation in taxicab regulation seems to spur from necessity or convenience more than an attempt to improve the industry, but the notion of a possible shared city and county taxicab authority is at least germane to Milwaukee. In 2013, the Milwaukee County Board approved a measure to have County Executive Chris Abele negotiate with the City on transferring taxicab regulations to the County (the measure was vetoed citing legal grounds but the veto was over-ridden).

City of Milwaukee Attorney Grant Langley, however, also recently gave a legal opinion that *“such an agreement would not be legal or enforceable.”* Though under current state law a transfer of authority is not possible, other intergovernmental agreements may be relevant in the future.

D. Conclusion.

Overall, most taxicab fare regulations in the United States are administered by city departments or agencies and use peer data or economic analysis to set meter rates. Further, triggers for meter rate reviews are either initiated by the industry or the authority itself, either regularly or in an ad-hoc fashion. The use of ad-hoc rate reviews may be easier for regulatory authorities but are arguably not to the benefit of either the public or the taxicab industry. Based on anecdotal review of industry “best-practices” in the cities described above, a number of conclusions emerge.

To begin, annual rate reviews triggered by “inflation” thresholds might be an appropriate balance between the administrative burden of annual rate changes (meter reprogramming or inspection costs) and the “price shock” of infrequent rate changes to both consumers and service providers. In this way, rates would be reviewed annually but only changed if certain thresholds are reached (for instance, if the CPI increases by more than 2.5%). Some costs, such as fuel, will likely remain volatile and subject to frequent change, but these could be accommodated objectively through a codified surcharge schedule.

Further, because the high cost of a taxicab license on the open market has put upward pressure on City-mandated meter rates, the easing of license caps should increase taxicab demand by encouraging lower fares. It stands to reason, then, that decreases in fares should help promote lower license lease costs: over the long-run, operators may need to reduce their lease costs to attract drivers if fare revenue is lowered.

The City could further this benefit to the public by finding creative alternatives to regulating entry into the industry. For instance, as Boston Globe Columnist Edward L. Glaeser notes in a 2013 article¹⁰ about Boston’s taxicab industry:

Better regulation would base the fees on a hard estimate of the burden each cab imposes on its surroundings. Just like other cars, cabs create congestion, pollution, and safety risks for pedestrians and other drivers; these and other problems associated with driving amount to a social cost of 10 cents per mile, by one estimate. So if Boston cabs travel an average of 60,000 miles per year, the annual medallion fee should be about \$6,000. Current medallion owners should keep their right to renew their licenses, just as

¹⁰ Glaeser, Edward L. April 4, 2013. *Excessive Regulation Turns Boston Taxi Industry Into Corrupt Mess*. The Boston Globe.

the statute says, but so should anyone else, as long as they pay the annual fee. If, at some future date, Boston decides that it has too many taxis, it can always raise the annual fee to the point where license holders stop renewing.

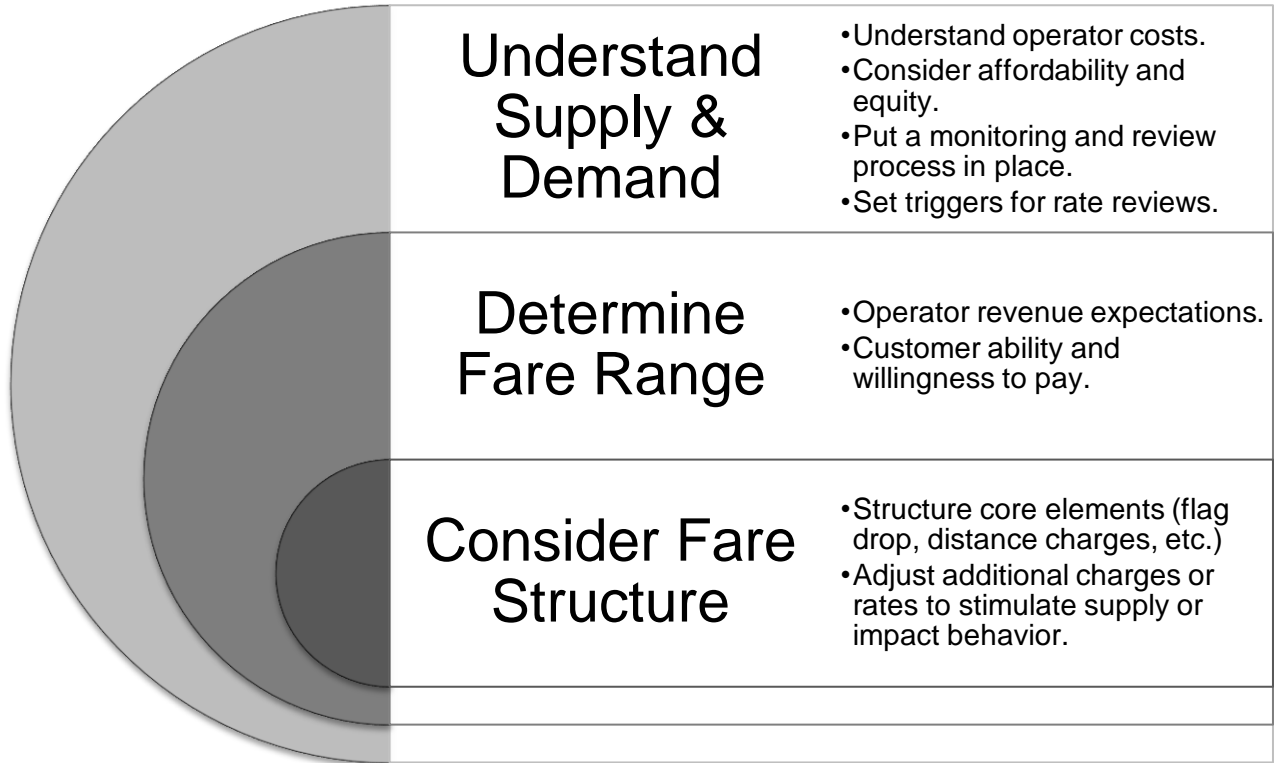
Regardless of the method chosen to adjust meter rates, any changes should be made frequently enough to maintain cost recovery for the industry but not so frequently as to create uncertainty or confusion for the public or undue administrative costs for the regulatory authority. In theory, an optimal taxicab market could be achieved under the present regulatory system if administrators know the correct number of licenses to allow and the appropriate level of taxicab fares. In practice, this is rarely the case.

Because there is no such thing as perfect foresight, regulations will to varying degrees over- or under-represent future economic rents, which will generate pressure for fares to diverge from optimal levels. However, with fair entry into the market, an annual license fee proportional to normal industry profit and meter rate adjustments consistent to the cost of operating a typical taxicab, the City might best minimize the potential impact of unforeseen circumstances and the pressure of various interest groups.

Without guiding principles to help regulators objectively find these numbers, optimal fare determinations (as well as entry and quality regulations) become political issues and not in the interest of the public welfare. Figure 4 on page 56 provides a simple overview of the steps necessary to determine and review taxicab fare levels.

Transportation is essential to most city residents. If taxicabs are not conveniently available at equitable prices, people will, in the short run, choose other transportation options or give up on the activity requiring transportation (including jobs and healthcare). The availability of transportation may also factor into a person's decision of whether or not to own a personal vehicle. In these and other ways, the long-term effects of inefficient transportation options may prove significant, not just to the overall characteristics of individuals, but the City as a whole.

Figure 4. Simple overview of steps in determining and reviewing taxicab fare levels.



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