

THE TAXATION OF CARSHARING:
IS PUBLIC POLICY CONSISTENT WITH THE PUBLIC BENEFITS OF CARSHARING?

BY

Alice Bieszczat

June, 2011

Chaddick Institute for Metropolitan Development
School of Public Service
DePaul University
Chicago, Illinois

The author gratefully acknowledges Joseph P. Schwieterman, PhD, and Nate Frey for their advisory and research assistance, respectively. The author may be contacted at alicebieszczat@gmail.com.

ABSTRACT

As carsharing experiences rapid growth in the United States, it is attracting the attention of researchers interested in its potential public benefits, including its ability to reduce vehicle ownership, vehicle emissions, vehicle miles traveled and transportation costs. Building upon this existing literature, this study reviews evidence in support of these benefits and measures the sales and excise taxes paid by carsharing members in 82 U.S. cities. The data reveal that carsharing reservations are taxed, on average, at 14.08% to 17.93%, or about 1.7 to 2.2 times the general sales tax rate in cities. Vehicle rental sales and excise taxes paid on carsharing reservations account for a significant share of the taxes. The presence of such elevated rates of taxation in light of carsharing's public benefits points to a fundamental contradiction and suggests that state and local governments should better align their carsharing policies with their environmental, economic and social goals.

INTRODUCTION

Carsharing has expanded significantly since the first major U.S. carsharing organization was launched in Portland, Oregon, thirteen years ago. In the intervening years, carsharing organizations and advocates have vigorously claimed that carsharing brings a plethora of benefits to users and the surrounding community. These include environmental benefits, such as reduced greenhouse gas emissions, reduced personal vehicle holdings and fewer vehicle miles traveled; economic benefits such as reduced transportation costs for individuals, companies and governmental entities, and increased consumer spending in the local economy; and social benefits such as reduced congestion and increased use of transit and active transportation (walking and biking). Similarly, there are claims that carsharing is closely aligned with the goals of many local, county and state governments to reduce emissions and pollution and improve air quality; reduce congestion and relieve parking pressures; boost local and state economies; increase green and open space; and improve public health and safety.

This paper explores the question of whether there is indeed compelling evidence of public benefits attributable to carsharing; and if so, are government taxation policies supporting or inhibiting the growth of carsharing and its public benefits? To answer these questions, this report briefly summarizes the scholarly research about carsharing benefits and documents the taxation policies of state, county and local governments towards carsharing. The taxation of general goods and services and the taxation of traditional car rentals are also documented and compared to the taxation of carsharing, in order to gauge whether local, county and state taxation policies are supportive or inhibitive to carsharing. The final section offers conclusions and recommendations.

BACKGROUND

Carsharing organizations (CSOs) maintain fleets of vehicles that are available to members for use on an hourly, pay-as-you-go basis. Carsharing increases the mobility of member users. However, carsharing alone is not a substitute for private vehicle ownership. With an hourly rate structure, carsharing is rarely appropriate for a daily commute and the attendant charges that would accrue while the vehicle is idle at the workplace. Rather, carsharing is viewed as the “missing link” in a package of transportation options, including transit, walking, biking, taxis, rental cars and ridesharing, that enables users to live largely car-free lifestyles, or to reduce overall household vehicle holdings. Carshare members will utilize transit, walking or biking for the daily commute; taxis for trips that are one-way or short in distance but long in duration; rental cars for longer distance trips that benefit from unlimited mileage; and carshare vehicles for other trips as needed (Millard-Ball et al. 2005). Members reserve and use carshare vehicles for reasons of necessity and convenience. For example, they may prefer carsharing when transporting items such as groceries purchased on a shopping trip, when making multiple stops while on personal business, or when a destination is difficult to reach via other modes of transportation (Millard-Ball et al. 2005).

The carsharing industry has experienced rapid growth since the first major carsharing service was launched in 1998. As of January, 2011, 27 U.S. carsharing organizations reported 518,520 members using a fleet of 7,776 vehicles (Innovative Mobility Research 2011). They have a major presence (50 vehicles or more) in 13 metropolitan areas and locations in 44 states.

CARSHARING IMPACTS – EVIDENCE OF THE PUBLIC BENEFITS

Many advocates of carsharing argue that carsharing provides enhanced mobility and flexibility for its members. Carsharing advocates and supporters also claim that it generates additional positive impacts for both users and society in general. These potential impacts, they argue, include: environmental benefits such as reduced greenhouse gas emissions; economic benefits

including reduced transportation costs for users; and social benefits including reduced travel delays due to congestion and increased use of active transportation modes. The four most compellingly documented benefits in the literature are reductions in vehicle ownership, vehicle miles traveled, greenhouse gas emissions and transportation costs.

Reduced Vehicle Ownership: Studies and surveys suggest that every vehicle in the carsharing fleet replaces 9 to 15 privately owned vehicles (Martin and Shaheen 2010; Econsult 2010; Cervero, Golub and Nee 2007; Price, DeMaio and Hamilton 2006; Millard-Ball et al 2005; Lane 2005; Cervero and Tsai 2004; Katzev 2003; Zipcar 2010a; I-GO 2011). Martin and Shaheen (2010) found that carsharing households collectively removed between 90,000 and 130,000 vehicles from the transportation system by either shedding an owned vehicle or by joining carsharing in lieu of purchasing a new vehicle.

Reduced Vehicle Miles Traveled: Carsharing appears to reduce the average vehicle miles traveled of carsharing members (Cervero, Golub and Nee 2007; Price, DeMaio and Hamilton 2006; Millard-Ball, et al. 2005; Cervero and Tsai 2004). The hourly, all-inclusive pricing structure of carsharing encourages a reduction in VMT by making the true cost of each mile driven more apparent; members respond by more thoughtfully comparing the costs and benefits of each mode before each trip (Lane 2005; Katzev 2003). The authors of a recent retrospective of the North American carsharing industry reviewed all relevant studies and estimated that VMT falls by 44% for the average carsharing member (Shaheen, Cohen and Chung 2009). As VMT decreases, use of active transportation increases (Lane 2005; Price, DeMaio and Hamilton 2006; Millard-Ball et al. 2005; Scott, Brook and Perussi 2003).

Reduced Greenhouse Gas Emissions: On average, carsharing households reduce their greenhouse gas emissions by .58 to .84 tons per year. The aggregate impact of all carsharing

households in North America on greenhouse gas emissions is a reduction in 109,000 to 224,000 tons per year (Martin and Shaheen 2010).

Reduced transportation costs: Carsharing can lower transportation costs for individuals and institutions (Econsult 2010; Price, DeMaio and Hamilton 2006; Millard-Ball et al. 2005; Lane 2005; Zipcar 2010b; Feigon 2008). Households that reduce their transportation costs have the opportunity to invest savings into appreciating assets, such as education or a home, rather than a depreciating vehicle (Feigon 2008). Local governments including Berkeley, New York and Philadelphia, have saved hundreds of thousands or millions of dollars each year by partnering with CSOs to manage part or all of their municipal fleets (Cohen, Shaheen and McKenzie 2008; Millard-Ball et al. 2005; City of Philadelphia 2004; Government Fleet 2010; City of New York 2010).

Additional benefits of carsharing are claimed as well, including: reduced congestion due to fewer vehicles on the road driving fewer miles; potential health benefits from increased use of active transportation; and a variety of benefits associated with reduced parking demand, including lower development costs, more open and green space, and fewer impervious surfaces and reduced stormwater runoff (Litman 2010 and 2011; Shoup 2005). These more speculative benefits, while plausibly argued as impacts of carsharing, are not as richly documented in the literature as the four primary benefits highlighted in this section and must be acknowledged as such.

METHODOLOGY

There are many ways in which government interacts with carsharing. An increasing number of governments are now carsharing customers; many also lease space for parking stalls to CSOs. Taxation is another means through which local, county and state governments interact with carsharing. Such interactions can be supportive, neutral or negative.

The following sections explore the application of sales and excise taxes to carsharing and compare the taxation of carsharing to both general goods and services (the general sales tax) and to

car rentals (car rental sales or excise taxes). This section offers an overview of the data collection methodology to lay groundwork for the following section, which summarizes the key findings. In the final section, conclusions are drawn and recommendations made.

Data Collection

To understand how taxation affects carsharing, extensive information was collected about the price paid by members for a carsharing reservation in locations throughout the United States. The data was collected using the reservations websites of three CSOs: Zipcar, a for-profit, independent carsharing organization that operates in 11 metropolitan areas and at over 150 campuses in 32 states; Connect by Hertz, which has a presence in 26 states and is the carsharing division of the for-profit rental car agency Hertz; and I-GO, one of the three major U.S. non-profit CSOs, which operates in the metropolitan Chicago area.

Reservation prices were collected in 12 of the 13 metropolitan area with a major carsharing presence of 50 vehicles or more. The metropolitan areas included are: Atlanta, Georgia; Baltimore, Maryland; Boston, Massachusetts; Chicago, Illinois; Los Angeles, California; New York/New Jersey; Philadelphia, Pennsylvania; Pittsburgh, Pennsylvania; Portland, Oregon; San Francisco, California; Seattle, Washington; and Washington, District of Columbia. In addition, reservation prices were collected from various campus locations to ensure representation in the data set of every state in which the three CSOs provide service. In total, data from 91 carsharing “pods” in 82 cities in 40 states were collected.

The full price for each reservation was collected, as were its components: base reservation rate; all applicable taxes; and all applicable government-imposed fees and surcharges. For example, a one-hour reservation from Zipcar in Hartford, Connecticut, costs a member \$9.72, or: \$8.00 per the hourly base rate; \$.48 state sales tax at 6%; \$.24 state motor vehicle rental surcharge at 3% ; and a

\$1.00 per day state motor vehicle rental surcharge. The reservations were priced whenever possible for a compact vehicle, such as a Honda Civic, which are common in CSO fleets.

For each carsharing pod sampled, the cost to a member of both a one-hour and a 24-hour reservation was collected. This represents the minimum and maximum reservations available in a one-day period by most carsharing providers. Gathering data for both one and 24-hour reservations is important for two reasons. One, it allows measurement of the minimum and maximum tax rates that are applied to CSO members. Some taxes are applied to carsharing as a flat rate per day or per transaction (for example, the previously mentioned \$1.00 per day surcharge in Connecticut), rather than a percentage of the base reservation charge. The effective tax rate of a daily fee will decline as the length and cost of a reservation increases. (In Hartford, Connecticut, the tax rate on a one-hour reservation is 21.5% while the tax rate on a 24-hour reservation is 10.52%.) In addition, while most carsharing reservations are brief in duration (several hours or less), daily rates and reservations are offered. A full-day carsharing reservation also allows comparability to rental cars, which are generally available in 24-hour, not hourly, increments.

While traditional car rental has some similarities with carsharing – vehicle use on a temporary basis without ownership – it has numerous differences as well, including customer base, business model and documented impacts. Despite these differences, car rental sales and excise taxes are in some locations applied to carsharing. This analysis will consequently include a comparison of the tax treatment of carsharing to traditional car rentals as well as to general goods and services. Therefore, after documenting the cost of carsharing reservations in 82 locations, the cost to consumers of a 24-hour car rental in the same locations was gathered using the Enterprise Rent-A-Car website. Downtown or neighborhood based rental locations, rather than airport locations, were selected to better match the typical carsharing service areas of a city's central business district, denser

neighborhoods and college campuses. This step was necessary to avoid including the special taxes and surcharges applied to airport-based transactions that limit comparability.

Finally, the general sales tax rates were collected for each sampled location. This data was collected from state, county and local Department of Revenue (or equivalent) websites. Using the completed data set, the following section offers four basic findings about the status of municipal and state taxation of carsharing operators.

DATA ANALYSIS AND RESULTS – THE TAXATION OF CARSHARING

The data was analyzed to facilitate comparison of the tax treatment of carsharing, traditional auto rental, and general goods and services. Data analysis revealed the following key findings:

Key Finding 1: Carsharing is being taxed at between 1.7 to 2.2 times the rate of general goods and services. Using population-based weighted averages, one-hour carsharing reservations are taxed at 17.93%, while 24-hour carsharing reservations are taxed at 14.08%. General goods and services, meanwhile, are taxed at just 8.06%.

The average and median rates of taxation across the 91 pods in the 82 cities were calculated for: i.) general goods and services; ii.) a one-hour carsharing reservation; iii.) a 24-hour carsharing reservation; and iv.) a 24-hour car rental. The average rates were then weighted by population to develop a more refined (although not perfect) measure of the taxation encountered by the typical urban dweller in cities where carsharing is most prevalent. Table 1 displays the results.

Table 1. Average and median tax rates of sampled cities

	General goods and services	One-hour carsharing reservation	24-hour carsharing reservation	24-hour car rental
Average tax rate-population weighted	8.06%	17.93%	14.08%	15.93%
Average tax rate	7.08%	16.10%	10.90%	12.48%
Median tax rate	7.00%	11.50%	10.52%	11.49%

The population-weighted average tax rate in sampled locations for a one-hour carsharing reservation is 17.93%, or more than twice the average sales tax on general goods and services of 8.06%. The population-weighted average tax rate on a 24-hour carsharing reservation is 14.08%, or about 1.7 times the average general sales tax. Because a carsharing reservation can vary in duration from one hour to 24 hours, the one-hour rate should be considered the upper bound of the tax rate that members will pay, while the 24-hour rate is the lower bound of the tax rate applied to carsharing members, for a reservation that is one day or less (the majority of reservations).

The population-weighted average tax rate on a one-hour reservation, at 17.93%, is noticeably larger than the median rate of 11.50%. This suggests that some unusually large tax rates are skewing the average higher than the median, which is indeed true. Tax rates on carsharing can reach as high as 62.56%, and 21 of the 91 sampled pods had a tax rate of over 20% for a one-hour reservation. Table 2 presents the price of a one-hour reservation in a selection of these highly taxed locations.

Table 2. Cities with highest tax rates for carsharing expressed as a percentage of the price of a one-hour reservation

City	Total cost	Base rate	Tax	Tax rate
Hoboken, NJ	\$14.63	\$9.00	\$5.63	62.56%
Pittsburgh, PA	\$14.09	\$9.25	\$4.84	52.32%
Tempe, AZ	\$11.40	\$8.00	\$3.40	42.50%
Philadelphia, PA	\$10.14	\$7.25	\$2.89	39.86%
Miami, FL	\$9.65	\$7.00	\$2.65	37.86%
Albuquerque, NM	\$10.96	\$8.00	\$2.96	37.00%
Colorado Springs, CO	\$10.83	\$8.00	\$2.83	35.38%
Fayetteville, AR	\$9.80	\$8.00	\$1.80	22.50%
Hartford, CT	\$9.72	\$8.00	\$1.73	21.50%

The tax rates presented in Table 2 must be viewed as the maximum rate a carsharing member could be charged, because the effective tax rate on a reservation will fall as the duration of

the trip increases in those locations with a per day/per transaction fee or surcharge. Table 3 presents the same pods as in Table 2; however, in this table, the columns report: i.) the tax rate on a one-hour reservation (i.e., the maximum tax rate) ; ii.) the tax rate on a 24-hour carsharing reservation (i.e., the minimum rate); and iii.) the general sales tax rate applied to goods and services.

Table 3. Cities with the highest tax rates for carsharing, expressed as a percentage of the cost of the reservation, with comparison to general sales tax rate

City	One-hour reservation	24-hour reservation	General goods & services
Hoboken, NJ	62.56%	14.25%	7.00%
Pittsburgh, PA	52.32%	14.97%	7.00%
Tempe, AZ	42.50%	15.09%	9.30%
Philadelphia, PA	39.86%	15.08%	8.00%
Miami, FL	37.86%	10.60%	7.00%
Albuquerque, NM	37.00%	15.03%	7.00%
Colorado Springs, CO	35.38%	13.63%	7.40%
Fayetteville, AR	22.50%	22.52%	9.25%
Hartford, CT	21.50%	10.52%	6.00%

The data in Table 3 demonstrate that in these locations with high carsharing taxes, even the minimum tax rate a CSO member would be charged for a reservation exceeds the sales tax rate for general goods and services. In fact, this is generally true: in 58 of the 82 locations sampled, carsharing is taxed at a higher rate than general goods and services, while 3 locations tax carsharing at rates lower than general goods and services. The remaining 21 locations tax carsharing at the same rate as general goods and services.

Given the convincingly documented benefits of carsharing to their host communities, this disadvantageous taxation situation is surprising. Despite the established positive impacts of

carsharing, numerous local, county and state governments across the country are taxing carsharing at elevated rates compared to most other goods and services.

Key Finding 2: The per day/per transaction vehicle rental fees and surcharges imposed by governments are an important contributor to the high tax rates applied to carsharing. Percentage-based vehicle rental excise taxes that are layered onto the general sales tax rate also contribute to the disadvantageous tax treatment of carsharing.

Given that the most frequent reason members reserve a carsharing vehicle is for a shopping trip, most carsharing trips are just a few hours in length. Therefore, per day or per transaction fees and surcharges applied to vehicle rentals are particularly injurious to carsharing members. Examples of these fees/surcharges include: a \$5.00 Domestic Security Fee charged by the State of New Jersey for each day or part thereof that a vehicle is rented; and a \$2.00 per day motor vehicle rental fee charged by the State of Pennsylvania. While these fees add just 10.5% and 5.2%, respectively, to the price of a one-day traditional car rental in Hoboken, New Jersey, and Philadelphia, Pennsylvania, they add up to 55.6% and 28.6%, respectively, to the price of a one-hour carsharing reservation. These per day/per transaction fees were encountered in 21 of the 82 cities sampled. The fees, which may be imposed at the local, county or state level, are listed in Table 4.

It is not only the application of per day/per transaction vehicle rental fees that elevates the tax applied to carsharing. High percentage-based vehicle rental taxes layered onto the general sales tax rate are a contributing factor as well. Examples include the New York metropolitan area, in which an 8.875% general sales tax combined with an 11% vehicle rental tax results in a 19.875% tax on carsharing reservations, and Seattle, in which a 9.5% general sales tax combined with a 9.7% vehicle rental tax results in a 19.2% tax on carsharing reservations.

Table 4. Per day/per transaction fees

Governmental entity imposing the fee	Amount of fee
State of New Jersey	\$5.00
City of Chicago, IL	\$2.75 ^a
Maricopa County, AZ	\$2.50 ^b
Allegheny County, PA	\$2.00
State of Colorado	\$2.00
State of Florida	\$2.00
State of New Mexico	\$2.00
State of Pennsylvania	\$2.00
State of Connecticut	\$1.00

^aapplied only to carsharing reservations of 24 hours or more

^bthe actual tax is 3.25% with a minimum fee of \$2.50

Table 5 presents the total and component costs of a one-hour carsharing reservation in the sampled locations that apply the highest tax rates to carsharing.

Key Finding 3: On average, carsharing is subjected to the highest tax rates in the Northeast region, regardless of the length of the reservation, compared to other regions. The West region also experiences elevated carsharing taxation rates compared to the national averages. These comparatively higher tax rates are partially due to the popularity of per day/per transaction vehicle rental fees in the Northeast and West regions.

As can be in seen in Table 6, which compares average tax rates by region and nationwide, the Northeast region has highest average tax rates in the nation for both one-hour and 24-hour carsharing reservations. The average tax rate for a one-hour reservation in the Northeast is 22.82%, or 3.5 times the general sales tax rate, while the tax rate for a 24-hour reservation is 11.68%, or just under twice the general sales tax rate. The popularity of per day/per transaction rental vehicle rental fees and percentage-based vehicle rental sales taxes in the region, as well as the application of these vehicle rental taxes to carsharing, contributes to these elevated tax rates.

Table 5. Total and component costs of highly taxed one-hour carsharing reservations

City	Total cost	Base rate	Tax	Effective tax rate	Applicable taxes
Hoboken, NJ	\$14.63	\$9.00	\$5.63	62.56%	7% sales tax (state) \$5 fee per auto rental (state)
Pittsburgh, PA	\$14.09	\$9.25	\$4.84	52.32%	7% sales tax (state & county) 2% auto rental tax (state) \$2 fee per auto rental (county) \$2 fee per auto rental (state)
Tempe, AZ	\$11.40	\$8.00	\$3.40	42.50%	9.3% sales tax on rentals (state, county & city) 3.25% rental surcharge (county), minimum \$2.50
Philadelphia, PA	\$10.14	\$7.25	\$2.89	39.86%	8% sales tax (state & county) 2% vehicle rental tax (state) 2% vehicle rental tax (county) \$2 fee per day per rental (state)
Miami, FL	\$9.65	\$7.00	\$2.65	37.86%	7% sales tax (state & county) \$2 per day auto rental surcharge (state)
Albuquerque, NM	\$10.96	\$8.00	\$2.96	37%	7% sales tax (state, county & city) 5% auto rental tax (state) \$2 per day auto rental surcharge (state)
Colorado Springs, CO	\$10.83	\$8.00	\$2.83	35.38%	7.4% sales tax (state, county & city) 3% auto rental tax (county & city) \$2 per day auto rental fee (state)
Fayetteville, AR	\$9.80	\$8.00	\$1.80	22.5%	9.25% sales tax (state, county & city) 10% auto rental tax (state) 3.25% auto rental tax (local)
Hartford, CT	\$9.72	\$8.00	\$1.73	21.5%	6% sales tax (state) 3% auto rental tax (state) \$1 per day tourism surcharge (state)
New York, NY	\$13.19	\$11.00	\$2.19	19.91%	8.875% sales tax (state, city) 6% auto rental tax (state) 5% auto rental tax (metro commuter district)
Seattle, WA	\$12.52	\$10.50	\$2.02	19.24%	9.5% sales tax (state, county, local) 9.7% auto rental tax (state/local)

Average carsharing tax rates are also comparatively higher in the West, with a one-hour reservation taxed at 17.82%, or 2.3 times the general sales tax rate of 7.63%. As in the Northeast, per

day/per transaction vehicle rental fees play a strong role in this disparity. (In fact, a look back at Table 4 reveals that seven of the nine per day/per transaction fees found in the data set are based in the Northeast and West regions.)

Interestingly, the Midwest is the only region in which the average taxation a 24-hour carsharing reservation (11.62%) is greater than the average taxation of a one-hour reservation (10.41%). This is attributable almost entirely to Chicago, which has the largest carsharing presence in the Midwest. The City of Chicago applies its per-day and percentage-based vehicle rental taxes to carsharing only if the reservation is 24 hours or more. This policy is unique among all sampled cities.

Table 6. Comparison of regional and nationwide average tax rates

	General Goods and Services	One-hour Carsharing Reservation	24-hour Carsharing Reservation	24-hour Car Rental
Northeast	6.47%	22.82%	11.68%	12.54%
Midwest	8.10%	10.41%	11.62%	14.53%
South	6.59%	12.38%	9.90%	11.22%
West	7.63%	17.82%	10.86%	12.48%
Nationwide	7.08%	16.10%	11.30%	12.48%

Key Finding 4: Carsharing organizations have had limited success securing less onerous taxation (e.g., rates equivalent to the general sales tax rate), especially at the state government level.

Several cities and counties have recognized a distinction between carsharing and traditional car rental and have clarified their municipal codes accordingly. In Chicago, the City Council amended its code to eliminate the city’s 8% Personal Property Lease Transaction Tax for hourly carsharing reservations that are less than 24 hours in duration. Carsharing reservations of 24 hours or more are, however, subject to the tax. As part of the amendment, the City defined a carsharing organization as one that is membership-based, provides access through a self-service reservation

system with no written agreement required at each reservation, utilizes an environmentally friendly fleet of vehicles, and includes legally required insurance in the cost of a reservation or membership (City of Chicago 2006). Mayor Richard M. Daley cited carsharing's ability to reduce vehicle emissions and traffic congestion when announcing the amendment (US States News 2006).

Multnomah County, Oregon (Portland), amended the municipal code to state that the county's 17% tax on motor vehicle rentals applies to traditional car rental agencies (referred to as "commercial establishments" in the code), but not to carsharing organizations (defined simply as an organization with membership requirements that provides use of a vehicle for a fee) (Multnomah County 2009; Nassauer 2008). In Allegheny County, Pennsylvania (Pittsburgh), however, county officials determined that the \$2.00 fee per vehicle rental does indeed apply to carsharing organizations and therefore every carsharing reservation no matter how brief (Green 2008).

Almost every state in the data set with car rental sales or excise taxes currently apply them to carsharing organizations as well. In Illinois, a legislative bill proposing exemption of carsharing organizations from the state's vehicle rental excise tax (currently at 12%) lacked the votes to move out of the House Revenue Committee (Jackson 2006). In Washington State, a proposed bill to define carsharing as a service not subject to the state's vehicle rental tax failed to make it out of committee as well. The introduction of the bill was prompted when the state's Department of Revenue announced in 2007 – about seven years after carsharing launched in Seattle – that carsharing organizations would need to pay the car rental tax, currently at 9.7%. Despite vocal support from multiple bill sponsors, the governor, the Seattle city council and thousands of online petition signers, the bill was not passed (Curl 2008; Seattle Post-Intelligencer 2008; Williams 2010). The State of New Jersey is currently considering a bill to exempt carsharing organizations from the state's \$5 per transaction vehicle rental surcharge; this surcharge results in a tax rate of over 60% on a one-hour carsharing reservation (Whiten 2010).

The State of Massachusetts does recognize a distinction between car sharing and car rental; however, it is worth noting that this state-level victory for carsharing advocates concerns a tax that is only applied in one city (Boston), rather than statewide, as are the other state-imposed vehicle rental sales and excise taxes. The State's Department of Revenue assesses a \$10.00 Convention Center Financing Surcharge every time a vehicle rental transaction contract is executed in Boston. CSOs, though, are required to assess the surcharge on only the first carsharing reservation per annual membership contract, rather than every carsharing reservation. As a result, active carsharing members will pay a \$10.00 surcharge only once per year. The State defines CSO as a membership-based provider of self-service vehicle access for primarily hourly/short-term use, which does not require a separate written agreement for each use of a vehicle (Massachusetts 2005).

In summary, the data presented in this chapter clearly demonstrate that carsharing is being taxed at rates that are significantly higher than most goods and services, and that the typical carshare reservation of several hours is often taxed at rates higher than a vehicle rental. Depending on the duration of the reservation, the average tax rate (weighted by population) applied to carsharing in the 80 sampled cities is 14.08% to 17.93%, compared to an average general sales tax rate of 8.06%. In other words, consumers are taxed 1.7 to 2.2 times more for a carsharing reservation than for most other items, in spite of its many public benefits.

CONCLUSION

Carsharing has several benefits that are enjoyed by not only members, but the general public in the communities where carsharing is located. These benefits, as described in an earlier section, include fewer vehicles on the road (an estimated 9 to 15 privately owned vehicles are removed from the transportation system for each carsharing vehicle); reduced vehicle emissions; decreased vehicle miles traveled and increased use of public and active transportation; and reduced transportation

costs. These benefits are convincingly documented by the literature; however, there are additional, theorized benefits that have not been yet been sufficiently quantified but have the potential to extend the reach of carsharing's benefits even further. Examples of these benefits include reduced congestion; increased green and open space; a boost to the local economy as members spend money saved on transportation costs at local shops, restaurants and schools; and improved health and reduced health care costs due to greater usage of active transportation.

Is Current Carsharing Taxation Policy Appropriate?

Many of the benefits of carsharing are essentially public goods in so far as they augment the transportation, land-use and environmental goals of U.S. governments and agencies from the local to federal level. For example, the benefits of greenhouse gas emissions reductions, relief of parking pressures, congestion reduction, increased green and open space, improved stormwater management and economic development all have a distinctly “public” quality. Considering the demonstrated ability of carsharing to directly and indirectly advance such goals, it is worth examining how local and state governments support, ignore or impede the expansion of carsharing and its impacts.

There are a variety of ways in which local and state governments can interact with carsharing. Parking is one example. Governments can lease parking spaces (either on-street curb parking or off-street spaces in municipally owned facilities) to CSOs at reduced or market prices. They can encourage the creation of CSO parking spaces in new or re-developments through incentives (increased floor-area ratio, for example, or a reduction in overall parking requirements). Or, they can mandate the inclusion of carsharing stalls in new developments. San Francisco, for example, amended their planning code to require that carsharing spaces be made available when parking is provided for either residential or non-residential uses in all zoning districts (San Francisco 2010).

Governments can support carsharing providers as customers. In addition to the previously mentioned New York, Portland and Berkeley, Chicago contracts fleet management services to a CSO. Chicago initiated a pilot with local non-profit CSO I-GO in 2005. The pilot secured the exclusive use of two carshare vehicles for city employees during business hours and the partnership between the City and I-GO expanded significantly in subsequent years (City of Chicago 2005; City of Chicago 2011). Chicago recently contracted with Zipcar to provide not only access to the full CSO fleet for city employees, but also fleet management (reservation system and smartcard access) for city-owned fleet vehicles (City of Chicago 2010).

Taxation is yet another means through which government and carsharing interact. Many municipalities and states have explicitly stated goals to reduce traffic and congestion, reduce greenhouse gas emissions, and strengthen and grow the local or state economies. However, in the majority of sampled locations, local, county and state governments may in effect be discouraging carsharing by subjecting it to elevated and disadvantageous taxation.

There are several reasons why a government chooses to tax a good or service over the general sales tax rate. For example, to discourage certain behaviors or activities considered detrimental to individual or societal well-being, “sin taxes” apply elevated tax rates to liquor or cigarette sales. Special tax rates may be hypothecated, or enacted specifically to fund related activities or programs. For example, revenues from fuel taxes are often used for road construction and maintenance, public transportation or the environmental mitigation of vehicle emissions.

The taxes imposed on conventional vehicle rental services frequently lie in the second category, with the revenues collected from rentals often committed to travel and tourism related projects such as convention centers and stadiums. In fact, a variety of travel and tourism related activities and services, including hotel rooms and tourboat cruises, are subject to special taxes. These tourism taxes are intended to help fund the amenities that attract visitors to the community. They

are also considered politically “safer” than raising the general sales tax rate, as the burden of these tourism taxes is perceived to fall largely on non-residents (and non-voters). An increase in the general sales tax rate, however, will impact and possibly antagonize local residents.

When carsharing is taxed above the rate for general goods and services, it is because carsharing has been made subject to vehicle rental sales and excise taxes. This is true without exception among the 82 sampled locations. However, a clear argument against the appropriateness of applying car rental taxes to carsharing can be made. While carsharing and traditional vehicle rental share some characteristics (providing temporary, non-ownership access to motor vehicles), their business models and customer bases are different. Traditional car rental agencies do serve local customers, but according to their business model, a significant proportion of customers are visitors from out of town. Because of this difference in clientele, traditional car rental is not likely to replace private vehicle ownership for most of its users and is therefore unlikely to generate the same environmental, social and economic impacts as carsharing. Indeed, while there is a significant and growing body of evidence documenting the positive impacts of carsharing, a literature review did not identify similar impacts attributable to traditional car rental.

Why, then, are governments choosing to apply taxes designed for traditional car rentals (i.e., taxes designed to apply primarily to tourists) to carsharing organizations that serve primarily local residents? Budget shortfalls have left many state and local governments scrambling to find new revenue sources. But carsharing, with its positive impacts, does not seem an appropriate choice for elevated taxation. It is notable, however, that while carsharing has been recognized and codified as distinct from traditional car rental by some local and county governments, only one state government has done so – and in that case, the state-imposed fee is only applied in one city. It is possible that the problems carsharing addresses – air pollution, congestion, parking availability – are

viewed at the state level as more “urban problems”, impeding the ability of carsharing advocates to garner sufficiently broad support for pro-carsharing legislation.

In addition, traditional car rental agencies have lobbied aggressively for the same treatment of car rental and carsharing under the law. The primary goal of the Coalition Against Discriminatory Car Rental Taxes is to eliminate the taxes altogether. However, the Coalition and member agencies have strongly objected to legislative efforts to distinguish carsharing from traditional car rental, asserting that there are no meaningful differences between the two services and that if the taxes are not appropriate for carsharing organizations, they are not appropriate for car rentals, either (Jackson 2006; Enterprise 2010). Legislators may be concerned that by defining carsharing as distinct from car rental and therefore not taxable under vehicle rental excise taxes, they will also be creating an opportunity for traditional car rental agencies to claim exemption as well. In fact, a Washington legislator stated as much, commenting that, “The concern is that no matter how smart we are, the accountants for the rental car companies are smarter” (Curl 2008).

Recommendations

Although there are barriers, including the two just discussed in the previous section, it is appropriate for local, county and state governments to end the elevated and disadvantageous taxation of carsharing organizations and their members. The following recommendations are submitted to the attention of policymakers and researchers:

Align carsharing tax policy with general goods and services in most cases. Carsharing has positive impacts on members and the larger community; these impacts support public goals without requiring subsidy. Therefore, the evidence strongly suggests that carsharing should be taxed at a rate no higher than the tax rate for general goods and services.

Consider exemption from taxation for carsharing in certain locations. Local, county and state governments can encourage the expansion of carsharing into lower-income neighborhoods by

exempting reservations at qualifying pods from sales and excise taxes. By forgoing tax revenue in these specific, limited circumstances, governments can promote the extension of the benefits of carsharing into additional lower-income communities.

Utilize codified definitions or certification processes to ensure that only organizations generating the significant public benefits associated with carsharing are recognized as CSOs for purposes of taxation. Some governments have ratified formal definitions of carsharing to limit the applicability of carsharing-specific ordinances or policies. Governments that have used this approach include Chicago, Illinois, Multnomah County, Oregon and Massachusetts, as described earlier in this report. Alternatively, San Francisco has created a carsharing certification process to restrict the distribution of parking spaces to organizations that meet specific environmental goals (San Francisco 2010). The certification or definition processes are replicable tools that local, county and state governments can use to craft targeted policies encouraging the establishment and growth of carsharing and its benefits.

Support additional research documenting the price elasticity of demand for carsharing to better understand the effects of differential taxation. This segment of the literature is significantly underdeveloped. Unfortunately, it is probably difficult to conduct such research due to the proprietary concerns of carsharing organizations. However, a clearer understanding of how demand for carsharing responds to pricing changes will allow policymakers to better gauge the growth potential of carsharing's public benefits and to design policies accordingly.

REFERENCES CITED

- Cervero, Robert, Aaron Golub and Brendan Nee. 2007. "City CarShare: Longer-Term Travel Demand and Car Ownership Impacts." *Transportation Research Record: Journal of the Transportation Research Board* No. 1992:70-80.
- Cervero, Robert and Yuhsin Tsai. 2004. "City CarShare in San Francisco, California: Second-Year Travel Demand and Car Ownership Impacts." *Transportation Research Record: Journal of the Transportation Research Board* No. 1887: 117-127.
- City of Chicago. 2005. Justification for Non-Competitive Procurement with Procurement History, Specification No. 35601. Accessed July 15, 2010. http://www.cityofchicago.org/content/dam/city/depts/dps/SoleSource/NCRB_2005/06_Jun2005/igo.pdf.
- City of Chicago. 2006. Ordinance amending Section 3-32 of the Municipal Code of Chicago. Accessed November 24, 2010. http://mayor.cityofchicago.org/etc/medialib/mayor/ordinances/ordinances_pdfs__by/2006/january_11_2006.Par.90680.File.dat/carsharingamendment.html.
- City of Chicago. 2010. "Specification No. 72898." Department of Fleet Management.
- City of Chicago. 2011. "Vendor, Contract and Payment Information." Accessed February 3, 2011. <http://webapps.cityofchicago.org/VCSearchWeb/org/cityofchicago/vcsearch/controller/vendors/contractsLink.do?vendorName=I-GO+CAR+SHARING+ALTERNATIVE&cityVendorId=53944878E#searchResults>.
- City of New York. 2010. "Mayor Bloomberg, Deputy Mayor Goldsmith, Commissioner Sadik-Khan Announce Start of City's First Car Share Program." Press Release dated October 12. Accessed December 19, 2010. http://www.nyc.gov/portal/site/nycgov/menuitem.c0935b9a57bb4ef3daf2f1c701c789a0/index.jsp?pageID=mayor_press_release&catID=1194&doc_name=http%3A%2F%2Fwww.nyc.gov%2Fhtml%2Fom%2Fhtml%2F2010b%2Fpr429-10.html&cc=unused1978&rc=1194&ndi=1.
- City of Philadelphia. 2004. "City to Join PhillyCarShare, Cut 400 vehicles." Press release dated April 5, 2004. Accessed February 3, 2011. http://www.phila.gov/pdfs/City_to_Join_PhillyCarShare.pdf.
- Curl, Aimee. 2008. "Flexcar bill out of gas; Tax exemption dead in Olympia, prices likely to go up." *Seattle Weekly*, February 27.
- Econsult Corporation. 2010. The Economic and Environmental Impact of PhillyCarShare in the Philadelphia Region. Accessed July 5, 2010. <http://www.phillycarshare.org/wp-content/uploads/2010/07/pes-impact-study.pdf>
- Enterprise. 2010. "Enterprise Holdings Stands Up for Car-sharing Customers." Press Release, October 29. <http://www.enterpriseholdings.com/press-room/enterprise-holdings-stands-up-for-car-sharing-customers.html>.

Feigon, Sharon. 2008. "The I-GO Carsharing Program." Lecture, American Planning Association, Chicago, IL, January 8. Accessed February 2, 2011. <http://www.planning.org/tuesdaysatapa/2008/jan.htm>.

Government Fleet. 2010. "Philadelphia Pilots Car Sharing and Tracking Technology in City Vehicles." Accessed February 3, 2011. <http://www.government-fleet.com/News/Story/2010/12/Philadelphia-Pilots-Car-Sharing-and-Tracking-Technology-in-City-Vehicles.aspx>.

Grasset, Vincent and Catherine Morency. 2010. "Carsharing: Analyzing the interaction between neighborhood features and market share." Paper presented at the annual meeting of the Transportation Research Board, Washington, D.C. January 10-14.

Green, Elwin. 2008. "Paying the Price: New \$2 Rental Car Levy Punishing Flexcar Users." *Pittsburgh Post-Gazette*, February 5.

I-GO. 2011. "Chicago number one in road congestion." *I-GO blog*, January 20. <http://www.igocars.org/2011/01/20/chicago-number-one-in-road-congestion/>

Innovative Mobility Research. 2011. "Carsharing." Accessed January 28. <http://www.innovativemobility.org/carsharing/index.shtml>.

Jackson, Cheryl V. 2006. "Boston car-sharing firm hits obstacle here: Rental companies want to piggyback on tax-free state ride." *Chicago Sun-Times*, April 6.

Katzev, Richard. 2003. "Car Sharing: A New Approach to Urban Transportation Problems." *Analyses of Social Issues and Public Policy*, Vol. 3 No. 1, 65-86.

Lane, Clayton. 2005. "PhillyCarShare: First-Year Social and Mobility Impacts of Carsharing in Philadelphia, Pennsylvania." *Transportation Research Record: Journal of the Transportation Research Board*, no. 1927: 158-166.

Litman, Todd. 2010. *Evaluating Public Transportation Health Benefits*. Victoria Transportation Institute. Accessed December 14, 2010. http://www.vtpi.org/tran_health.pdf.

Litman, Todd. 2011. "Why and How to Reduce the Amount of Land Paved for Roads and Parking Facilities." *Environmental Practice* 13: to be published.

Martin, Elliot W. and Susan A. Shaheen. 2010. *Greenhouse Gas Emission Impacts of Carsharing in North America*. San Jose, CA: Mineta Transportation Institute. Accessed July 10. [http://transweb.sjsu.edu/MTIportal/research/publications/documents/Carsharing%20and%20Co2%20\(6.23.2010\).pdf](http://transweb.sjsu.edu/MTIportal/research/publications/documents/Carsharing%20and%20Co2%20(6.23.2010).pdf)

Massachusetts Department of Revenue. 2005. "TIR-05-1: Convention Center Financing Surcharges." Accessed February 3, 2011. <http://www.mass.gov/?pageID=dorterminal&L=7&L0=Home&L1=Businesses&L2=Help+%26+Resources&L3=Legal+Library&L4=Technical+Information+Releases&L5=TIRs+->

+By+Year(s)&L6=2005+Releases&sid=Ador&b=terminalcontent&f=dor_rul_reg_tir_tir_05_1&csid=Ador.

Millard-Ball, Adam, Gail Murray, Jessica Ter Schure, Christine Fox and Jon Burkhardt. 2005. *Car-sharing: Where and How It Succeeds*. Washington, DC: Transportation Research Board. Accessed August 27, 2010. http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_108.pdf.

Multnomah County Board of Commissioners. 2009. "Ordinance No. 1132." Accessed January 5, 2011. <http://www2.co.multnomah.or.us/cfm/boardclerk/uploadedfiles/11322.pdf>.

Nassauer, Sarah. 2008. "Car-sharing companies fight taxman." *Wall Street Journal*, June 19.

Price, Jeff, Paul DeMaio and Chris Hamilton. 2006. Arlington Carshare Program 2006 Report. Arlington County, Virginia: Department of Environmental Services. Accessed December 15, 2010. <http://www.commuterpage.com/research/uploads/ACCS015/Arlington%20Carshare%20Program%202006%20Report.pdf>.

San Francisco Planning Department. 2010. "Car-Share Requirements and Guidelines." Accessed November 24. http://www.sf-planning.org/index.aspx?page=2347#certification_process.

Scott, Steven and David Brook and Matei Perussi. 2003. "Impacts of Carsharing on Walking Behavior." Paper presented at the Walk 21 conference Portland, Oregon, May 1-3. Accessed December 18, 2010. <http://www.metaresource.com/projects/Walk21-car%20sharing.pdf>.

Seattle Post-Intelligencer. 2008. Editorial "Renting is better." *Seattle Post-Intelligencer*, February 8.

Shaheen, Susan, Adam P. Cohen and Melissa S. Chung. 2009. "North American Carsharing 10-Year Retrospective." *Transportation Research Record: Journal of the Transportation Research Board*, no. 2110: 35-44.

Shoup, Donald. 2005. *The High Cost of Free Parking*. Chicago: American Planning Association Planners Press.

US States News. 2006. "Tax Incentives Approved for Carsharing Organizations." February 8.

Whiten, John. 2010. "New Jersey Will Consider Bill Exempting Carsharing Businesses from State Rental Surcharge." *Jersey City Independent*, September 15. <http://www.jerseycityindependent.com/2010/09/15/new-jersey-will-consider-bill-exempting-car-sharing-businesses-from-state-rental-surcharge/>.

Williams, John. 2010. Interview by author and Joseph Schwieterman, PhD. November 9.

Zipcar. 2010a. "greenbenefits." Accessed November 29. <http://www.zipcar.com/is-it/greenbenefits>.

Zipcar. 2010b. Zipcar media kit. Accessed November 29, 2010. <http://zipcar.mediaroom.com/index.php?s=23>.