Institutional Issues in Commuter Ride Sharing

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The Environmental Protection Agency, the U.S. Department of Transportation, and the Federal Energy Administration place commuter pooling among the most potentially powerful tools available to achieve their respective goals of pollution abatement, traffic reduction, and energy conservation. Commuter pooling, which consists largely of car and van pools combined with elimination of zoning, insurance, and regulatory barriers, not only offers a potential for rapid and inexpensive reductions in traffic congestion, air pollution, and energy consumption but is also the measure most likely to be adopted in the next 10 years that is capable of substantially reducing the number of vehicle-kilometers traveled (VKT) by commuters.

The vast majority of car- and van-pooling potential is derived from markets that have little or no conventional bus or fixed-rail service. This potential exists in essentially two major markets: (a) the urban areas that have fewer than 500,000 people, which constitute half of the nation’s population, and (b) the urban areas that have more than 500,000 people and fast-growing suburb-to-suburb markets, which now constitute nearly half of the typical urban-area employment and one-fourth of the nation’s population. Thus, about three-fourths of the nation’s population is without effective transit alternatives.

Serving at least 10 percent of this market would be extremely difficult for any mode except cars and vans because of the low residential densities and wide-ranging travel patterns. Obviously, there are plenty of automobile seats available, since only about one-fourth are in use (Table 1). Since about 600,000 vans are produced each year, availability of vans is hardly questionable. This differs considerably from the case of buses and fixed rail, which are not only virtually saturated at rush hour but are also produced in numbers (5000 buses and 150 rail vehicles) that cover little more than replacement vehicles (1).

The most significant market for the potential reduction of VKT is found among the 27 percent of automobile commuters who travel more than 16 km (10 miles) to work (Table 2). This group accounts for 68 percent of the VKT (2). Only about 20 percent of this group would have to start van pooling to reduce VKT by 10 percent. This group is also the most likely to accept car and van pools due to the cost, boredom, and time involved in these longer trips and the inability of buses to serve this widely dispersed market. The average van pool travels 40 km (25 miles) one way and serves this long-distance market with ease. This is a clear-cut distinction between the van-pool market and the typical transit market. The vast majority of transit users travel fewer than 16 km (10 miles) one way.

Thus, commuter pooling offers substantial potential in reducing commuter VKT. How can this potential be realized to increase the market penetration of highway ride-sharing modes, i.e., car pools, van pools and buses? The institutional issues revolve around how best to permit full testing of innovative concepts and to provide economic incentives to bring out the best in each mode.

SUCCESSFUL PROGRAMS

Claims that voluntary car pooling is not working simply reflect the fact that there has been no comprehensive, coordinated national program to make them work. Perhaps a national program is not the answer, since the successful plans that have evolved have been diverse and locally conceived. Citizens’ groups, employers, government agencies, and private operators have all been instrumental in the successful approaches developed to date. The programs implemented by Hallmark Cards; 3M Company; Reston Commuter Bus, Inc.; Colonial Transit; Continental Oil Company; GEICO; Southern New England Telephone; the Pentagon; Specialty Transit, Inc.; Cenex; and Polisar are not stereotyped programs but unique programs that serve unique situations.

One of the nation’s best pooling efforts is the Tennessee Valley Authority (TVA) program in downtown Knoxville, Tennessee (3). Although this is a medium-sized city with little traffic congestion and shorter commuter distances than those in a major city, the TVA (which employs about 3000 people) has reduced commuter VKT by 50 percent in less than 3 years (Table 3). Program development started before the oil embargo and was launched in December 1973 with the first bus carrying a full seated load and four standees. To cover the costs associated with the express bus, the fares were nearly double their former rate. In January 1975, after the number of buses grew to 15, TVA offered an incentive plan with a one-third discount on commuter tickets. By January 1976, ridership on buses had increased 800 percent, and all extra public and private buses available (22 in all) were in service.

Characteristics of Taxicab Service in the District of Columbia. Washington, D.C., National Capital Region

Transportation Planning Board, Repts. 23 and 31, 1970.

INSTITUTIONAL ISSUES

A myriad of institutional obstacles have beset all forms of commuter ride sharing for years. These institutional barriers emerged when public policy was based on past rather than current needs. The growth of low-density suburbs, industrial and office parks, shopping malls, and satellite communities after World War II presents demand patterns that are vastly different from those of 30 years ago. As travel patterns become more dispersed, the commuter car and van pools are in operation and carried more than 10 percent of the employees. A survey found that 49 percent of the van poolers were former automobile drivers and 50 percent were former car poolers. Overall, 80 percent considered van pooling more convenient than their previous mode (4). A little-noticed part of the 3M program was the increase from 1000 to 2000 in the number of car poolers. As a result, the number of vehicles arriving at the corporate headquarters actually declined, although employment increased 23 percent, to more than 9000 employees. The reduced demand for new parking facilities saved 3M more than $2.5 million.

The Continental Oil Company (CONOCO) in Houston recognized the severity of the long-term oil shortage and decided to assist their employees in establishing commuter car and van pools in March 1975. Starting with 25 percent of the 1450 Houston employees in car pools, the company set a goal of 65 percent in pools. Within a year, the pooling population had increased to 16 percent in van pools and 36 percent in car pools. Van pooling is becoming so popular at CONOCO that employees now ask before buying a house, "Does a van serve this development?" Realtors are also using the availability of van service as a selling point.

Recognizing an excellent concept, the management of CONOCO decided to expand van pooling to as many CONOCO sites throughout the nation as possible. After corporate policy and administrative systems were established for the first site, it was relatively easy to expand to new sites. A number of minor changes were necessary to comply with some state regulations. In one state, the driver was not allowed to pocket the extra fare, so a revised fare and incentive scheme was developed. The driver continues to ride free, has use of the van in the evenings and weekends, and is required to accept all riders within a reasonable time and distance variance. The fare is based on a minimum of eight fares equivalent to a given monthly rate. If, for example, the van is full with 12 people including the driver, the paying riders would divide the monthly rate by 11, thus automatically reducing each fare. By the middle of 1976, CONOCO had vans in five states with sites in other states under development. The nation's smallest known corporate van-pooling site is an oil field that has 12 employees and one van.

Table 2. Selected characteristics of commuting trips in United States.

<table>
<thead>
<tr>
<th>One-Way Trip Length (km)</th>
<th>Percentage of Workers</th>
<th>Percentage of Home-to-Work VKT</th>
<th>Projected Travel Time (min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fewer than 8</td>
<td>52.1</td>
<td>13.9</td>
<td>15 or fewer</td>
</tr>
<tr>
<td>8 to 16</td>
<td>20.9</td>
<td>17.8</td>
<td>16 to 25</td>
</tr>
<tr>
<td>16 or more</td>
<td>27.0</td>
<td>48.3</td>
<td>26 and more</td>
</tr>
</tbody>
</table>

Note: 1 km = 0.6 mile.

Table 3. Mode of transport used to get to work in Knoxville, in percentages.

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Drive alone</td>
<td>65.0</td>
<td>42</td>
<td>30</td>
<td>23</td>
</tr>
<tr>
<td>Ride bus</td>
<td>3.5</td>
<td>14</td>
<td>23</td>
<td>29</td>
</tr>
<tr>
<td>Car pool</td>
<td>30.0</td>
<td>40</td>
<td>42</td>
<td>43</td>
</tr>
<tr>
<td>Van, bicycle, walk</td>
<td>1.5</td>
<td>4</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

On the basis of the initial success of the TVA pooling program, management and the unions agreed to a continuation of the comprehensive pooling program in lieu of providing parking spaces at the new Knoxville headquarters that was completed in 1976. An estimated $10 million in construction costs was saved. In addition to the headquarters pooling program, van pools were established at a number of other sites. At one site, the need for a four-lane access road to a nuclear power plant construction site was eliminated. Since the road was only needed for the few years when more than 5000 construction workers would be commuting, the decision was made to increase the average automobile occupancy for the construction workers to 5 persons/vehicle by using hundreds of vans and buses. This was estimated to have saved $20 million in highway and parking construction costs.

The 3M Company in Minneapolis launched the nation's first commuter van-pool program in April 1973, before the oil embargo. While employment at the company's headquarters site was expected to double, access to the site was limited by the capacity of nearby highway facilities. Assurances were not forthcoming from government officials that adequate highways would be constructed. On-site parking ramps were also inadequate for the anticipated growth. After about 6 months of research and planning, the company agreed to try a six-van pilot program for 6 months. The van pool was designed to break even with eight paying passengers; the ninth passenger was the driver, who rode free and had private use of the van during the evenings and weekends for a specified charge per kilometer. The extra fares for the tenth, eleventh, and twelfth passengers went into the driver's pocket. Within a couple of months after the pilot program started, the company considered it successful and decided to add more vans to meet growing demand.

Three years later 91 vans, including 12 privately owned vans, were in operation and carried more than 10 percent of the employees. A survey found that 49 percent of the van poolers were former automobile drivers and 50 percent were former car poolers. Overall, 80 percent considered van pooling more convenient than their previous mode (4). A little-noticed part of the 3M program was the increase from 1000 to 2000 in the number of car poolers. As a result, the number of vehicles arriving at the corporate headquarters actually declined, although employment increased 23 percent, to more than 9000 employees. The reduced demand for new parking facilities saved 3M more than $2.5 million.
pooling, regulations must be modernized and the question of legality, which tends to suppress innovation, must be resolved. Simple solutions must be found to such questions as:

What can a car-pool or van-pool driver charge a rider without risking loss of insurance?
Are transportation brokers legal?
How does a citizens' group readily obtain commuter bus service?
What is a legal car pool?

Fortunately, a precedent has been established for updating laws and working toward a systematic resolution of institutional issues that affect ride sharing. For example, states have passed new laws that classify van pools as car pools, which permits churches to donate parking facilities for park-and-ride lots without risking their tax-exempt status, and laws that require parking garages to provide the height needed for commuter vans.

Concerned citizens in many states will not charge a pool rider because they believe it is illegal or their insurance will be voided. In many states, car-pool drivers are restricted to sharing driving responsibilities or, if fares are collected, to sharing such operating costs as gasoline, parking, and tolls. Such regulations clearly act as economic disincentives to car pooling if the driver wants to be fully insured while carrying paying passengers. For example, the total out-of-pocket costs for a typical round trip of 32 km (20 miles) to work in a car that gets 4.2 km/L (10 miles/gal) would be approximately $1.70–7.6 L (2 gal) of gasoline costing $1.30, $0.02 for each 1.6 km (1 mile) for tires and oil, and no parking fee, since 90 percent of commuters park free. Splitting the cost of 70 mpg (miles per gallon) people per week yields $0.17/trip, which is not worth collecting at today's prices. However, if you charged $0.50/trip, which is comparable to the transit fare, you would be operating illegally and would run the risk of voiding your insurance, a risk not worth taking.

In some states, simply sharing driving responsibilities may put the driver in a precarious position in regard to liability. Where guest statutes are in effect, a person injured while riding in an automobile cannot recover from the driver unless the driver's conduct amounted to willful and wanton misconduct. Where the protection of the guest statute is removed, the driver may be sued for injuries to the passenger that arise out of simple negligence. In Ohio, sharing driving responsibilities has been viewed as compensation, which removes the guest statute protection. Where the protection of the guest statute is removed, automobile insurance coverage may be affected, depending on course on its particular provisions. When car poolers are uncertain on such legal issues, they will simply avoid getting involved.

The emergence of van pools requires a greater degree of formal organization, and the exchange of money magnifies the problem addressed under car pools. Van pools raise the additional question of driver compensation, insurance costs (which are largely dependent on the way the van is classified), and public utilities commission regulations.

Driver compensation became an issue when it was questioned by a prospective van-pool employer. The employees were to drive commuter vans owned by their employer under a voluntary van-pooling program. The question arose as to whether the time spent driving would be considered compensable hours of work under the provisions of the Fair Labor Standards Act. This issue was resolved in an opinion issued by the Wage and Hour Division of the U.S. Department of Labor: "The time spent by employees driving the commuter vans would not constitute compensable hours of work within the meaning of the act."

The cost of van-pool insurance is dependent on whether the van-pool or car-pool vehicle is classified as a for-hire vehicle or a private carrier. Privately owned vans can obtain insurance for about $500/year; other groups have had to pay $1400/year. This difference can easily mean an increase in the fare of nearly $10/month/person. In general, the for-hire carriers have virtually unlimited liability, while a private carrier such as the private automobile is generally required to be liable for damage done to occupants of another vehicle and for the occupants of the insured vehicle where guest statutes are not in effect. This seemingly minor difference can have a substantial impact on the cost of insurance settlements; hence the difference in the cost of insurance.

Fortunately, the major van-pooling employers are either self-insuring or can add, at reasonable cost, van-pool clauses to their multimillion dollar corporate insurance policies. This is not true with smaller organizations.

As a result of Minnesota legislation passed April 9, 1976, commuter vans are no longer to be treated as commercial vehicles under the Minnesota no-fault law but rather as private passenger automobiles. This means the passengers in a commuter van who otherwise have automobile insurance will initially seek damages from their own insurance company in the event of an accident, and only if they pass the no-fault threshold of $2000 can they seek damages from insurance on the van. Insurance on the commuter van will continue to provide primary coverage for the driver and any passengers who do not have automobile insurance. The net effect of this change should be to lower the annual premium on the van insurance, since the initial coverage on most passengers will be spread over the regular automobile policies covering the passengers rather than rest entirely on the van insurance.

In early 1975, the California Public Utilities Commission ruled that a privately owned van pool was an illegal bus line. The commission also set up new guidelines that stated that vans could operate as car pools with a maximum of nine seats and permitted only proportionate sharing of out-of-pocket expenses between driver and passengers. To overcome these guidelines, new legislation was passed that excludes vans from economic regulation as a bus line provided the vehicle has fewer than 15 passenger seats and the driver is on the way to or from his place of employment. By May 1976, Tennessee, Washington, Connecticut, Maryland, Virginia, and Minnesota made similar changes in their laws.

In Minnesota, commuter vans are exempted from regulation by the Public Service Commission. In addition, the driver or owners of a commuter van are not held to the standard of care applicable to common carriers or to the ordinances or regulations that relate exclusively to the regulation of drivers or owners of automobiles for hire (taxis) or other common carriers. Commuter vans remain subject to motor vehicle regulations such as those that require a separate written and driver's test for a chauffeur's license.

At present, adequate private capital to promote and capitalize on commuter ride sharing may be severely affected by regulations that limit legal operations. Additional related issues that are beyond the scope of this paper center on workman's compensation, insurance, comparable federal-interstate questions of regulation of van pooling, tax treatment of driver compensation in kind, driver liability, classification of commuter ser-
This paper attempts (a) to describe the range of approaches to regulating and insuring prearranged ride sharing, (b) to summarize the arguments that have been put forward on behalf of various approaches, and (c) to discover which approaches are actually being adopted at the state level, where most of the decisions on regulatory practice are made. Because our exploration necessarily leads through the semantic briar patch of state regulatory statutes and regulatory agency rules, it is essential to develop clear definitions of the ride-sharing modes we wish to study.

By "prearranged ride sharing" I mean transportation arrangements in which (a) ridership is by advance reservation, (b) the same group of riders travels together on a continuing basis, and (c) routes are tailored to accommodate rider needs. The arrangements that fall under this broad heading are commonly called car pools, van pools, and subscription buses. However, to discover how these modes fare under state statutes written long before they were conceived, we need to be considerably more precise, and I have found it useful to classify ride-sharing arrangements in terms of four key characteristics:

1. The relationship between the owner of the vehicle and the riders, i.e., the vehicle may be owned by one of the riders, by the employer of all or most of the riders, or by a third party—a nonprofit corporation, a for-profit corporation, or a government agency (other than the employer of the riders);
2. The nature of compensation, if any, received by the vehicle owner, i.e., less than the costs or none, exact cost compensation, or cost compensation plus a profit;
3. The nature of compensation, if any, received by the driver, i.e., (a) none (other than a proportional reduction in commuting costs equal to that of the other riders), (b) a free trip to work, use of the vehicle on nights and weekends, and (possibly) retention of fares beyond a certain number, or (c) a cash wage as an employee of the vehicle owner; and
4. The size of the vehicle, i.e., automobile, van, or bus.

An enormous number of ride-sharing arrangements are possible (135, in fact, since the first characteristic allows 5 possibilities and the other three characteristics offer 3 possibilities each), and I have necessarily concentrated on the regulatory status of those arrangements that are most frequently attempted. However, I have tried to identify those characteristics that are of key significance to regulators and insurers so that the reader may make a reasonable judgment of the status of arrangements other than those specifically discussed. Six arrangements will be considered here.

1. Compensation car pool: (a) The vehicle is owned by one or more of the riders, (b) the pool members compensate other members for the cost of providing the vehicles either by supplying vehicles on alternate days or by cash payments, (c) the driver receives no compensation other than a proportional reduction in commuting costs equal to that received by the other riders, and (d) the vehicle is a passenger automobile.
2. Employer van pool: (a) The vehicle is owned by the employer of all the riders; (b) the employer is compensated by pool members for the costs of vehicle ownership and operation and for program administration; (c) the driver is one of the commuting employees and receives compensation in exemption from paying the fare, use of the vehicle nights and weekends, and retention of the fares paid by additional riders above a specified number; and (d) the vehicle is a 9- to 15-passenger van.
3. Nonprofit van pool: (a) The vehicle is owned by a nonprofit corporation and leased to a group of work-trip commuters and (b), (c), and (d) are the same as for employer van pool.
4. Government van pool: (a) The vehicle is owned by