Title
Carsharing Continues to Gain Momentum

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Car-sharing Continues to Gain Momentum

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With auto ownership and fuel costs rising, people everywhere are seeking alternatives to private vehicle ownership. Car-sharing (or short-term vehicle rentals) provides such an alternative through hourly rates and subscription-access plans, especially for individuals and businesses in major cities with good access to other transportation modes, such as transit and carpooling.

The principle of car-sharing is simple: individuals gain the benefits of private vehicle use without the costs and responsibilities of owner- ship. People involved in this typically join an organization that maintains a fleet of cars and light trucks in a network of locations, such as lots at transit stations or in neighborhoods or businesses.[1] Most car-sharing operators manage their services with some degree of modern computer-based technologies, which can include automated reservations, smart card vehicle access, and real-time vehicle tracking.[2]

For nearly 20 years, there has been growing worldwide participation in car-sharing. Some 330,000 individuals—nearly two thirds of whom are in Europe—now share at least 10,500 vehicles as part of organized car-sharing services.[3] (See Table 1 and Figure 1.) Many of these operations began in Switzerland and Germany in the late 1980s and later spread to 12 other countries on the continent and to the United Kingdom. In the 1990s, North America and Asia also started professional car-sharing activities. More recently, three car-sharing initiatives were launched in Australia starting in 2003.[4]

One of the first European initiatives can be traced to a cooperative known as "Sefage" (Selbstfahrergemeinschaft), which initiated services in Zurich, Switzerland, in 1948 and remained in operation until 1998.[5] This early effort was mainly motivated by economics. Indiv- iduals who could not afford to buy a car instead shared one. Elsewhere, a series of shared-car experiments were tried but later discontinued, such as Procotip in France from 1971 to 1973, Green Cars in the United Kingdom from 1977 to 1984, and programs in three Swedish cities at different times in the late 1970s through the 1990s.[6]

U.S. car-sharing began with two experiments: Mobility Enterprise, a Purdue University research program from 1983 to 1986, and the Short-Term Auto Rental (STAR) demonstration in San Francisco from 1983 to 1985.[7] More successful car-sharing operations worldwide began in Zurich in 1987 and in Berlin in 1988.[8]

A number of social and environmental bene- fits are commonly associated with car-sharing and are supported by an increasing body of empirical evidence, although differences in methodologies have produced inconsistent results. According to recent studies, sharing a car reduces the need for 4–10 privately owned cars in Europe and for 6–23 cars in North America.[9] North American studies and member surveys suggest that 11–29 percent of car-sharing participants sold a vehicle after joining a program, while 12–68 percent delayed or decided

against buying a car.[10] While the estimates of forgone vehicle purchases appear to be comparatively high compared with Europe, it is important to note that they are based on "stated preference" survey responses, which can be overstated and are typically less reliable than "revealed preference" data (such as actual number of cars sold after joining car-sharing). Furthermore, auto ownership is much higher in the United States, so the potential to reduce the number of cars in a household is presumably greater.[11] Earlier European studies indicated a range of 16–32 percent of participants selling a vehicle after joining car-sharing; however, a more conservative range (23–26 percent) avoided or postponed a vehicle purchase.[12]

European studies indicate a large reduction in vehicle- kilometers traveled (VKT), between 28 and 45 percent.[13] Data on VKT reduction range from as little as 7.6 percent to as much as 80 percent in Canada and the United States.[14] Estimates differ substan- tially between members who gave up vehicles after joining a program and those who gained initial access to a car through sharing one.[15] There was an average reduction of 44 per- cent in VKT per car-sharing user across North American studies.[16]

Table 1. Car-Sharing Members and Vehicles, by Region, 2005

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Region	Members	Vehicles
Europe	210,000	7,400
North America	105,571	2,409
Asia	13,500	726
Australia	600	35
Total	329,671	10,570

Source: Estimates based on discussions with regional experts and car-sharing organizations.

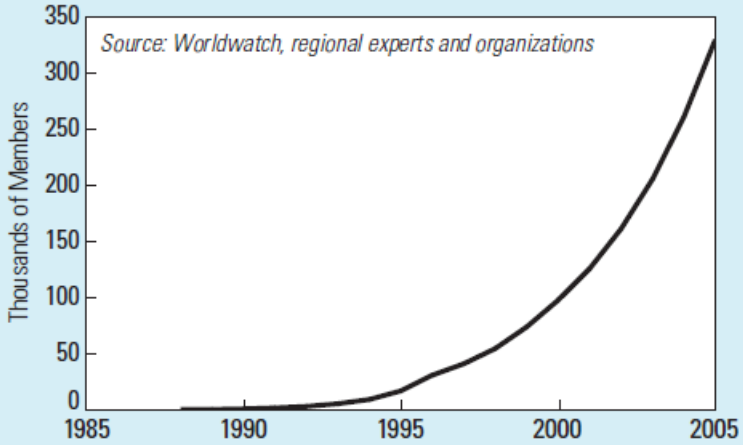
In Europe, car-sharing is estimated to reduce the average user's carbon dioxide emissions by 40–50 percent.[17] In addition, many car- sharing organizations include low- emission vehicles, such as gasoline- electric hybrid cars, in their fleets, which also reduces users' impacts on air quality and climate change.[18]

In addition, car-sharing shows evidence of beneficial social impacts. People can gain or maintain vehicle access without bearing the full costs of car ownership.[19] Depending on location and organization, the maximum annual mileage up to which car-sharing is more cost- effective than owning or leasing a personal vehicle lies between 10,000 and 16,093 kilometers.[20] Low-income households and college students also benefit from participating in car-sharing.[21]

Car-sharing continues to grow in business, transit, and fleet markets (such as government vehicles), as well as in university settings, particularly in North America. With few exceptions, advanced technology plays an important role in car-sharing worldwide. In Australia, France, the Netherlands, and North America, there is increased governmental interest and support for car-sharing, including supportive policies and grants. Competition among operators in the same region is also increasing, particularly in Germany and the United States.[22]

Future expansion in some regions may reflect a response to economic conditions, such as reduced household budgets and rising fuel prices. There will likely be entrants in new locations, such as Malaysia, South Africa, and New Zealand. Competition among operators is sure to continue, resulting in better services and choices for customers and, in some cases, in mergers and company closures. Along with competition, there will likely be increased cooperation among car-sharing operators and other partners, such as public transit (using smart card ticketing and access technologies, for instance), businesses, rental car companies, hotels, resorts, and shopping outlets.

Figure 1. Growth in Car-sharing Worldwide, 1988–2005



Continued growth in business, fleet, transit, and university car-sharing markets is projected, as well as increased market share among house- holds that need access to a second private vehicle. The neighborhood or individual car-sharing market is likely to grow as standards (on vehicle access technologies, for example) emerge that facilitate linkages or cross-agreements among operators in a region. In addition, car-sharing will be more widely integrated into urban trans- port and land use strategies through zoning variances for developers and supportive parking policies, for instance. And technological advances should encourage more people to join car-sharing programs that offer, for example, open-ended bookings, instant access, one-way rentals, satellite radio, and prepaid usage cards.[23]

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