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# Chapter 2

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## THE ECONOMIC BENEFITS OF COORDINATION

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### INTRODUCTION

Coordination helps to eliminate the inefficiencies usually found in the disparate operations and service patterns that often result from a multiplicity of providers. Through coordination, transportation services that were overlapping, duplicative, and inefficient can be combined for more efficient service delivery.

The more integrated services resulting from coordination may achieve economies of scale not available to smaller providers; they may also often provide higher quality services. Greater efficiency helps to stretch the limited (and often insufficient) funding and personnel resources of these agencies. In certain instances, coordination can lead

to significant reductions in per trip operating costs for transportation providers.

Many communities use these savings to expand services to persons or areas not previously served. Persons with special transportation needs often benefit from the greater amount of transportation and higher quality services when transportation providers coordinate their operations.

### POTENTIAL BENEFITS OF COORDINATION

Coordination has a wide range of potential benefits. Major potential benefit categories include

- Coordinated transportation services often have access to **more funds** and

thus are better able to achieve economies of scale. They also have **more sources of funds** and other resources and thus create organizations that are more stable because they are not highly dependent on only one funding source.

- Second, **higher quality and more cost-effective services** can result from more centralized control and management of resources.
- Third, the **enhanced mobility** created by better access to jobs, health care, shopping, or community facilities has substantial personal and community benefits.
- Finally, coordinated services can offer **more visible transportation services** for consumers and less confusion about how to access services.

Some of the more important specific benefits can include

- Providing additional funding for agencies that offer transportation services;
- Generating cost savings to some participating agencies in special forms of coordinated transportation service;
- Providing trips to consumers at lower costs;
- Filling service gaps in a community by offering services to additional individuals and geographic areas within existing budgets;
- Providing more trips for community members, thus enhancing their mobility and their quality of life and providing economic benefits to their communities; and

- Reducing total vehicle trips within a community, thus enhancing air quality and making other positive environmental contributions.

## THE COSTS OF COORDINATION

Coordination has its costs. It may be initially more expensive, more difficult, and more time consuming to achieve than most agency representatives initially perceive. Coordination may increase overall cost-effectiveness or reduce unit costs (for example, costs per trip), but coordination may not necessarily free up transportation dollars for other activities. Some agencies have hoped to see money returned to them — this has seldom happened because any cost savings realized are most often devoted to addressing unmet travel needs. Also, coordination agreements can unravel over time, so constant work is necessary to ensure that all parties keep working together. Coordination depends on mutual trust and good will among all parties involved; therefore, long-standing coordination arrangements can be jeopardized by antagonistic or self-serving individuals.

Despite these concerns, the economic and other benefits of coordination typically outweigh coordination's costs in many communities.

## KEY ECONOMIC BENEFITS

The three basic kinds of economic benefits resulting from the coordination of

transportation services are benefits accruing from additional funding, benefits from the more efficient and effective use of transportation resources, and benefits related to increased mobility. This report focuses on the first two kinds of benefits.

## **ADDITIONAL FUNDING**

Coordination between transit operators, who have transportation services to offer, and human service agencies, with clients who need transportation, can provide significant amounts of additional funds for public transit authorities. Contracts or other types of agreements can be made between transit operators and organizations serving individuals with developmental disabilities, agencies funded by Medicaid programs, school districts, and many other agencies. Particularly where large numbers of agency clients can ride existing fixed route services, the gains in transit system revenues can be large.

## **EFFICIENCY AND EFFECTIVENESS IMPROVEMENTS**

Coordination can increase the efficiency and effectiveness of transportation services in two ways:

- Reducing cost inputs and
- Increasing service outputs.

A before and after coordination comparison of the efficiency and effectiveness of transportation services at five sites suggested that coordination can offer real

improvements in efficiency (as in service cost per vehicle hour or number of vehicles required for service); productivity (trips per month, passengers per vehicle hour); and cost effectiveness (cost per trip) (CGA, 1992). Later chapters examine a wide range of sites to observe coordination's economic benefits.

### ***Techniques for Reducing Costs***

The major expenses for transportation services are labor (drivers' wages); administration (administrative wages, rent, and similar expenses); and capital costs (vehicles and other equipment). If coordination is going to reduce cost inputs, reductions will need to be made in these categories.

A basic premise of coordination is that pre-coordination circumstances will show evidence of duplicative resources. In fact, a similar argument has been made in favor of corporate mergers and consolidations. Therefore, coordination asks the following kinds of questions:

- Why should 2 organizations pay for 10 drivers when the work can be done by 1 organization that employs 8 drivers?
- Why should there be 2 transportation providers, each with its own executive director and other administrative staff, when the work could be done with 1 executive director and limited administrative staff?
- Why should 2 organizations pay for 10 vehicles when the trips can be provided by 1 organization that owns 6 vehicles?

These **reduction of resources** questions may often uncover situations of duplication and overlap that could reasonably be improved by judicious oversight and management. However, it is important to note that some persons who were previously employed as transportation personnel may no longer be employed in those positions if the “improved resource allocations” are implemented.

**Economies of scale** can also often lead to cost reductions as suppliers are often willing to provide reduced unit prices to customers who buy supplies in large volumes. This can be important in terms of vehicles, gasoline, and (sometimes) maintenance services. On the other hand, we have seen instances where small transportation operations receive insurance rates that are much lower than those received by larger (and presumably, more professional) transportation operations because of the increased risk exposure created by more frequent services. Both positive and negative impacts related to operational size need to be estimated.

### ***Techniques for Increasing Service Outputs***

For the transportation services being considered here, service outputs are the number of passenger trips consumed per unit of services provided: in other words, passenger trips per vehicle hour or per vehicle mile. Techniques for increasing service outputs include coordinated dispatching so that more riders and more

different types of riders — such as persons qualified for Americans with Disabilities Act (ADA) paratransit services offered by public transit agencies and persons receiving rides from Area Agencies on Aging — all ride on the same vehicle at the same time. (This strategy is sometimes referred to as “ridesharing.”)

Larger transportation operators are likely to be able to amortize capital expenses, such as the costs of automated vehicle location (AVL) systems and automated dispatch services, over large numbers of passengers. Therefore, larger services (such as those formed by coordinating or consolidating the operations of several smaller services) should be able to afford the infrastructure and technology that enable them to achieve greater productivity. Transit agencies have reported reductions in fleet requirements ranging from 2 percent to 5 percent as a result of efficiencies in fleet utilization gained from AVL systems (Goeddel, 1996).

### ***The Results of Cost Effectiveness***

Greater cost effectiveness results from reducing costs while holding service outputs constant, or increasing service outputs while holding costs constant, or reducing costs while increasing service outputs. Cost effectiveness, measured in terms of cost per trip, is one of the fundamental measures of transportation system performance. Coordinated transportation services are expected to be more cost effective than noncoordinated operations.

## THE ECONOMIC BENEFITS OF INCREASED MOBILITY

Transportation's "mission" has been succinctly expressed as follows:

"Transportation is necessary to support overall economic growth and activity in the national economy, but it also is expected to serve other goals of the community, support the desires of those who use its services, and do all this with the least expenditure of scarce resources" (Fuller, 2000). The kinds of goals that transportation is expected to address include "facilitate welfare reform, narrow regional wealth or opportunity disparities, manage growth, and help produce more livable cities or neighborhoods . . .," accomplishing this as it "provides employment, facilitates changed land uses, links businesses and employees, broadens distribution, enhances recreation, and in short is called upon to put in place the agenda of every political body" (Fuller, 2000).

The American Public Transportation Association (APTA) lists the following major benefits from transit investments:

- Mobility benefits;
- Efficiency benefits;
- Economic development benefits; and
- Economic productivity benefits.

Overall, the ratio of benefits to public costs is said to range between 4.0 and 5.1 to 1 (APTA, no date).

Specialized transportation services commonly provided by human service

agencies and public transit operators focus on individuals with limited mobility. This means that the economic benefits of mobility to this group of individuals could be different from the broad range of benefits listed above. Still, many of the same benefit categories listed by APTA for general public transit riders apply also to travelers with special needs.

A recent economic impact study of public transportation services found large economic benefits, demonstrating that public transportation is a good investment. The kinds of benefits that transit systems (Burkhardt, Hedrick, and McGavock, 1998) generate for their communities include

- Riders have better access to jobs: employment increases, workers get better jobs, labor markets broaden;
- Riders get better access to health care, welfare, and shopping: riders become (and stay) more independent;
- Riders can now shop where prices are lower;
- Riders save on their travel costs when using transit;
- Local businesses increase their level of activity: more money is spent locally, and new businesses and visitors are attracted to the community; and
- Communities benefit by the best use of their unique environments.

(In addition to such benefits, transit impacts communities through the wages paid and benefits provided to transit employees, local purchases of goods and services by the transit system, and the multiplier effects

of wages and system purchases in the local economy.) Such benefits have been shown, by both national and local analyses, to create positive returns on investments for local communities. The ratios of benefits to costs of these returns have been shown to be approximately four or five to one in urban areas (APTA, no date) and three to one in rural areas (Burkhardt, Hedrick, and McGavock, 1998).

## **SUMMARY OF BENEFITS**

The economic benefits of coordinating human service transportation and regular fixed route transit services include

- Additional funding (more total funding; a greater number of funding sources);
- Increased efficiency (lower production costs, measured as reduced cost per vehicle hour or per mile);

- Increased productivity (greater service consumption, such as more trips per month or passengers per vehicle hour);
- Enhanced mobility (such as increased access to jobs or health care or trips provided to passengers at a lower cost per trip); and
- Additional economic benefits, such as increased levels of economic development in the community or employment benefits for those persons associated with the transportation service.

The other benefits of coordination, not usually expressed in monetary terms but still important in their own right, include improving service quality, making transportation services available to more people, having transportation services available to larger service areas, centralizing oversight and management, and more accurately reporting costs and outputs.