Payback to Governments for Transit Investment

Overview: For every $1 invested in transit, the income of US residents goes up by at least $8.50. Governments gain through higher tax receipts on new income which is more than enough to pay for the investment in transit. Essentially the government gets a payback for investment in transit.

Federal Payback:

A study found that investment in transit caused income in a region to go up by $8 to $9 for every dollar invested in transit. The average was $8.50. (1)

Through the Federal New Starts program the US government pays around half the cost of constructing new transit systems. It also pays an average of about 6% of operating costs. As a whole the US government pays around 28% of the cost. State or local taxes and rider fees pay the remainder of the cost not covered by the US government.

The federal portion of the money is funded by uniform taxes across the country. The average marginal income tax rate is 35% including Social Security. This means each additional dollar of income is taxed at about $0.35. Therefore an $8.50 growth from transit will cause an increase in income tax from the region of $2.98. At its current level of support of 28% of total cost, it pays $0.28 per $1 in transit in improvements. Since the federal support generates $8.50 in income, it generates $2.98 in income taxes. It more than pays for itself without increasing the federal tax rate. The payback ratio for the

Federal governments is 10.6 or 1060% of what it invested. ($2.98/$0.28) The federal government gets back essentially ten times of what it invested. The federal government also gains from reduced numbers of people in poverty in higher transit regions. Lower poverty means lower expense for social spending.

Additionally, when a regional economy grows the whole country is lifted up by exports to the region. People have a marginal propensity to consume local goods and services 60% of the time and imports 40% of the time. This means that economic growth in one area of $1 causes a $0.67 growth in the rest of the economy. Therefore an $8.50 growth from transit will cause a $5.70 growth in the rest of the economy. Some of this will be in the nation and some will be due to foreign imports. Even if a large share of this comes from overseas, the economies of the other regions in the US are still lifted up to some extent. Further study is needed to evaluate exactly how much the country is lifted up by one region investing in transit.

Therefore, the federal government would gain at least $10 back in taxes for every $1 in increased transit spending when it sponsors 28% of the cost. The federal government used to pay as much as 80% of the capital cost for transit, but now pays much less. If the federal government were to sponsor 80% of the cost, then their payback would be at least $2.98 for every $0.80 invested. It would be a 370% payback. This is not as high as the 1060% payback when only paying for 28% of the cost, but there is likely a marginal benefit to the government by increasing the portion that it pays, more transit will be encouraged and tax revenues will increase even further.

<u>Regional Payback</u>:

State and local governments gain from transit investment too. The method of funding varies from region to region, such as from incomes taxes, property taxes, parking revenue, local improvement districts, and tax increment financing.

Some States have flat taxes such as Michigan in 2006, and some have tiered such as Alabama. Using Michigan as an example, in 2006 it had a flat tax of 3.9%. This is a median value for state taxes since Michigan falls in the middle of tax rates. After a $1 investment in transit, the regional income should go up by $8.50. The State tax on this increase in income is $0.33, and it would gain from other forms of tax besides the tax on income. The actual payback would likely be much higher because the States pay for a large share of social programs. The spending on social programs would reduce as the people using the programs get higher income. Therefore, if the State of Michigan paid for up to 33% of the cost of improvements in transit, it would get at least that amount of money back. Encouraging more transit upgrades and paying for a third of the cost would increase State tax revenues enough to pay for the investment. The average marginal tax rate would be needed to apply this method to other States.

Local portion of transit funding is even more varied than State funding. Picking one city as an example would mean little for other cities, but in general city income and property taxes will go up after an improvement in transit. Some observations are that creating

Local Improvement Districts and using Tax Increment Financing appear to be effective tools to raise the money to pay for new rapid transit improvements because property values near stations goes up dramatically after an improvement.

Conclusions:

The Federal government has the greatest measurable payback from investment in transit. It also has the most to gain from increased investment in transit. State and Local governments gain in taxes from economic activity that is generated by transit. However, the gain to the State is just above what it typically invests in transit. Additionally, local taxes vary so widely in their form and rate that it is difficult to make generalizations about how much cities gain from transit.

References:

1. Hoback, A., Anderson, S., "Link Between Transit Spending and Personal Income," Journal of Public Transportation.