

highways are not automatically complementary. But the passenger automobile now dominates short- and medium-distance intercity passenger transportation as, in numbers, it dominates in the use of most highways. Therefore any system for the allocation of highway investment would have to assess an important share of the total against passenger transportation. Both the provision of highway facilities for trucks and the competition with rail freight which this provision makes possible are to some extent by-products of the provision of facilities which would be demanded in any case by drivers of passenger automobiles.

Moreover, although many segments of the national rail net are subject to competition from waterways operators who pay no user charges, this competition is specialized with respect to both area and commodity.

There are still massive problems for rail investment created by the competitive environment in which railroads operate. Many railroads are in a position to avoid payment of Federal income taxes on part or all of their income, due to tax loss carry-forwards, which helps to improve their competitive position vis-a-vis public investment by reducing or eliminating the spread between their gross and their net return. But these tax-loss carry-forwards are also a factor in the growing phenomenon of footloose railroad cash. The roadbed may be immobilized, but the cash flow derived from depreciation, net income and sale of miscellaneous assets is not. Therefore the problem of railroad investment in the face of competition may be further subdivided into two different problems: negatively, competitive forces have cut into railroad earnings, and continue to hold them down; positively, the opportunity cost of converting railroad cash into railroad investment seems to be rising as alternative uses of the cash become relatively more attractive.

As if these problems were not complicated enough, there exists a further railroad investment problem which is a product of both history and technology. Historically, most railroads financed themselves to the maximum possible extent by the issuance of mortgages on their fixed assets. These often contain "after acquired" clauses which subject any further fixed assets to the original lien. Even without such provisions, loans against rolling stock provide the lender with more mobility and hence more security than loans against investments in way and structure. Historically, also, most railroads supplied themselves with whole systems of branch lines, and elaborate patterns and stations and yards, all built on the assumption of minimum hauls for local drays and wagons. The motor truck has revolutionized terminal services, and eliminated the need for much railroad fixed plant. Technical improvements in railroading must struggle against a financial, investment, and operating structure which combine to throw a deep shadow of the past into the present.

Finally, each individual railroad enterprise may be both too big and too small to achieve maximum credit in security markets for investment in technological advance. Individual railroads involve massive capital investments reflected in high balance sheet valuations of assets. Specific improvements due to new investment may lose most of their effect on earnings ratios due to the massive size of this asset denominator. Conversely, most individual railroads are too small to realize for themselves all of the beneficial systems effects of new investments.

To sum up: the problem of discounting costs and benefits of new railroad investment goes much deeper than is indicated by a simple contrast between "public" and "private" considerations. If railroads were experiencing the exuberant growth which characterizes highway or airport construction, many of the most glaring contrasts between railroad and other transport investment criteria would be greatly reduced. The problems of private ownership, of divided ownership, of obsolete physical capital, and often of obsolete balance sheets combine to make the development of acceptable criteria for railroad investment a matter of deep concern to the Department of Transportation as well as to the railroads themselves.

4. Trust funds, and pay-as-you-go

Federal highway programs have always been on a pay-as-you-go basis in the sense that no new bonds were ever issued as a specific offset to Federal highway contributions. But the major present Federal commitment to highways, via the Highway Trust Fund, is pay-as-you-go in a much more direct and meaningful sense. Receipts are earmarked for highway investment, and are thereby enclosed in what amounts to a budget within the budget.

The basic idea of a trust fund involves segregation of particular receipts from the general budget. But a trust fund need not involve the further principle