

CHAPTER 1

THE EVOLUTION OF THE TRANSIT INDUSTRY

The history of public transit in the United States covers a period of nearly 150 years. During the first part of this period transit was the dominant form of transportation in American cities, but since the 1920s the use of transit has been declining steadily. The decline was interrupted only during the years of World War II when the supply of fuel and new vehicles was severely constrained.

THE STREET RAILWAY ERA

The street railway was the predominant form of public transportation prior to the 1920s. The first fixed-route, urban public transit in the United States was a horse-drawn, eight-seater omnibus that began operating on New York City's Fourth Avenue in 1831. The cable car, which was introduced in 1873, more than doubled the horsecar's speed, but the cost of burying the cable limited use of this system to already densely developed corridors. In the 1880s, however, the electrification of the streetcar expanded the range of public transit in the cities, and until the end of World War I public transit ridership grew more rapidly than the urban population.

The extent of urbanization kept pace with the evolution of transit technology. Until the late 1880s a typical city had a two-mile radius, the distance a horsedrawn streetcar could cover during the 30 minutes most people were willing to spend to reach their destinations in the city core.

The electrification of the streetcar helped push the development horizons of the city five miles away from the center. During the height of the street railway era, lines leapfrogged past the densely developed part of the city to outlying areas and even satellite towns. The spaces in between soon were filled with new buildings, in part because of the new transit links.

In the typical development sequence, the appearance of electric streetcar lines helped precipitate the conversion of old residential streets to commercial and lower-income housing areas. Higher-income residents, who were offended by the noise and overhead wires from the streetcars sought property in outlying areas those same streetcars had made accessible. The densest retail and industrial development occurred where lines intersected and at their termini. Commercial activity continued to focus on the historic core, but important subcenters grew where new crosstown lines met the older radiating routes.

The Decline of Public Transit

Although the ridership on street railways held steady until the end of World War I, by the late 1920s a pattern of serious competition between the private automobile and public forms of transportation in urban areas had begun to emerge.

The automobile had begun to assert itself as a major form of transportation by the middle of the 1920s. With gradually increasing personal income and the efficiency of mass production, automobile ownership and use expanded quickly. In 1900, there were only 8,000 registered automobiles in the United States, but by 1925 the number had risen to 17 million.¹-/

The rising popularity of the automobile threatened the transit industry in three main ways. First, the automobile directly competed with transit for riders, particularly for social and recreational trips. Second, the widespread use of automobiles meant there was less incentive to extend streetcar and other transit to serve new housing and industrial development. Third, automobiles 'increased congestion on the city streets and created a situation in which the public transportation industry had to compete for patronage on the private automobile's own ground, where the latter performed considerably better.

In response to growing suburbanization and the growing competition from the private automobile, the public transportation industry in the 1920s began to shift from rail to buses. In 1922 almost all transit patrons were carried by streetcar and rapid rail, but by 1925 over a billion passengers were being carried annually by buses. By 1930 this number had risen to 2.5 billion.

The shift to buses was at least partially an unintended secondary effect of the Public Utilities Holding Company Act of 1935. This act prohibited utility companies from holding financial interest in street railways. Utility companies had been buying into streetcar operations since the turn of the century, and profits from their other more solvent businesses offset the financial setbacks transit operations were suffering. By removing the remaining underpinnings of financial stability from many of the relatively few surviving streetcar lines, the Holding Company Act accelerated the modal conversion process.

TRENDS IN TRANSIT RIDERSHIP

The results of the transit/auto competition and other economic pressures are illustrated clearly by the trend in total number of passengers carried by public transit. Ridership on

1/ Us. Department of Transportation, Federal Highway Administration, Highway Statistics, Summary to 1965, p. 12.

street railway operations more or less held steady during the 1920s but fell during the early 1930s. By the time of the Depression, the private automobile had cornered the pleasure and social trip market. Transit therefore depended increasingly on work trips for revenue, and rising unemployment cut into work travel. The losses might have been even greater if two other forces had not come into play: a temporary halt in the rapid growth of the automobile industry and an influx of potential patrons into the cities from failed farms.

The rally in transit ridership during the World War II years, when a surge in employment coincided with gasoline shortages, gave way to a steady decline that lasted nearly 25 years. Between 1945 and 1974 the total passengers carried by all forms of public transit had fallen from over 20 billion to just over 7 billion. There has been a slight increase in passengers during the past two years, a large part of which is due to fuel shortages and rising prices. Figure 1 illustrates this trend dramatically.

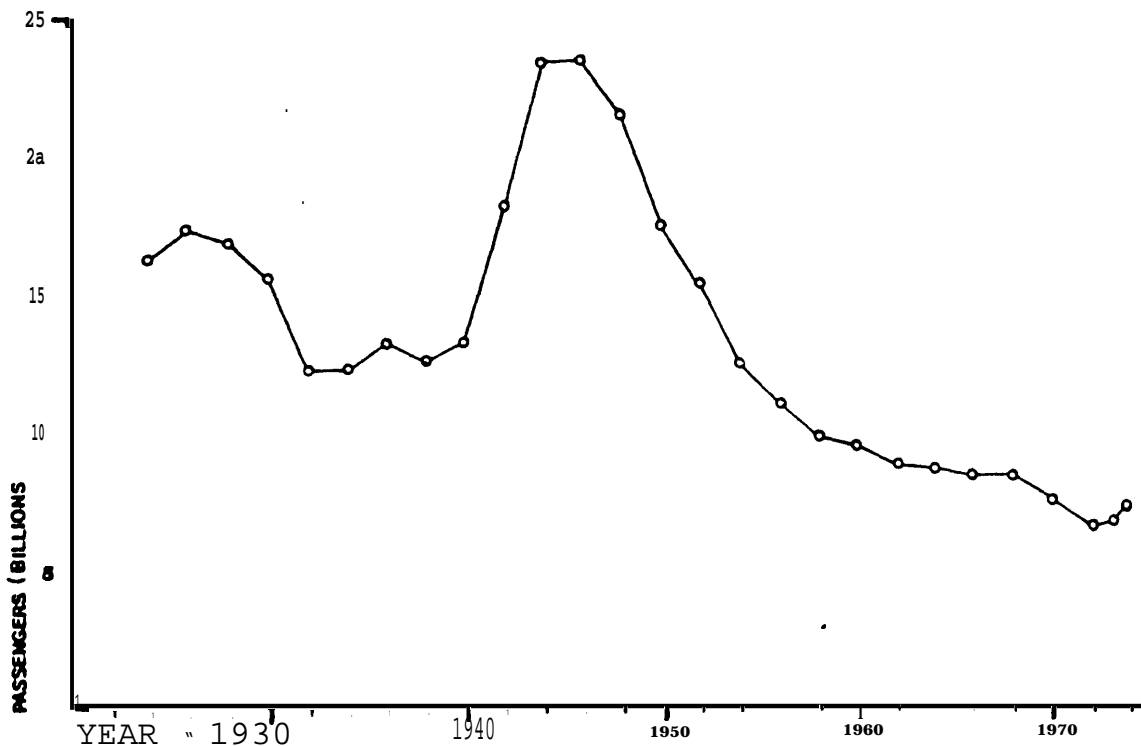


FIGURE 1: TOTAL TRANSIT PASSENGERS 1924-1974

Source: Wilbur Smith and Associates, Future Highways and Urban Growth, 1961
American Public Transit Association, '74-'75 Transit Fact Book

CAUSES OF DECLINE

In the almost three decades since World War II, the urban public transit industry in the United States has continued its economic decline. Even though average fares nationally have risen faster than the consumer price index, passenger revenue has not grown rapidly enough to offset increased costs. More and more systems have experienced operating deficits and many privately owned systems have either ceased to operate or sold their depleted operations to the municipalities they served. The basic causes of the decline in mass transit can be attributed to a number of interdependent factors:

- The urban population has grown rapidly outside the central cities in which most public transportation systems are located and where service is concentrated. (From 1960 to 1970 alone the population outside central cities in the United States increased by about 34% compared to a 1.5% population gain in central cities. Most of the older central cities suffered decreases.)
- Suburban living in the United States is largely automobile-oriented, in part because housing and population densities are low and parking space is usually freely available. Moreover, because of these low population densities and the wide dispersion of origins and destinations, conventional public transit cannot operate profitably and often is not even available to the suburbanite.
- Automobile ownership has increased dramatically. Even over the last decade there continued to be marked change. Automobile ownership per household between 1960 and 1970 increased from 1.09 to 1.27; the number of two or more automobile households rose from 13% in 1960 to over 30% in 1972. By 1972 only 20% of all households were without automobiles. These, of course, were concentrated among the poor, old, or too young -- the groups that are frequently considered to be "captive riders" of public mass transit systems -- as well as among dwellers in the centers of the largest cities.
- Public transit fares have escalated while the user's perception of the cost of driving has gone down.
- Lack of innovative management and marketing in the transit industry and conservative attitudes toward change generally have contributed to the difficulties of public transportation.

- Federal programs have been enacted and administered unevenly, giving impetus to one form of transportation over another. The support of highway construction from the Highway Trust Fund, for example, has provided relatively certain annual funding at relatively high levels for highways. Transit, in contrast, has no comparably dependable and ample source of funding.
- Federal planning funds for comprehensive urban planning available from the Department of Housing and Urban Development have been only partly coordinated with transportation programs within metropolitan areas. Coordinated planning is necessary to locate transportation services where they will get the most use and, conversely, to locate new development where it will be best served by public transportation. Much of the effort at coordination that has occurred has been thwarted by the lack of development controls and other powers necessary to implement the plans.
- During most of the period in which the nation's urban mobility problems were developing, the state and Federal governments were largely concerned with the problems of transportation between urban areas. It is only in the last few years that attention has increasingly focused on the transportation needs within these areas, although this shifting interest and concern has not yet caught up with the needs.

THE RAPID INCREASE IN OPERATING DEFICITS

Although ridership has declined sharply and continuously since 1945, it was not until 1963 that the industry as a whole first experienced operating costs in excess of revenues. By 1973 (the most recent year for which published data are available), despite a small increase in revenue passengers for the first year since World War II, the revenue deficit nationally had grown to two-thirds of a billion dollars and was growing at a rate of over 33% per year.^{1/} The deficit stood at 13 cents per revenue passenger.

Recently published data show that the annual percentage growth rate in 1974 was more than double the 1973 number as indicated in Table 1.^{2/} Because of these dramatic increases and the major implications of a continuation of this trend, a 1975 national projection has been obtained based on up-to-date experience in major metropolitan

1/ '73-'74 transit Fact Book, American Public Transit Association., Table No. 1, p. 4.

2/ Ibid.

TABLE 1 -- NATIONAL ANNUAL TRANSIT DEFICIT

| Year | Net Operating Deficit After Taxes (\$Millions) | Annual Percent Change |
|------------------|--|-----------------------|
| 1968 | \$161 | 37% |
| 1969 | \$221 | 30% |
| 1970 | \$288 | 43% |
| 1971 | \$411 | 25% |
| 1972 | \$513 | 44% |
| 1973 | \$738 | 72% |
| 1974 | \$1,271 | 33.9% |
| 1975 (projected) | \$1,702 | |

Source: American Public Transit Association, '74-'75 Transit Fact Book for 1968 through 1974; System Design Concepts, Inc. forecast for 1975 (see text for explanation).

areas. Metropolitan transportation officials in each of the cities listed are the sources of data for the forecasts of deficits indicated.

The total 33.9% projected increase for 1975 in the metropolitan areas was used as the basis for projecting the national figures shown in Table 2. This projection is presented with some reservation, recognizing that the basis for the individual figures varies widely. On the whole the individual estimates are likely to be on the conservative side, tending to reflect operators' optimism regarding their ability to manage costs. Nonetheless this analysis does clearly demonstrate that the rapid rate of growth of operating costs in excess of operating revenues is reaching an order of magnitude of major national consequences -- \$1.7 billion. A recent

TABLE 2 -- TRANSIT OPERATING DEFICITS IN 1974 AND PROJECTED FOR 1975 IN SELECTED MAJOR METROPOLITAN AREAS (Millions of Dollars)

| Metropolitan Area | 1974 | 1975 | Percent Increase |
|--------------------------------------|-------|---------|------------------|
| New York* (Calendar Year) | 315.0 | 421.7 | 33.8% |
| Boston (Calendar Year) | 141.6 | 159.0 | 12.3% |
| San Francisco** (F.Y.) | 87.6 | 109.9 | 25.5% |
| Los Angeles (F.Y.) | 66.8 | 97.1 | 47.2% |
| Chicago (CTA only - Calendar Year) | 62.6 | 93.6 | 49.5% |
| Philadelphia (Septa only) | 58.5 | 75.1 | 28.4% |
| Washington, D.C. (Bus only - F.Y.) | 17.5 | 38.4 | 121.1% |
| Pittsburgh | 23.4 | 30.4 | 29.9% |
| Atlanta (F.Y.) | 17.0 | 24.3 | 43.0% |
| Seattle | 14.3 | 19.5 | 36.4% |
| Minneapolis-St. Paul (Calendar Year) | 12.0 | 24.3 | 102.5% |
| Denver (Calendar Year) | 7.4 | 10.4 | 45.4% |
| Totals | 823.7 | 1,103.7 | 33.9% |

*N.Y.C.T.A. only; based on interpolation of data for 11 months of F.Y. 1974 and prior years and projections of 1975 and 1976 calendar years by MTA.

**Based on data from five principal operators covering all estimated 95 percent of area's transit system and extrapolated to cover the entire transit service area in the San Francisco region.

Source: Telephone contacts with officials in each metropolitan area in March 1975. In each city, the numbers for the two years use common assumption, although some of the numbers are inconsistent with more recently reported data.

U.S. Department of Transportation projection of a \$2.5 billion deficit in 1990 is unrealistically optimistic in light of this trend.^{1/}

Recent growth in deficits reflect, to an increasing extent, the financial impacts of public takeovers of declining Private systems coupled with extensions and improvements in the quality of service. In addition, in contrast to a few years ago

1/ A Study of Urban Mass Transportation Needs and Financing, U.S. DOT, July, 1974, pp. 4,5.

operators have been tending to hold the line on fares despite rising costs.-&/ Average fares have been declining in real dollar terms nationally during the last few years. Thus, in contrast to earlier years, the financial problem is more and more a result of conscious policy decisions rather than a reflection of neglect and deterioration in the level and quality of service.

The financial impact of service improvements was illustrated during fiscal years 1974 and 1975. Transit operators responded to the oil embargo and higher fuel prices with new routes, route extensions, and more frequent service, placing " greater emphasis than before on innovative services. Ridership increased, but the gap between operating costs and farebox revenues generally grew wider. For example, WMATA here in Washington reported that the expanded service increased operating costs by 12% while ridership grew only by 2%.

The National Mass Transportation Assistance Act of 1974 provided a total of \$3.975 billion over six years, through the new Section 5, for optional use to pay operating costs. The funds authorized are not to exceed \$300 million for fiscal year 1975, increasing annually to \$900 million in fiscal year 1980.

The results of a telephone survey of major metropolitan transit operators indicate their need for operating assistance is so great that most of them plan to use their entire allocation of Section 5 funds for this purpose despite the requirement of much greater local matching share (see Table 3) . The local share for operating assistance is at least 50% compared to 20% if the same funds are used for capital improvements. It is apparent that in at least some of the metropolitan areas surveyed the present level of transit service cannot be maintained under the existing fare structure through the remainder of this year without the operating assistance funds authorized in the 1974 act.

1/ During the period 1949 to 1970 transit fares rose 3% per year greater than the consumer price index; however, between 1971 and 1974 transit fares rose less than 2% per year, While the consumer price index rose more than 6% per year.

TABLES
 NATIONAL MASS TRANSPORTATION ACT 1974
 PROPOSED DISPOSITION OF SECTION 5 FUNDS F.Y. 1975
 SELECTED METROPOLITAN AREAS

| METROPOLITAN AREA | F.Y. 1975 ALLOCATIONS (MILLIONS) | TRANSIT OPERATIONS (PERCENT) | CAPITOL DEVELOPMENT (PERCENT) | TRANSIT OPERATIONS (TOTAL) |
|-------------------|----------------------------------|------------------------------|-------------------------------|----------------------------|
| ATLANTA | \$2.4 | 100 | 0 | \$2.4 |
| BOSTON | \$6.5 | 100 | 0 | \$6.5 |
| CHICAGO | \$18.1 | 100 | 0 | \$18.1 |
| DENVER | \$2.4 | 0 | 100 | 0 |
| LOS ANGELES | \$24.0 | 100 | 0 | 824.0 |
| NEW YORK | \$42.7 | 100 | 0 | \$42.7 |
| SAN FRANCISCO | \$10.1 | 99 | 1 | \$10.0 |
| SEATTLE | \$ 2.7 | 0 | 100 | 0 |
| TWIN CITIES | \$ 3.3 | 0 | 100 | 0 |
| WASHINGTON D.C. | \$6.9 | 100 | 0 | \$ 6.9 |
| TOTAL | \$119.10 | 92% | 8% | \$110.60 |

In summary, the financial stability of the transit industry has undergone a dramatic reversal since 1945. As shall be discussed in the next chapter, the decline has spurred the continuing efforts for the Federal government to develop a sound public policy for supporting transit operations.