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SPATIAL DISTRIBUTION OF MASS TRANSIT FUNDS IN THE CHICAGO METROPOLITAN AREA

INTRODUCTION

A review of the literature on the development of urban transportation in the United States suggests that transportation expenditures occur as periodic waves of expansion and stagnation and tend to be associated with business and real estate cycles (1). During each periodic wave, the spatial network of mass transit within a metropolitan area apparently undergoes a process of restructuring as new transportation modes are developed, as certain routes are extended, as others are reduced or abandoned, and the volume of service on existing routes are intensified or reduced (2). Restructuring appears to manifest itself in both the expansion and stagnation cycles. As a consequence, accessibility of residential areas to mass transit becomes spatially redistributed. This paper suggests that current spatial allocations in government funding of mass transit in the Chicago metropolitan area facilitates and reflects shifts in the mass transit network favoring the suburbs to the detriment of the city of Chicago's more transit dependent population.

(1) Isard, Walter. *Methods of Regional Analysis*, M.I.T., 1966. pp. 218-219.
Hoyt, Homer. *One Hundred Years of Land Values in Chicago*. University of Chicago, 1933. pp. 208-219.

(2) Altshuler, Alan. *Urban Transportation System: Politics and Policy Innovation*. M.I.T., 1979. pp. 19-99.
American Public Transit Association. *Tansit Fact Book*. 1983.
Pushkarov, Boris and Zupan, Jeffrey. *Public Transportation and Land Use Policy*. Indiana, 1977. pp. 8-12.

EARLY YEARS

During periods when transit expenditures were relatively stagnant in American cities, such as the depression years of the 1930's, the war years of the 1940's, and the early 1950's spatial restructuring of mass transit was in process. Motor buses replaced electrified street cars, new subway lines were demolished. However, most of these changes were contained within the municipal boundaries of central cities. Only automobiles and highways expanded into the suburbs.

The mass transit network in Chicago reached its maximum development by 1930 and generally maintained its service area coverage for decades (3). Passenger volume attained its peak by 1927 and then went into decline, and with the exception of World War II years of gasoline shortages, never recovered its former levels (4). Influencing the decline was the continuous growth of automobile ownership in the city (5).

From its beginnings, mass transit systems in Chicago, operating as private corporations, received no public funding until the municipal government purchased the transit firms in 1947 as they went bankrupt and consolidated them under the Chicago Transit Authority (CTA). Revenues of the private transit companies were derived from fares and real estate holdings. Though yearly passenger volumes maintained their long term decline, the spatial network remained virtually intact during the period when motor buses replaced electrified street cars, although some service was cut when routes were consolidated.

In 1957, federal government grants were allocated to the Chicago Transit Authority to construct radial subway lines from the central business district along the median strip of newly constructed expressways to the edge of the city. Within city limits, accessibility to the central business district was increased and some diminution of intra-neighborhood travel occurred as the electric street car era ended.

A PERIOD OF EXPANSION

With the passage by the U.S. Congress of the Housing Act of 1961 and the Mass Transportation Act of 1964, a marked growth of expenditures on

(3) Barret, Paul. *The Automobile and Urban Transit: The Formation of Public Policy in Chicago 1900-1930*. Temple University, 1983.

(4) Lind, Alan. *Chicago Surface Lines*. Transport History Press, Park Forest, IL, 1979, p. 416.

(5) Ibid.

capital equipment contributed to the city's transit network expansion including servicing of neighboring suburbs by the Chicago Transit Authority. But it was not until the 1974 U.S. Urban Mass Transit Act, which provided subsidies, for the first time, for transit operations did a new phase develop in the spatial expansion of mass transit. In order for the Chicago Transit Authority to receive grants from the government, the Illinois state legislature was required to institute for the Chicago area the Regional Transportation Authority as the agency to allocate government funds and local revenues and coordinate transit systems for the city and suburbs in a six county region. Federal funds, which were previously allocated directly to the Chicago Transit Authority, now had to be shared with the suburbs, although more funds were made available.

During the period between 1974 and 1981 when transit funds expanded, the share of funds allocated by the Regional Transportation Authority gradually shifts toward the suburbs (Table 1). It was a time when costly commuter railroad operations were subsidized by the Regional Transportation Authority with several bankrupt operations purchased outright. New suburban bus routes were developed and service on existing routes were intensified and expanded. Despite the growth in city transit operating expenditures, its rate in comparison to suburban transit was lower between 1974 and 1981 (Table 2).

A PERIOD OF STAGNATION

Since 1981, total expenditures by all systems under the Regional Transportation Authority appear to have entered a period of stagnation (Table 2). Local restraints produced a reduction in Chicago Transit Authority operating expenditures which reversed their long period of growth. In contrast, allocations to suburban bus and commuter railroad line expanded. The share of funds for the Chicago Transit Authority dropped to its lowest level since it came under control of the Regional Transportation Authority (Table 3).

The effect of fund allocation upon transit service for city and suburbs demonstrates the restructuring process. From January 1979 through 1980, expanded allocations resulted in \$92 million in suburban bus and commuter rail improvements compared to slightly larger amount of \$105 million for the much larger Chicago Transit Authority system. The major part of the funds was used by the CTA for an airport subway leaving only \$38 million for neighborhood transit improvements.

In response to RTA cost reductions of 1982, service was severely curtailed on RTA rail and suburban bus lines. CTA managers found it necessary to institute service cuts in the city. Partly due to the Chicago Transit Authority expenditures being more than two times larger than the combined suburban

systems, service cuts were more extensive. Approximately 500 per cent more units of service were cut in the city as compared to suburban systems, although not all the units are equivalent. In the same period as cuts were being made, new service was developed in the suburbs. Ten new suburban bus routes were added and service was significantly increased on one of the commuter lines. A new program of transfers between suburban transit lines and the CTA was introduced which primarily benefits suburban commuters going downtown. During this same period fares were reduced for the commuter railroads which represents additional costs to the RTA budget.

DENSITY AND COSTS

In a period of cost cutting, it can be expected that transit system managers would locate components in the system which are costly. If service cuts are required, then those operations with the lowest passenger volumes represent a basis for cost reductions. As early as 1979, the Regional Transportation Authority administration suggested that new service routes not be introduced into areas having less than 3000 persons per square mile (6). If the RTA were to apply this density standard for determining priorities for new or reduced service for all systems under the RTA instead of applying it only to the suburbs, no service would be cut in the city before cuts were made in the suburbs. The mean gross density of suburban communities where cuts were made was a 2200 persons per square mile.

The CTA made its own cuts to conform to its reduced budget. Since the gross density for the city of Chicago is 14,000 persons per square mile, few areas would have densities sufficiently low as to require cuts. The mean density of neighborhoods whose service was reduced or cut was 27,000 persons per square mile. Mean gross density of suburban areas receiving new service in 1983 is 8500 persons per square mile. The twelve suburban routes which were new during the 1980 period of expansion had area densities averaging 3500 persons per square mile. Reallocation toward the suburbs appears to be producing a high cost transit system. Data on costs per passenger tends to confirm the high cost suburbs.

1980 Costs Per Passenger

CTA	\$.79
Commuter R.R.	3.71
Suburban Bus	1.53

(6) Regional Transportation Authority. *Proposed Annual Program and Estimated Budget*. FY 1982, August, 1981, Chicago, p. 10.

EQUITY (7).

Beyond the economic effects of transit fund shifts is the social impact upon transit dependent populations. City transit cuts as compared to suburban cuts affect areas with significantly greater proportions of their population which have lower automobile ownership rates, lower income levels, fall below the poverty level, and which are of racial and ethnic minorities. Furthermore, comparison of city neighborhoods receiving cuts in service appear to have affected more of the disadvantaged population. Seventy-two per cent of cuts occur on routes falling in predominantly black and hispanic populated neighborhoods.

POLICY AND THE RTA BOARD OF DIRECTORS

Shifts in the allocation of funds towards the suburbs are the result of policy decisions by the RTA Board of Directors. The composition of the Board of Directors was initially established in 1974 to give the city of Chicago and its mayor a narrow majority with 5 representatives from the city and 4 from the suburbs. In 1984, the Illinois legislature restructured the composition of the Board with the city of Chicago getting only 5 votes out of a total of 13 members. One can expect that the RTA Board will more effectively facilitate the process of restructuring transit to favor the suburbs and selected areas within the city of Chicago.

(7) Pucher, John. "Who Benefits From Transit Subsidies? Recent Evidence From Six Metropolitan Areas." *Transportation Review*. Vol. 17A. No. 1, pp. 39-50. 1983.

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Pucher, John, Hendrickson L. and McNeil S. "The Socio-economic Characteristics of Transit Riders: Some Recent Evidence." *Traffic Quarterly*, 35, pp. 461-483. 1981.

Rock, Steven M. "The Redistributive Impact of Transit Services Financing." Urban Mass Transportation Administration. Office of Policy Research. *U.S. Department of Transportation*, September. 1981.

TABLE 1

Regional Transportation Authority
Percentage of Total RTA Subsidy

	Chicago CTA	Suburban Bus	Commuter R.R.
	Percent	Percent	Percent
1974-1976	78.6	4.5	16.9
1977-1979	71.0	6.8	22.2
1980-1982	75.2	6.7	18.1
1983	68.8	8.6	22.6

Source: RTA Annual Reports

TABLE 2

Regional Transportation Authority (Chicago)
Change In Operational Expenditures
(Millions of Dollars)

	CTA	SUBURBAN BUS	COMMUTER R.R.	TOTAL RTA
1974	273.2	11.5	81.8	366.5
1981	528.0	36.2	189.8	764.0

Percent Change

1974-81	+ 96.9	+ 214.8	+ 132.0	+ 108.5
Avg./Yr.	+ 13.8	+ 30.7	+ 18.9	+ 15.5

Source: RTA Annual Reports

TABLE 3

Regional Transportation Authority (Chicago)
Operational Expenditures
(Millions of Dollars)

	CTA		SUBURBAN BUS		COMMUTER R.R.		TOTAL RTA	
		%		%		%		%
1981	538.0	70.4	36.2	4.7	189.8	24.9	764.0	100
1982	510.3	72.2	31.8	4.5	164.2	23.3	706.3	100
1983	518.1	66.6	44.4	5.7	215.4	27.7	777.9	100

Percent Change

1981-1982	- 5.1	- 12.1	- 13.5	- 7.5
1982-1983	+ 1.5	+ 39.6	+ 31.2	+ 10.1
1981-1983	- 3.7	+ 22.8	+ 13.5	+ 1.8

Source: RTA Annual Reports