Evolution of Fare Policy: A Product of Modern Transit Management

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When a transit agency sees costs going up and ridership going down, can fares save the day? A new fare structure, imposed by the Chicago Transit Authority (CTA), suggests that fares can be used to stimulate both ridership and revenues. Fare policy analysis as an integral part of strategic management planning is outlined. The adoption of a series of basic fare policies by the CTA Board is reviewed. The recent 1990 fare restructuring, as described, directly responds to these policies, with respect to market segmentation, reflection of service quality, and deep discounting concepts. Revenue and ridership effects and associated fare elasticities, associated with four CTA fare changes that were implemented during the 1980s, are also analyzed. Fare elasticities derived from state preference surveys, regarding a range of alternative fare structures, are presented. The broader context for fare policy analysis, as it has evolved at CTA, is also outlined, in terms of sustained demand for basic service, emerging new markets, accommodating escalating costs, and meeting associated revenue needs.

Can a product priced at less than half of its value have a future? Public transit, faced with a sustained escalation of operating costs, stagnating public acceptance, and the potential reduction of federal subsidies must address this question. Public transit agencies, often wedded to management procedures that worked so well in the 1950s and 1960s, must now integrate aspects of modern management into their planning and operation. With present-day competition for the traveler coming from many sources, public transit operators must learn new ways of not only being sensitive to their markets but of satisfying and increasing those markets through well-thought-out, corporate-like strategies.

This paper follows the development of one such strategy—a market-oriented fare policy—developed at the Chicago Transit Authority (CTA). Fare policy itself is seen as a significant component of emerging agency market orientation.

That market orientation and resultant fare policy have evolved from a strategic planning process that has set an overall context for service delivery in terms of an eroding financial climate and CTA's ability to change within that climate.

The strategic planning process, and subsequent management actions taken, including the fare restructuring, can be summarized as follows:

1. *Strategic management planning.* The CTA strategic plan identified the capital and operating constraints that will limit agency actions in the short term and serve as guidelines for agency change in the long term. The plan targets changing ridership patterns and identifies markets from which CTA must draw. Knowing the most likely limits and sources of capital funds for upkeep and growth, and knowing the constraints on non-farebox-generated operating funds, the CTA can better understand the limits of its ability to deliver service. The agency must take full advantage of knowledge of its markets to ensure that it can match the demand for existing and new service with an organizational structure to provide adequate and appropriate supply.

2. *Program-based budgeting.* To be sure that the organization follows a strategic management approach, the annual operating budget must be targeted to reflect agency goals and objectives, ensuring that programs of highest priority get adequate funding. In addition, the budget must identify revenue targets to be met. The budget, rather than being merely a control document, becomes an active planning document reflecting the strategic plan.

3. *Fare policy.* The strategic management plan and its annual documentation—the program-based budget—articulate revenue goals and ridership targets. Fare policy, in this context, becomes a dynamic and aggressive marketing tool.

The next section of this paper addresses the conditions under which these management approaches were applied.

PREPARING FOR THE FUTURE

The CTA is a complex agency, with over 100 years of history. It now serves 1,900,000 trips per day and operates 24 hr every day of the year, with more than 13,000 employees and a combined operating and capital budget approaching 1 billion dollars.

CTA, like other transit companies, has been confronted for the last two decades with rising costs of service and an eroding passenger base.

Quite often, to balance this divergence of increasing costs and declining revenues, transit agencies attempt to increase their income by a simple fare increase applied to and imposed on an existing base of riders.

Today's transit agencies, with newer business tools at their disposal than in the past, can now begin to manage this divergence in more sophisticated ways. Assuming a market orientation, strategic planning can examine various cost-revenue subsidy scenarios and establish ways in which a revenue generation policy—especially fare setting—can be used as a marketing device.

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TRADITIONAL TRANSIT MARKETS

Competition with the private automobile is cited by transit operators as the single greatest challenge to urban transit service. In our larger metropolitan areas a major sustained demand for relatively high service levels of transit will undoubtedly continue, linked closely with those high-congestion, peak-hour travel corridors where high-capacity, exclusive right-of-way transit modes continue to hold clear service advantages. Sustained demand will be linked also to those transit dependents who do not have automobiles available.

However, it is problematical whether these sustained demands will experience marginal increases or decreases over the coming years. For example, many larger urban areas are experiencing a gradual decline in bus ridership levels, particularly for cross-town and nonwork travel. As bus fares have risen, some discretionary travel has been foregone or accommodated in other ways. Regaining these trips then becomes a potential marketing target.

Population and employment change within both larger and smaller urban areas will continue to be a key to future transit demand prospects. The extent to which that change occurs within central cities, either in relation to renewal of older residential areas, at higher densities, or the renewal and growth of downtown areas and environs, or both, will be especially important. The prospects for growth in rail rapid transit ridership are promising for CTA because of Central Area employment growth and a resurgence of inner-city housing.

In light of uncertainty regarding noncentral area transit travel markets, major challenges face the transit industry in terms of targeting specific market segments where transit potentials appear stronger. These market segments may be tied either to specialized transit needs (demand side) or particular types of transit service (supply side). In the Chicago region, for example, market segments on the demand side that show potential for growth include reverse commuting to suburban jobs, and off-peak travel for elderly, disabled, and student populations.

On the supply side, additional service potential appears to exist for premium express bus service, particularly to the Central Area, and for a Central Area distributor system to facilitate the present pattern of growth and to avoid the threat of downtown street gridlock. Privately provided transit services also have established a particular supply side role and market share.

EMERGING MARKETS

The pattern of transit ridership in Chicago is not dissimilar to that in other very large urban areas. Bus ridership is stable, or declining, whereas rail ridership, especially in certain emerging urban "hot" areas is gradually increasing. There is no question that the significant change in the economic and demographic profile of the region has had, and will continue to have, a significant impact on bus and rail ridership. CTA's current ridership profile is given in Table 1.

Table 1 also notes some demographic characteristics of those who do not ride CTA. Because of the current nature of its service, CTA serves city residents primarily. However, those riders are not overly skewed, as in many urban areas, to lower-income levels but are distributed throughout all income categories. A total of 12 percent of those who use CTA have household incomes greater than $50,000, compared with 14 percent of non-CTA users.

TABLE 1 Profile of Current CTA Ridership Market (*1*)

	Riders (%)	Non-Riders (%)
Live in City	81	50
Live in Suburbs	19	50
Have Drivers License	64	86
No Car in Household	27	6
Employed Full Time	52	56
Student	12	4
Occupation: White Collar	71	68
Occupation: Blue Collar	23	28
Median Income ($1,000)	24.2	26.8
- Less Than $20,000	39	31
- More Than $50,000	12	14
Reasons For Using CTA (%)		
* No Car Available	36	
* Can't Drive	11	
* Convenience	34	

When looking at why CTA is selected for travel, car availability and convenience are major reasons for 81 percent of CTA riders. Cost is a principal reason for only 9 percent of riders. But for those to whom cost is important, a greater percentage (10 percent) cite cost when they use the system every day, as compared with those (5 percent) who are infrequent users. Those attributes of service that are important, coupled with frequency of use by rider and purpose of trip, become critical design parameters for the development of a fare structure that can be used to provide market incentives to existing and new users.

In projecting new markets for which CTA might provide service, two major sets of information must be assessed: (a) ridership trends by year and by route or line and (b) significant changes in regional demographics. Two examples developed from such data give evidence of emerging markets that are different in character from the more traditional transit markets noted briefly in the previous section:

1. *Higher-income urban workforce.* An older segment of the elevated rail system serves a series of revitalized higher-income, young professional neighborhoods in the north and near northwest parts of the city. These more affluent riders (many owners or leasers of automobiles) use the Ravenwood elevated rail line to commute to work. Over the last 10 years line ridership has increased 32.5 percent, compared with an overall rail system increase during that period of 3.3 percent. Three stations more than doubled daily riders in that same period. Because these new riders are "users of the city," there is also significant new demand for improved weekend service. In summary, this is a new market of moderate- and higher-income riders, who ride for convenience and even for status, and for whom the cost of the trip is far less important than convenience and quality.

2. *Airport corridor.* CTA extended its northwest rapid transit line to reach O'Hare Airport in 1984. Three additional stations were opened at suburban-like sites. Of these three additional stations, two have major parking capacity, and all three provide kiss-and-ride access. All have excellent feeder or connecting bus service. Since opening, the extension has

added 17,000 daily riders to the system. Of all trips taken on the extension, 21 percent are for reverse commuting, responding to the rapid growth of jobs in the vicinity of the airport. O'Hare station itself is unique in ridership. It remains busy on weekends and at peak holiday periods, including summer months. Many riders are first-time CTA riders. In summary, this extension serves riders for unique purposes: journeys to airport, reverse commutes, and park-and-ride facilities at convenient station parking areas for former automobile travelers.

These examples show that emerging markets must be evaluated so that service attributes can be tailored to needs and services can be priced according to these attributes.

A more general evaluation of emerging markets to be incorporated in strategic system planning includes

- Redistributed journeys to work
  - Reverse commuting
  - Airport vicinity job markets
- Traditional journeys to work, new markets
  - More affluent young urban professionals
  - Suburban commuters at core-oriented park-and-ride locations
- Nonwork journeys
  - Midday shoppers and evening recreation
  - Expanded Loop (central city) travel
- Nontraditional markets
  - O'Hare Airport travelers (rapid rail line now in service)
  - Midway Airport travelers (rapid rail line to have opened in 1992)

The ability to attract and serve these markets is a function of the agency's ability to dedicate resources toward tailoring services to the needs of riders. Because contained costs make it difficult to satisfy even today's markets, methods to reallocate key budget items to high-priority areas must be derived. Strategic planning and program-based budgeting, described briefly later, are used for establishing agency priorities and allocating resources consistent with meeting the needs and expectations of current and emerging markets.

OPERATING BUDGET CONSTRAINTS

CTA, by law, must generate at least 50 percent of its operating budget from system-based revenue. One approach to budgeting would be to look at ridership trends and fares and calculate the maximum allowable operating budget on the basis of anticipated fares. A more strategic approach might be to develop an operating budget that responds to strategic agency priorities and to then establish the level of fare revenue needed to support that budget. The latter was the approach taken that resulted in a new fare structure.

The operating budget of CTA has been under pressure since 1981, when all systems in the region faced a major fiscal crisis. From a period of severe agency cutbacks in 1981–1982 until the present, operating costs have gradually increased so that daily demands for service could be met at least at a satisfactory level.

With public pressure to keep operating cost growth at less than inflation, with regional pressure to divert some operating funds to capital programs, with a strong unwillingness to enact general fare increases and general public pressure to sustain service at existing levels, much ingenuity must be applied to generate a budget that permits operation of a safe system. Of interest is that CTA performed as well or better than its peers during the past decade, using operating cost per passenger (both bus and rail) as an index. But inflationary growth in expenses, even with a constrained budget that defers many necessary agency programs, still outpaces growth in available revenues. New approaches to management, primarily using a longer-range strategic plan as a focus, must be brought to bear to simultaneously address market needs, anticipated budget levels, and the need for growth of system-generated revenue.

APPLICABLE MANAGEMENT TOOLS

The previous section illustrated the financial dilemma facing a large transit property. Operating costs are rising greater than the available revenues. The basic revenue source, the fare, does not necessarily reflect the nature of the service obtained. The system is aging and needs replacement. And new markets are emerging that must either be served well or be lost to competing modes.

The development of a strategic plan creates an agencywide awareness of these problems and challenges the agency to develop effective strategies to confront problems and serve its markets.

In this section the strategic planning effort at CTA is reviewed briefly. An operational partner of the plan, a program-based budget, was also an important supporting management tool.

STRATEGIC MANAGEMENT PLAN

The strategic management plan has become, for most complex agencies, a major document for setting priorities and establishing programs as they evolve.

The strategic management plan examines current conditions of operation, organization, and financial structure and projects alternative futures on the basis of overall system condition, the rate at which system improvements can be made, future funding sources other than fare-box generated revenue, ridership trends, and agency organization. For these various alternatives, revenue (fare-box) needs can be established. The purpose of the strategic planning process was to raise the following question: Should future budgets and revenue needs be addressed by simple, across-the-board periodic fare increases, with a likely negative impact on ridership, or can new fare structures be identified that can actually serve as market tools, increase revenues, and retain or increase ridership? The latter was the direction that CTA followed.

Fare policies have emerged as a major theme of the strategic management plan of the CTA. Within the broader set of financial constraints, cost containment needs, search for new non–fare box revenue sources, capital infrastructure replacement issues, productivity and organizational efficiency needs, and related issues, fare policy—and a stable relationship between passenger-generated revenues and operating costs—has become a vital element.

In 1988 the CTA Board adopted a fare policy, composed of 14 elements that in part recognized the importance of regular, relatively small incremental fare increases. The policies offer a basic foundation for fare revenues to keep pace with inflationary growth in operating costs while minimizing the ridership loss otherwise associated with fare increases.

To further explore this critical nature of fare policy, three scenarios for future population, employment, and transit demand growth in the CTA service area were examined as part of the strategic plan. The financial implications of these scenarios, in terms of associated service levels and operating costs, indicated that under any of the scenarios the ability to have passenger-related revenues keep pace with operating cost growth is the key to financial stability.

The need to explore fare restructuring that is sensitive to time-of-day and quality-of-service pricing (two variables found important to riders in previous CTA surveys) and to address specific market segments was accentuated in the strategic planning process. The long-term fare improvement program also included ongoing efforts to upgrade fare collection equipment technology, which would then provide flexibility in the pricing of prepayment instruments and differential fare structures. This is consistent with the long-term objective of a cash-free system. A new fare system then is responsive to the following:

- Market segments and the demand for service;
- Improved agency operations through integration of modern fare collection technology; and
- Budget requirements for meeting, in a responsible and planned way, an adequate share of operating costs.

A clear product of the strategic management planning process is to have an integrated agency-wide decision on market targets, methods of achieving those targets through various price schedules, and, finally, methods of providing organizational support for those price schedules via appropriate operational changes.

REVENUE AND RIDERSHIP: A CRITICAL MIXTURE

During the 1980s, the typical experience of urban transit operators was the inexorable need for periodic fare increases to match rising operating costs, coupled with resultant ridership decreases that in turn may have led to service cuts or additional fare increases, or both. Breaking this unfortunate and dangerous downward spiral has been one of the major challenges of modern transit management.

This section documents some of these typical revenue/ridership trends by examining the characteristics and impacts of four fare increases implemented by CTA in the 1980s. These increases variously addressed the pricing of cash fares, passes, transfers, and rail-bus differentials, with associated expected and unexpected effects on ridership by mode and fare payment type. This experience, coupled with the results of a 1987 stated preference survey of other fare structure options in Chicago, provides the basis for an overall better understanding of fare structure options as the transit industry enters the 1990s.

CTA FARE CHANGES DURING THE 1980s

Table 2 summarizes the four CTA fare increases that were achieved during the 1980s: in 1981 (twice), 1986, and 1988.

Different pricing strategies were embraced by each of these increases:

1. In January 1981 the cash fare was increased by one-third, whereas the pass price was increased substantially less, providing a major incentive for a shift to pass purchase and use.
2. In July 1981 when it was realized that the earlier fare increase was not generating required revenue gains, an across-the-board increase of 12 to 14 percent for both cash fares and passes was enacted.
3. In February 1986 three fare changes were made:
   - A 10¢ rail surcharge was added to reflect the higher quality of service offered by rail as compared with bus;
   - The transfer price was increased from 10¢ to 25¢, the first such increase in many years; and
   - Transfer regulations were tightened to allow only two rides per transfer, excluding the route of issuance (except for seniors during off-peak hours of service).
4. In January 1988, across-the-board fare parity was pursued, with the bus fare raised 10¢ to equal the rail fare and the pass price increased by 7 percent. This fare change resulted in the smallest (8 percent) average increase of any of four fare revisions.

CTA RIDERSHIP SHIFTS ASSOCIATED WITH FARE CHANGES

Table 3 summarizes the ridership shifts that occurred as a result of each of the four 1980s fare increases. For 1986 and

TABLE 2 Summary of CTA Fare Increases During 1980s

	Price ($)			Price Change (+%)			
	Bus Cash	Rail Cash	Monthly Pass	Bus Cash	Rail Cash	Monthly Pass	Average
1980	.60	.60	30	--	--	--	--
January 1981	.80	.80	35	33	33	16	30
July 1981	.90	.90	40	12	12	14	12
February 1986	.90	1.00	46	--	11	15	18
January 1988	1.00	1.00	50	11	--	7	8

A dash (--) is used to indicate unavailable data.

TABLE 3 Ridership Shifts Associated with CTA Fare Increases

	Annual Unlinked Trips (000)[a]			Ridership Change (%)			
	Bus Cash	Rail Cash	Pass	Bus Cash	Rail Cash	Pass	System Total
1980	341	99	85	--	--	--	--
January 1981[b]	195	59	46	-16	-12	+50	-5
July 1981[b]	110	34	52	- 4	+2	-20	-7
February 1986	304	107	164	-16	-15	+22	-5
January 1988	286	103	183	0	+6	-10	-3

[a]Compares year after against year before fare increase
[b]Ridership data are semi-annual; first 6 months 1981 vs. 1980 and second 6 months 1981 vs. 1980

A dash (--) is used to indicate unavailable data.

1988, the annual ridership before the fare increase was compared with that in the year after the fare increase. For the two closely spaced 1981 fare increases, the 6 months before the 6 months after each fare change were examined. In general, both expected and somewhat unexpected ridership shifts occurred. Analysis of these ridership shifts shows the following:

1. After January 1981 a 50 percent increase in pass sales and use was, as expected, accompanied by a significant decline in bus and rail cash fares, with bus affected more seriously than rail.
2. The continuing shifts experienced just 6 months later with the July 1981 fare increase may have, in fact, also included some continuing stabilization in response to the initial January fare increase, as well as direct response to the July 1981 fare increase itself.
3. After July 1981 the slight increase in rail cash fare ridership may have reflected a recognition that, because of its higher service level, rail was "worth" more. The unexpected drop in pass use may have reflected the increased relative value of the transfer, whose price continued at only 10¢, with some pass users moving back to using transfers. This drop of 20 percent was found to be only temporary in subsequent months, as pass users gradually returned.
4. In January 1986 pass use was back to its June 1981 level. An additional 22 percent increase in pass use occurred, attributed to the combined effects of increased transfer price (10¢ to 25¢) and tightened transfer regulations limiting their utility.
5. After January 1988 an overall ridership loss of −2.1 percent was projected, although an actual loss of −2.5 percent occurred. Effects were particularly high in reduced fare categories, which experienced a 25 percent (10¢ out of a prior 40¢) fare increase on bus, leading to ridership losses of approximately 12 percent, which was not unexpected.

DERIVATION OF FARE ELASTICITIES

The average fare and annual/semiannual ridership changes summarized in Tables 2 and 3 can be used to derive modal fare elasticities, as summarized in Table 4. These are calculated using the "shrinkage factor" elasticity formula:

$$\text{fare elasticity} = \frac{(R_2 - R_1)/R_1}{(P_2 - P_1)/P_1} \quad (1)$$

where R_1 and R_2 represent before and after ridership levels, and P_1 and P_2 represent before and after prices, respectively.

Table 4 shows considerable variation in fare elasticities across the four fare revisions of the 1980s, with average bus, rail, and system elasticities that are consistent with the literature: a rail fare elasticity (−0.14) about a third that of bus (−0.38), yielding a systemwide elasticity of about −0.33.

The following are year-by-year highlights:

1. For January through June 1981, with the highest of any of the fare increases examined, resulting elasticities were surprisingly low. The key here is the increased discount offered for passes, which encouraged and achieved a major switch from cash to pass, allowing a substantial number of riders to switch fare payment method rather than eliminate or avoid transit trips altogether. Additional discretionary or induced trips also may have been made by new pass purchasers. Note particularly that the net effect on rail was to yield any elasticity close to zero.
2. Although the July 1981 fare revision yielded the next-to-lowest average fare increase, it correspondingly had the most sensitive resulting systemwide fare elasticity, with a particularly high impact on buses. This elasticity could have been caused by continued reaction to the January 1981 fare increase and also may have been clouded by other factors, such as the economic recession then under way.
3. The average 1981 fare elasticities (across both fare increases) are more representative of the overall elasticity experience during the 1980s, suggesting that a 6-month time interval for gauging full ridership impact may be too short.
4. The elasticities derived for the February 1986 fare increase were complicated by the related effects of tightened transfer regulations, which had an unclear financial component. This worked against a clear distinction between bus and

TABLE 4 Estimated CTA Fare Elasticities During 1980s

	Average Fare Increase (+%)	Fare Elasticity		
		Bus	Rail	System
January 1981	30	-.20	- .03	-.17
July 1981	12	-.66	- .16	-.59
February 1986	18	-.33	- .28	-.27
January 1988	8	-.31	+.22	-.29
AVERAGE		-.38	-.14[a]	-.29

[a]January 1988 not included

rail elasticities, which are relatively close, although the systemwide elasticity is reasonable compared with the experience elsewhere. The lack of clear differentiation between bus and rail elasticities is likely caused by both increased transfer pricing and tightened regulation. The 15 percent increase in pass pricing also offered a neutral alternative compared with higher cash fares.

5. The differences in bus and rail elasticities in 1988 must be interpreted carefully. The net increase in rail ridership was largely attributed to the return to rail from bus of former pre-1986 rail passengers who had reluctantly switched to bus to avoid the 1986 10¢ rail surcharge. A cross elasticity between bus and rail was therefore in effect, as it undoubtedly was in 1986.

RESPONSE OF CTA RIDERS TO ALTERNATIVE FARE STRUCTURES

On the basis of 1987 stated preference surveys of CTA travelers, market segment analyses revealed a relative preference for peak versus off-peak fare structures, as well as for differential pricing for radial central business districts versus local neighborhood trips. Limited sensitivity to transit pricing based on the length of the trip was also found. A series of market-segmented elasticities for peak and off-peak travel were derived, after adjusting stated preference survey results to reinterpret individual mode choice preferences (automobile versus transit), as aggregate fare elasticities.

Table 5 summarizes these fare elasticities. The average elasticity of -0.33 for these different peak/off-peak pricing variations is consistent with the average bus-rail system elasticity of -0.33 shown in Table 4, so that together the two tables offer a broad range of fare elasticities for basic fare structure options. A review of this analysis shows that

- Overall, off-peak elasticities are more than twice peak-hour elasticities. Off-peak elasticities tend to hold at this higher level, between -0.36 and -0.49 for other market segmentations, including travel to the Chicago Central Area versus local neighborhood travel.
- Radial (to and from the Central Area) travel markets have a lower fare elasticity than local markets, particularly during the peak hour, where relatively low elasticities of -0.11 to -0.13 were observed. This most likely reflects the greater difficulty and congestion associated with peak-hour radial travel by automobile. The primary work purpose associated with such travel may also be a factor, with an assumed greater ability to absorb fare increases supported by employment income.
- Journeys of less than 2 mi also displayed peak versus off-peak fare increase sensitivities, as well as a higher level of sensitivity to fare changes than journeys greater than 2 mi. However, partly because of a probable lack of experience with distance-based fare structures, survey respondents did not display any further sensitivity to fare increases scaled on a per-mile basis for longer trips.
- Shorter trips within the Chicago Central Area also displayed off-peak elasticities higher than peak-hour elasticities. In particular, peak-hour elasticities for these shorter trips are significantly higher (double or more) than those for longer radial trips.

TABLE 5 Fare Elasticities Derived from 1987 Stated Preference Survey Data

	Peak	Off-Peak
Radial, to Central Area	-.11 to -.13	-.36 to -.39
Local Neighborhood	-.19 to -.24	-.41 to -.44
< 2 Miles	-.29	-.49
Within Central Area	-.26	-.39
OVERALL	-.19	-.44
AVERAGE ALL DAY	-.33	

NOTE: The ranges quoted above for Radial and Local market segments correspond to a further disaggregation into inner and outer zones

EVOLUTION OF A FARE POLICY

It was noted earlier that during the last decade CTA transit fares have been adjusted primarily in response to balancing the growing demands of an inflating operating budget with subsidies available from public funding and secondarily with recognition of quality differences between bus and rail service. Between 1986 and 1988 a rail surcharge was implemented to reflect the fact that there are differences between bus and rail service to which riders will respond. Lower rail fare elasticities were a practical basis for this fare differential but were only incompletely understood. As noted previously, consultant studies were undertaken, using stated preference surveys, to further examine the market sensitivity of a full range of alternate fare structures.

As the organization became more aware of market needs, a range of consumer issues associated with fares were addressed:

- Elderly and handicapped fare level mandates;
- Low-income riders, affordable fares—inability to purchase monthly passes;
- High-income riders—willingness to pay more for increased quality of service;
- Sustained declines in ridership in what are perceived to be unsafe areas; and
- Ridership growth in growing middle- and upper-income neighborhoods.

Recognizing that there must be a balance between meeting base service budget needs and maintaining or even improving ridership, the CTA Board adopted a series of "CTA fare policies." These 14 points (see Table 6) deal with issues of equity and quality as well as operational issues related to the collection and handling of money. Such problems were targeted to be the basis for further discussion as future fare structures are implemented. It is believed that CTA is the first transit property to adopt such policies independent of a system's particular fare increase. With an emphasis on prepaid fare instruments, improved technology, and value for service, such policies give strong direction to evolving fare structures that meet market needs and are consistent with an emerging strategic management plan.

TABLE 6 CTA Fare Policies

Policy Number	Policy
1	While pursuing all avenues of cost containment and innovation in service provision, CTA must regularly adjust its pricing and fare structure to reflect changes in the overall costs of service. Small affordable changes and structural readjustment are preferable over large one-step increases.
2	CTA fares should be structured to reflect the quality of service delivered.
3	CTA fares should be structured to reflect the relative costs of service delivered.
4	The CTA fare structure should afford maximum convenience to its customers, in terms of reasonableness, understandability, and acceptability.
5	Changes in CTA's fare level and structure should be designed to increase passenger revenues, attract new customers wherever possible, and minimize any associated losses in ridership, with an equitable distribution of financial impacts on existing and future riders.
6	The fares for elderly and handicapped customers during off-peak hours will not exceed half the fares charged other passengers during peak hours.
7	Special fares may be established for some customers or some types of service, to increase or facilitate ridership.
8	The availability and diversity of prepaid fare instruments should be increased, matching ridership markets and market segments.
9	Changes in CTA's fare structure should provide for an orderly, timely, and cost-effective implementation.
10	Exact fare should be required for boarding both bus and rail services.
11	CTA's fare structure should minimize opportunities for fare cheating, in order to protect its revenue base and the interests of all fare-paying passengers.
12	Cash-handling and change-making by operating personnel and ticket agents should be minimized.
13	Where cost/benefit ratios and improvements in passenger convenience are favorable, increased use of automated fare collection equipment and ticket/token-vending and coin-changing equipment should be made.
14	Regional fare coordination between CTA, Metra, and Pace should be achieved.

SETTING PRICE OF TRANSIT

Among the fare restructuring options considered in Chicago was the "deep discount" concept. This type of option recently had been implemented in different forms in Milwaukee and Denver and several smaller urban areas. Under this concept, one form of convenient prepayment of a multiple-ride fare instrument is discounted from the base cash fare, on the order of 20 to 25 percent. This is balanced against a correspondingly higher increase in the base cash fares usually so that the overall need for higher passenger revenues, at whatever level is indicated, can be achieved.

Increased revenues associated with the increased cash fare would be offset somewhat by a modest ridership loss among cash fare riders, reflecting fare elasticities associated with a price increase. However, some (perhaps most) of those price-sensitive riders could switch to the discounted prepayment instrument, softening that ridership loss. Experience has shown that the attractiveness of this prepayment instrument can be sufficient, in fact, to induce additional discretionary transit travel, to the extent that this ridership growth may itself offset the ridership loss associated with the cash fare price increase. It appears entirely possible to therefore achieve a gain in both fare-box revenue and passenger ridership through this deep discount pricing strategy.

TABLE 7 1990 CTA Fare Structure

	1989	1990
Full Fare ($)		
bus-peak	1.00	1.25
bus-off-peak	1.00	1.00
rail-peak	1.00	1.25
all-modes		
weekday (5-day) monthly pass	none	45.00
everyday monthly pass	50.00	60.00
tokens	.95	.90
transfer	.25	.25
Reduced Fare ($)		
bus-peak	.50	.45
bus-off-peak	.50	.40
rail-peak	.50	.45
rail-off-peak	.50	.45
everyday monthly pass	25.00	25.00
tokens	.50	.40
transfer	.15	.15

The fare structure selected by CTA was a clear product of the management principles discussed above. The characteristics of the adopted structure are given in Table 7. The base price of travel is set at $1.25. The differential in quality between bus and rail is shown in the off-peak price of $1.00 for bus, whereas rail remains at $1.25. Equity is addressed for daily riders, who are given a variety of discounts from token prices to weekday passes. This is the most ambitious fare change undertaken by CTA—but one well founded in good management principles.

The strategic management planning process showed clearly the nature of fiscal constraints that will affect the operating budget for years to come. Since half of the operating budget comes from the fare box, a judicious approach to fare policy is warranted. This means that ridership, and the markets that riders represent, must be understood and that service must be tailored as much as possible to meeting market targets. Market surveys also have shown important rider sensitivity to various fare structure options. The end result was to select and institute a fare policy that would help sustain or improve ridership while meeting revenue needs.

REFERENCE

1. *Household Survey of the CTA Service Area*. Market Opinion Research and Midwest System Sciences, Inc. Aug. 1988.

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