Bus Marketing Costs: The Experience of 18 Section 15 Reporters from 1981 to 1983

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ABSTRACT

The costs incurred by 18 transit agencies from 1981 to 1983 to market their bus services are reported. These costs are based on financial and operating data reported to the federal government under Section 15 of the Urban Mass Transportation Act of 1964, as amended. The operators whose reports were examined are among the largest agencies, and carry about one-half of the passenger trips reported by bus operators under Section 15. Total marketing expenditures in 1983 for the 18 agencies reporting were nearly $33 million. The average agency spent more than $1.8 million on marketing, or about 2.4 percent of operating costs, less than that spent by two other service firms examined. Marketing and operating costs both kept pace with inflation during the time period. On average, the 18 agencies spend $0.031 per passenger trip and $0.007 per passenger mile on marketing in 1983; marketing costs per passenger appeared to decline as fleet size and market share increased. The average agency spent more than 50 percent of its marketing budget on customer services in 1983. The remainder of the budget was spent on promotion (29 percent), planning (14 percent), and market research (5 percent). Costs in all of the marketing activity areas varied considerably among agencies and within agencies over time. It is suggested that transit agencies have not yet adopted a marketing orientation to managing their services and that a larger data set, more reliable ridership data, and more refined measures of service area population would improve analysis of the effectiveness of marketing expenditures.

Marketing is a critical activity in the management of transit services because it is the only strategy area with a direct impact on consumer demand (1). With the decline of federal operating subsidies, the role of marketing assumes additional importance. Although many transit agencies acknowledge the key role marketing should play, few have yet adopted a marketing approach to managing their services. Evidence of this gap between theory and practice can be found by examining actual marketing expenditures in the industry.

SECTION 15 DATA SOURCE

Described is what 18 publicly owned transit agencies spent to market their bus services from 1981 to 1983, both total expenditures as well as expenditures for particular types of marketing activities. One purpose of the study is to provide information that transit agencies can use as benchmarks for comparing their marketing costs with those of similar operators. The analysis serves strictly as a guideline in this regard; the related and important issue of marketing effectiveness (or productivity) is not addressed.

The analysis is based on data reported to UMTA, U.S. Department of Transportation, under Section 15 of the Urban Mass Transportation (UMT) Act of 1964, as amended. This act currently provides for the collection of financial and operating information from all transit operators receiving federal assistance under Sections 5 or 9 of the UMT Act.

Operators are required to report financial information in four functional categories: vehicle operations, vehicle maintenance, nonvehicle maintenance, and general administration. UMTA publishes these required data in its annual Section 15 report. Some agencies choose to report additional details about their operations, and these agencies file Level C, B, or A reports, in order of increasing detail. About two dozen agencies filed Level A reports from 1981 to 1983.

Both published data (2-4) and unpublished Level A information were used for this analysis. The published data included operating expense, revenue, ridership, and service information. The Level A data consisted of expenditures in four reporting categories: customer services, promotion, market research, and planning. The sum of costs in these categories is equivalent to the category "marketing expenditures" reported under Level B. [See Figure 1 for a diagram of Section 15 expense classifications at the various reporting levels (5).]

SELECTION OF DATA SET

The time frame of 1981 to 1983 was selected, yielding 3 years of data. Although Section 15 reports have been filed since 1979, data quality improved markedly from 1981 on, leading to the selection of that year for the beginning of the analysis. Reports filed for 1983 were the most recent available and hence define the end year of the study. (Data for 1984 were incomplete at the time of publication; limited analysis of these 1984 data suggests that their inclusion would not materially change the conclusions of the study.) Data from 1981 and 1982 pertain to fiscal years. Data from 1983 denote calendar-year information because of a change in Section 15 reporting

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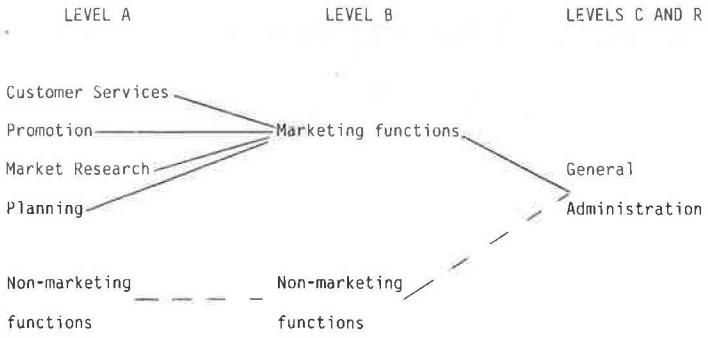

FIGURE 1 Section 15 expense classifications at various reporting levels.

requirements. All expenditures are given in actual (not constant) dollars, as reported, except where noted otherwise.

Operators were selected to include all those who filed Level A reports from 1981 to 1983 and had expenditures in at least one marketing category for all 3 years. The analysis was limited to one mode in order to control for differences in operating costs and other characteristics between modes. Motor bus service was selected because a substantial majority of the agencies reporting Level A data are motor bus operators, reflecting the predominant mode for operators nationwide. Described are marketing expenditures as they were reported by all-bus systems as well as for the motor bus operations of multimode agencies.

A total of 19 transit agencies fit the criteria just given. One of these was eliminated because it was substantially smaller than the next largest agency, leaving a total of 18 agencies for examination. Ten of the agencies are all-bus operations. A list of the 18 agencies and their operating characteristics is given in Table 1. An additional restriction was imposed on the data set, in terms of directly operated versus purchased service, with purchased service excluded to make the agencies more comparable. It was not possible to distinguish between directly operated and purchased service in Section 15 data before 1983; however, most purchased service involved commuter rail and/or demand-response modes, both of which were omitted from the analysis. In 1983 Section 15 data began to separate direct response from purchased service by mode and this purchased service was omitted from the current study. In all cases, purchased bus service was negligible.

DESCRIPTION OF PROPERTIES

The 18 agencies comprise roughly 5 percent of all motor bus operators reporting Section 15 data (at all levels) during the years 1981 to 1983. These 18 agencies are not representative of all U.S. motor bus systems, or even of the Section 15 motor bus operators--they are biased toward the largest 12 percent, that is, agencies operating 250 or more vehicles. Figure 2 shows a comparison of all Section 15 motor bus reporters with the 18 properties whose data are used for this analysis, on the basis of fleet size. Because system size is related to service area population, it follows that the operating characteristics and marketing behavior described here are more comparable to those of motor bus operators in large cities than to those in medium- and small-sized urban or rural areas.

Figure 3 shows the share of all Section 15 motorbus operating characteristics accounted for by the 18 agencies. The 18 operators carry one-half of all U.S. motor bus passengers, but account for only 40 percent of the total passenger miles. The disparity

TABLE 1 1983 Bus Operating Data for 18 Agencies

Transit System	No. of Revenue Vehicles	Operating Expense ($000s)	Fare Revenue ($000s)	No. of Passenger Trips (000s)	No. of Passenger Miles (000s)
Orange County Transit District (TD), Santa Ana, Calif.	526	64,367	14,011	27,657	202,308
Metropolitan Transit Commission (MTC), Minneapolis, Minn.	1,046	88,364	30,958	75,341	235,455
Via Metropolitan Transit (VIA), San Antonio, Tex.	456	30,685	8,368	33,433	148,245
New York City Transit Authority (CTA), N.Y.[a]	4,573	664,945	NA	1,062,142	2,027,245
Santa Clara County Transportation Authority (TA), San Jose, Calif.	758	85,794	8,553	36,945	149,267
Southeastern Pennsylvania Transportation Authority (SEPTA), Philadelphia, Pa.[a]	1,455	153,616	NA	186,467	516,848
Southeastern Michigan Transportation Authority (SEMTA), Detroit, Mich.[a]	1,249	138,459	NA	143,205	430,863
Chicago Transit Authority (TA), Ill.[a]	2,295	339,276	NA	473,986	1,101,696
Port Authority of Allegheny County (PATCO), Pittsburgh, Pa.[a]	1,034	110,250	NA	83,545	426,717
Municipality of Metropolitan Seattle (METRO), Wash.[a]	1,195	93,090	NA	60,564	385,023
Massachusetts Bay Transportation Authority (MBTA), Boston, Mass.[a]	1,157	105,770	NA	98,695	211,544
Metropolitan Atlanta Rapid Transit Authority (MARTA), Ga.[a]	1,023	77,721	NA	84,936	348,238
Southwestern Ohio Regional Transit Authority (SORTA), Cincinnati, Ohio	390	36,893	11,338	36,735	145,981
San Diego Transit Corporation (TC), Calif.	340	32,647	12,400	26,490	136,335
Bi-State Transit System, St. Louis, Mo.	890	80,235	22,943	56,544	200,710
Regional Transportation District (RTD), Denver, Colo.	776	76,351	17,960	48,250	250,066
Alameda-Contra Costa County Transit, Calif.	901	96,415	32,331	75,450	457,982
Dallas Transit System (TS), Tex.	636	41,048	19,831	37,271	177,769
Total	20,700	2,315,926	178,693	2,647,656	7,552,292
Average	1,150	128,663	17,869	147,092	419,572

[a]Property operates additional modes other than demand-response transit.

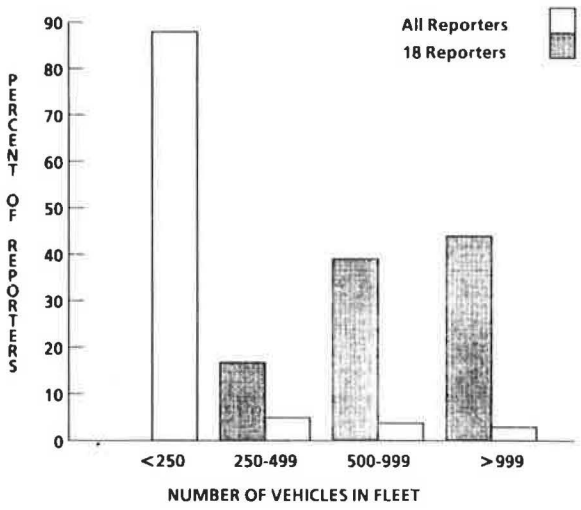

FIGURE 2 Distribution of 18 agencies and all Section 15 reporters by fleet size (1983).

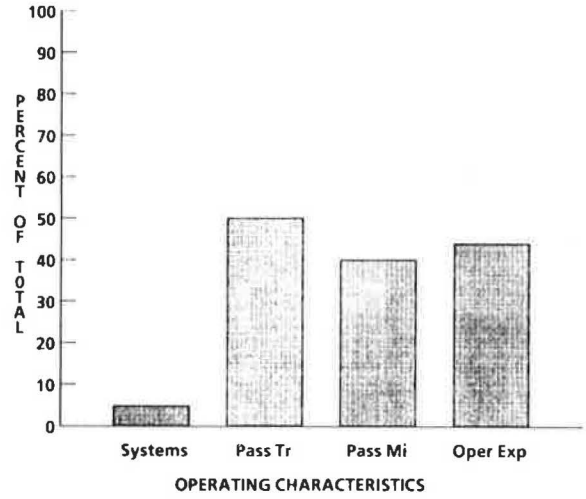

FIGURE 3 Share of all Section 15 bus operating characteristics accounted for by 18 agencies.

reflects the shorter trip lengths in many of the urban areas where the 18 agencies operate. The 18 reporting agencies accounted for 44 percent of all motor bus operating expenses, suggesting that they are more efficient than average, where efficiency is defined as cost per passenger.

TOTAL MARKETING COSTS

In 1983, the 18 motor bus agencies spent a total of nearly $33 million on marketing activities, or an average of more than $1.8 million per agency, as indicated by the data in Table 2. To compare agencies of different sizes, marketing expenditures were calculated in relation to operating expenses, operating revenue (fares), passenger trips, and passenger miles. The primary measure used was marketing costs in relation to operating expenses because operating expenses are more consistently defined and reliably reported than the other variables.

1983 MARKETING COST RATIOS

Marketing expenditures ranged between 0.2 and 4.8 percent of total operating expenses, and amounted to 2.2 percent of operating expenses on average. This amount is lower than the norm for other service industries, including transportation services. American Telephone and Telegraph, for example, spent more than 13 percent of operating expenses on marketing in 1983, according to their 1983 Annual Report. Delta Airlines, as indicated by the data in Table 3, spent more than 12 percent of operating expenses on marketing in the same year, according to their 1984 Annual Report. Transit agencies in New York, Chicago, Boston, Atlanta, and Philadelphia (in that order) spent the lowest percentages of operating expenses on marketing.

Marketing expenditures among the 18 agencies amounted to an average of $0.031 per passenger in 1983, ranging between $0.001 and $0.101 per passenger. Again, agencies in New York, Chicago, Atlanta, Philadelphia, and Boston spent the least on a per-passenger basis. This is reasonable, if marketing costs are expected to decline with market share. For example, all of these agencies except that in Boston carry more passengers per standard metropolitan statistical area population than average.

TABLE 2 1983 Bus Marketing Expenditures for 18 Agencies

Transit System	Total Marketing Expenditure	Marketing Operating Expense	Marketing Fare Revenue	Marketing Passenger Trip	Marketing Passenger Mile
Orange County TD	1,626,649	0.025	0.116	0.059	0.008
Minneapolis MTC	2,357,932	0.027	0.076	0.031	0.010
San Antonio–VIA	1,469,491	0.048	0.176	0.044	0.010
New York CTA	1,557,805	0.002	NA	0.001	0.001
Santa Clara County TA	3,720,934	0.043	0.435	0.101	0.025
Philadelphia–SEPTA	1,350,022	0.009	NA	0.007	0.003
Detroit–SEMTA	2,983,519	0.022	NA	0.021	0.007
Chicago TA	1,663,083	0.005	NA	0.004	0.002
Pittsburgh–PATCO	1,625,366	0.015	NA	0.019	0.004
Seattle METRO	3,385,143	0.036	NA	0.056	0.009
Boston–MBTA	787,675	0.007	NA	0.008	0.004
Atlanta–MARTA	583,094	0.008	NA	0.007	0.002
Cincinnati–SORTA	1,451,348	0.039	0.128	0.040	0.010
San Diego TC	1,275,260	0.039	0.103	0.048	0.009
St. Louis–Bi-State	2,033,750	0.025	0.089	0.036	0.010
Denver–RTD	1,917,311	0.025	0.107	0.040	0.008
Alameda-Contra Costa	2,007,455	0.021	0.062	0.027	0.004
Dallas TS	1,200,992	0.029	0.061	0.032	0.007
Total	32,996,829				
Average	1,833,157	0.024	0.135	0.032	0.007

Note: Acronyms for the transit systems are defined in Table 1. Values in the table are in dollars.

TABLE 3 Comparison of Expenditure Rates

	18 Bus Reporters (1983)	Greyhound (1983)	Trailways (1984)	Delta Air Lines (1983)
Marketing/operating expense	0.024	–	–	0.123
Marketing/passenger trip	0.032	–	–	13.170
Marketing/passenger mile	0.007	–	–	0.018
Promotion[a]/operating expense	0.007	0.044	0.024	0.017
Promotion[a]/passenger trip	0.0091	0.647	0.513	1.830
Promotion[a]/passenger mile	0.002	0.0041[b]	0.0025[b]	0.0025

[a]Defined as advertising or promotion.
[b]Estimate.

Regression analysis of the 1983 data confirmed that the ratio of marketing costs to operating expenses was inversely related to fleet size and (somewhat less certainly) to market share. Market share was defined as the ratio of passenger trips to urbanized area population. (Results of the regression analysis can be obtained from the author.) Other studies have found both positive (6) and negative (7,8) correlations between marketing costs and market share.

Marketing expenditures per passenger mile ranged from $0.001 to $0.025, with most agencies spending between $0.002 and $0.013. Delta Airlines, on the other hand, spent $0.018 per passenger mile on marketing in 1983 (Table 3). Santa Clara County was the only transit agency to reach or exceed this ratio. It could be argued that transit services should show higher marketing expenditures than air travel services on a passenger-mile basis because the transit passenger trips are substantially shorter.

Because fare revenue was not reported by mode from 1981 to 1983, the ratio of marketing to fares could only be reliably determined for the 10 single-mode systems in the analysis. For these 10, marketing amounted to an average 13.5 percent of fare revenue in 1983, with a range of from 6 to 13 percent for most of the systems (Table 2). However, the ratio of marketing costs to fares can be misleading. For one thing, some agencies apparently spending at the high end of the scale simply have low fare-recovery ratios. At the same time, a low fare-recovery ratio does not necessarily mean poor market support for transit because some agencies recover a substantial portion of operating costs through a dedicated local tax, which could be considered another measure of local support for transit (or sales response to the system). In San Diego, for example, marketing costs amount to 43.5 percent of fares because fares (and the fare-recovery ratio) are very low; at the same time, the city dedicates tax revenues to transit, making the fare-recovery ratio a poor indicator of local support.

FROM TRENDS 1981 TO 1983

Two distinct trends for the 18 agencies as a whole can be observed from 1981 to 1983: revenue and costs increased, while ridership declined; these trends are shown in Figure 4. (Note that in the figure fare revenue reflects 10 all-bus systems only.) Both total operating expenses and marketing expenses were 9 percent higher in 1983 than in 1981. Taking into account the effects of inflation, expenditures and revenue decreased slightly from 1981 to 1983. At the same time, the number of passenger trips decreased by 11 percent, possibly in response to higher fares and stable gasoline prices. (In real terms, fares declined, but gasoline prices declined even more over the 2-year period.) The number of passenger miles declined by 17 percent from 1981 to 1983, reflecting cuts in service as well as decreased ridership.

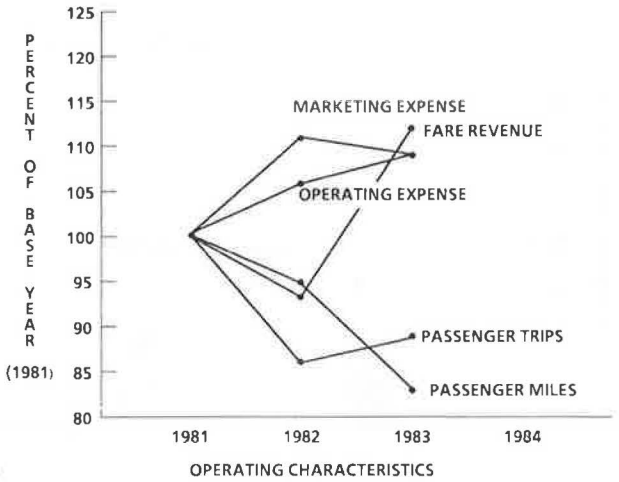

FIGURE 4 Bus operating trends for 18 agencies (1981-1983).

The average percentage increase in marketing expenditures was about 14 percent over the time period, as indicated by the data in Table 4. This figure is higher than the 9 percent change in overall marketing costs because it reflects relatively higher percentage increases at some of the smaller sized agencies, which are equally weighted in calculating the average. The average also masks considerable variation among agencies. From 1981 to 1983, marketing expenditures declined for seven agencies, and increased by 35 percent or more (in actual dollars) at six others.

The average percentage change in the ratio of marketing expenditures to operating expenses from 1981 to 1983 was 1 percent (Table 4). The increase was particularly notable from 1981 to 1982, when marketing expenditures as a whole increased by 11

TABLE 4 Change in Bus Marketing Expenditures (1981-1983)

Transit System	Total Marketing Expenditure	Marketing/ Operating Expense	Marketing/ Passenger Trips	Marketing/ Passenger Miles
Orange County TD	-0.12	-0.34	-0.11	-0.15
Minneapolis MTC	-0.14	-0.28	0.04	0.00
San Antonio–VIA	0.42	0.10	0.37	-0.12
New York CTA	0.10	0.05	0.23	0.51
Santa Clara County TA	0.35	0.14	0.27	0.31
Philadelphia–SEPTA	0.05	-0.17	0.34	0.27
Detroit–SEMTA	-0.03	-0.10	-0.39	0.08
Chicago TA	0.19	0.18	0.35	0.33
Pittsburgh–PATCO	0.18	0.03	0.39	0.15
Seattle METRO	0.70	0.46	1.09	1.30
Boston–MBTA	0.03	-0.01	0.23	0.22
Atlanta–MARTA	-0.37	-0.39	-0.18	-0.26
Cincinnati–SORTA	0.87	0.64	0.96	1.26
San Diego TC	0.60	0.66	1.34	1.18
St. Louis–Bi-State	-0.20	-0.15	0.01	0.08
Denver–RTD	-0.30	-0.38	-0.21	-0.23
Alameda-Contra Costa	-0.12	-0.23	0.27	-0.10
Dallas TS	0.37	-0.04	0.39	1.00
Average	0.14	0.01	0.30	0.32

Note: Acronyms for transit systems are defined in Table 1. Values in the table are in dollars.

percent while operating expenses increased by only 6 percent, as shown in Figure 4. Again, there is substantial variation from one site to another. Although marketing obtained a much higher share of the operating budget at three agencies--Seattle (+46 percent), Cincinnati (+64 percent), and San Diego (+6 percent)--from 1981 to 1983, its share actually declined in relation to the total operating budget at 10 other agencies and indicated little change at the remaining 5 agencies.

Marketing expenditures per passenger trip increased during the 1981-to-1983 period by an average 30 percent in actual dollars (Table 4), or by about 16 percent after adjusting for inflation. This apparent increase is largely a result of ridership declines at many agencies. At a few agencies, expenditures per passenger trip apparently declined because ridership increased.

At two agencies, San Antonio and New York City, both marketing expenditures per passenger trip and ridership increased during the 2-year period. San Antonio's ridership increased by 37 percent as its marketing expenditures per passenger increased by 3 percent; New York City's bus ridership increased by 6.4 percent, while its per-passenger marketing expenditures increased by 23 percent. To attribute ridership changes to marketing behavior, additional cases and more detailed information--particularly about the timing of expenditures and changes in demand--would be required. However, these two cases provide potential support for the notion that marketing expenditures can effectively increase ridership in different types of transit markets. Marketing expenditures per passenger mile increased by 32 percent, on average, but the bulk of the increase is again the result of substantial declines in the number of passenger miles of travel in most of these areas.

COMPONENTS OF MARKETING EXPENDITURES

Section 15 defines marketing expenditures in four functional categories: customer services, promotion, planning, and market research. Customer services are sometimes described as selling-related activities, whereas the remaining categories are termed marketing-support activities. Each of these four functional categories will be described further.

Customer Services

As defined for Section 15 reporting purposes, customer services refers to public relations, customer relations, charter service, telephone information, and related activities. This category of marketing expenses thus includes production of materials such as timetables and system maps. Table 5 presents expenditures on customer service activities by the 18 agencies in 1983, both in absolute terms and as a share of all marketing expenditures. In 1983, the 18 agencies spent more than $18 million on customer service activities, an average of more than $1 million per agency.

Customer service expenditures accounted for more than 50 percent of total marketing expenditures for the 18 agencies and for at least 40 percent of marketing expenditures at most of the individual agencies. This ratio is not unusual in the transportation industry, which is heavily reliant on information exchange. A substantial portion of airline marketing costs, for example, is accounted for by commissions paid to travel agents for booking passenger flights and for communications systems to support airline information services.

On average, customer service expenditures increased by 10 percent from 1981 to 1983, as also indicated by the data in Table 5. As a share of all marketing costs, these expenditures declined by about 1 percent over the time period, possibly reflecting the decline in ridership at most agencies. The relative stability of customer service costs in relation to all marketing expenditures suggests that providing information is viewed as an essential part of selling services such as transportation; more years of data could confirm this hypothesis.

Promotion

Promotion as defined for Section 15 reports comprises both advertising and promotional activities, including newspaper, billboard and other advertising, press

TABLE 5 Expenditures on Customer Services by 18 Agencies

Transit System	Expenditure on Customer Services (1983) ($)	Change in Customer Service Expenditure (1981-1983)	Customer Service Share of Total Marketing (1983)	Change in Customer Service Share of All Marketing (1981-1983)
Orange County TD	526,752	0.09	0.32	0.24
Minneapolis MTC	991,778	-0.12	0.42	0.03
San Antonio--VIA	534,300	0.43	0.36	0.01
New York CTA	743,265	-0.02	0.48	-0.11
Santa Clara County TA	2,934,728	0.90	0.79	0.40
Philadelphia--SEPTA	490,416	-0.16	0.36	-0.19
Detroit--SEMTA	1,408,202	0.12	0.47	0.15
Chicago TA	468,311	-0.19	0.28	-0.32
Pittsburgh--PATCO	1,037,911	0.15	0.64	-0.02
Seattle METRO	2,531,941	0.46	0.75	-0.14
Boston--MBTA	308,671	-0.26	0.39	-0.28
Atlanta--MARTA	360,060	-0.26	0.62	0.17
Cincinnati--SORTA	465,403	0.46	0.32	-0.22
San Diego TC	784,768	0.44	0.62	-0.10
St. Louis--Bi-State	1,465,447	-0.12	0.72	0.10
Denver--RTD	1,284,193	-0.20	0.67	0.14
Alameda-Contra Costa	999,855	-0.17	0.50	-0.05
Dallas TS	695,565	0.31	0.58	-0.05
Total	18,031,566			
Average	1,001,754	0.10	0.52	-0.01

Note: Acronyms for transit systems are defined in Table 1.

releases, and related activities. It includes services provided by the transit agency as well as professional and technical services hired from outside firms. The data in Table 6 indicate that the 18 agencies spent more than $9 million on promotion in 1983, or slightly more than $500,000 each, on average. Promotional expenditures accounted for more than 29 percent of all marketing expenditures.

On average, the 18 agencies spent less on promotion than three other transportation firms examined, including two intercity bus companies, as indicated by the data in Table 3. The difference is particularly striking for the ratio of promotion (or advertising) costs to operating expenses, which was 0.007 for the reporters, compared with 0.017 for Delta Airlines, 0.024 for Trailways Lines (1984 data), and 0.044 for Greyhound Lines (Delta Air Lines 1984 Annual Report; 9,10).

Promotional expenditures increased from 1981 to 1983 by about 45 percent, on average, as indicated by the data in Table 6. However, the rate of change at individual agencies varied widely, with Seattle, Cincinnati, and San Diego indicating large increases and many other agencies indicating a decline in promotional costs. Possible factors that could explain the wide variation over the 2-year period include new services or facilities construction, changes in hours or routes of service, and changes in funding levels and sources, which may have been accompanied by advertising campaigns. Such campaigns might last only a few months, but could cause large year-to-year cost variations. As a share of all marketing expenses, promotion also increased by 17 percent on average, again with wide variation among systems.

Planning

Section 15 requirements simply define this category of marketing expenditure as including all long-range and regional transit planning and analysis activities. Both agency salaries and outside services are included. Planning expenditures amounted to $4.4 million for the 18 agencies in 1983, or nearly $250,000 per agency, on average, as indicated by the data in Table 7. Planning expenditures were about 15 percent of overall marketing costs.

Planning expenditures increased by about 10 percent between 1981 and 1983, as indicated by the data in Table 7. In relation to total marketing expenditures, planning expenses declined by an average 7 percent during the same time period. It is possible that the decrease in planning expenditures is related to lower capital outlays and more or less static development at many agencies.

Market Research

For Section 15 reporting purposes, market research activities comprise consumer behavior research and transit service demand surveys for service development and changes. Market research is central to managing transit services with a marketing (or consumer) orientation because it supplies the information on which to base strategy. The 18 agencies being studied spent a total of $1.4 million on market research in 1983, less than on any of the other three marketing activities. On average, the agencies spent more than $76,000, as indicated by the data in Table 8. Because five agencies spent nothing, the average for those undertaking any market research was actually more than $100,000. Market research expenditures were about 5 percent of overall marketing costs in 1983.

Average expenditures on market research by the 18 agencies increased by almost 40 percent from 1981 to 1983; however, this figure is misleading because San Diego's expenditures increased more than tenfold during this time period, as indicated by the data in Table 8. Without the San Diego data, mean expenditures are observed to have decreased by nearly 16 percent. The same holds true for market research expenditures as a share of all marketing costs. An apparent average increase of 7 percent becomes a decrease of more than 22 percent when San Diego is omitted from the calculation.

SUMMARY AND CONCLUSIONS

Cost data on bus marketing from the 18 transit agencies examined suggest that they have not yet adopted a marketing approach to transit management, particu-

TABLE 6 Expenditures on Promotion by 18 Agencies

Transit System	Expenditure on Promotion (1983) ($)	Change in Promotion Expenditure (1981–1983)	Promotion Share of Total Marketing (1983)	Change in Promotion Share of All Marketing (1981–1983)
Orange County TD	825,789	-0.03	0.51	0.11
Minneapolis MTC	664,340	-0.17	0.28	-0.03
San Antonio–VIA	555,150	0.43	0.38	0.01
New York CTA	120,278	-0.47	0.08	-0.52
Santa Clara County TA	754,784	-0.17	0.20	-0.39
Philadelphia–SEPTA	608,739	0.37	0.45	0.31
Detroit–SEMTA	946,837	-0.23	0.32	-0.20
Chicago TA	844,745	0.52	0.51	0.28
Pittsburgh–PATCO	331,571	0.06	0.20	-0.10
Seattle METRO	593,647	5.48	0.18	2.82
Boston–MBTA	239,455	0.34	0.30	0.31
Atlanta–MARTA	187,984	-0.44	0.32	-0.12
Cincinnati–SORTA	761,150	1.40	0.52	0.29
San Diego TC	299,234	1.37	0.23	0.48
St. Louis–Bi-State	202,702	-0.27	0.10	-0.09
Denver–RTD	551,913	-0.26	0.29	0.06
Alameda-Contra Costa	425,028	-0.24	0.21	-0.13
Dallas TS	226,429	0.35	0.19	-0.02
Total	9,139,775			
Average	507,765	0.45	0.293	0.17

Note: Acronyms for transit systems are defined in Table 1.

TABLE 7 Expenditures on Planning by 18 Agencies

Transit System	Expenditure on Planning (1983) ($)	Change in Planning Expenditure (1981–1983)	Planning Share of Total Marketing (1983)	Change in Planning Share of All Marketing (1981-1983)
Orange County TD	98,337	-0.67	0.06	-0.62
Minneapolis MTC	360,365	-0.25	0.15	-0.13
San Antonio–VIA	327,155	0.78	0.22	0.26
New York CTA	694,262	0.65	0.45	0.50
Santa Clara County TA	18,579	-0.93	0.00	-0.95
Philadelphia–SEPTA	142,892	-0.13	0.11	-0.17
Detroit–SEMTA	511,742	0.05	0.17	0.09
Chicago TA	350,027	0.35	0.21	0.13
Pittsburgh–PATCO	255,884	0.57	0.16	0.33
Seattle METRO	197,641	0.44	0.06	-0.15
Boston–MBTA	204,186	0.76	0.26	0.71
Atlanta–MARTA	30,728	-0.63	0.05	-0.41
Cincinnati–SORTA	217,839	1.79	0.15	0.50
San Diego TC	149,396	0.20	0.12	-0.25
St Louis–Bi-State	221,119	-0.50	0.11	-0.38
Denver–RTD	81,205	-0.79	0.04	-0.70
Alameda-Contra Costa	582,572	0.09	0.29	0.25
Dallas TS	1	0.00	0.00	-0.27
Total	4,443,930			
Average	246,885	0.10	0.15	-0.07

Note: Acronyms for transit systems are defined in Table 1.

larly insofar as that implies investment in consumer research. At more than one-half of the agencies, overall marketing expenditures declined in relation to operating expenses during the 2-year period examined. The agencies spent less than other transportation firms on promotion in relation to operating expenses. Particularly striking is the low allocation of resources to market research, which accounted for 5 percent or less of most marketing budgets in 1983. For instance, five agencies spent no money on market research in the 3 years under study. Although the marketing costs of only 18 agencies were analyzed, these agencies are much larger than average, and likely spend more on marketing than the average agency.

On the other hand, several agencies increased their marketing budgets in the years under study, some by substantial amounts. It is noted, however, that increased expenditures are not evidence of effectiveness. It would be particularly helpful to be able to relate marketing expenditures to a change in demand for transit service--in other words, to gauge the productivity of marketing expenditures. Preliminary work in this regard suggests that marketing is subsidiary to population density, fares, and level of service in determining transit ridership, but that within marketing customer service may be more important than promotion; work on this topic was completed for the author in May 1985 by J. Murayama and M. Fukuhara.

Several issues are suggested for additional analysis. One area involves variations in marketing costs from one transit agency to another. What accounts for these differences? To what extent are they under the control of the transit agency? More fundamentally, it would be useful to know what practices

TABLE 8 Expenditures on Market Research by 18 Agencies

Transit System	Expenditure on Market Research (1983) ($)	Change in Market Research Expenditure (1981–1983)	Market Research Share of Total Marketing (1983)	Change in Market Research Share of All Marketing (1981-1983)
Orange County TD	175,771	-0.22	0.11	-0.10
Minneapolis MTC	341,449	0.00	0.14	0.16
San Antonio–VIA	52,886	-0.43	0.04	-0.60
New York CTA	0	-1.00	0.00	-1.00
Santa Clara County TA	12,843	0.06	0.00	-0.21
Philadelphia–SEPTA	107,975	0.06	0.08	0.01
Detroit–SEMTA	116,738	0.05	0.04	0.08
Chicago TA	0	-1.00	0.00	-1.00
Pittsburgh–PATCO	0	0.00	0.00	0.00
Seattle METRO	61,914	1.21	0.02	0.30
Boston–MBTA	35,363	-0.38	0.04	-0.40
Atlanta–MARTA	4,322	-0.71	0.01	-0.55
Cincinnati–SORTA	6,956	-0.89	0.00	-0.94
San Diego TC	41,862	10.34	0.03	6.09
St. Louis–Bi-State	144,482	-0.02	0.07	0.22
Denver–RTD	0	-1.00	0.00	-1.00
Alameda-Contra Costa	0	0.00	0.00	0.00
Dallas TS	278,997	0.59	0.23	0.16
Total	1,381,558			
Average	76,753	0.37	0.05	0.07

Note: Acronyms for transit systems are defined in Table 1.

result in more effective marketing expenditures. Data needs for addressing these and similar questions include the following:

- A larger set of marketing expenditure data to control for expenditure variations attributable to size, mode, or both;
- More accurate ridership data to improve the reliability of estimates of year-to-year change in demand;
- More definitional specificity for categories of marketing expenses to ensure more consistency across agencies; and
- More precise data on transit service area populations to improve estimates of market share.

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