Some Costs of Competition

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Abstract

This paper presents data on advertising and promotional expenses for U.S. long distance telephone services from 1988 to 1997. Business persons transforming telephone companies from state-owned utilities to competitive firms should recognize that advertising and promotions will become significant expenses. Policy analysts and policy makers should recognized these expenses in assessing the costs and benefits of promoting particular types of competition in specific historical and institutional circumstances.

Key words: telecommunications, advertising, competition, policy, regulation

* The views expressed in this paper are those of the author and do not necessarily reflect the views of the Commission or its staff.

I. Introduction

Although policy makers might like to promote competition for everything, this is no more possible than doubting everything. Competition necessarily occurs for particular products and services, which by their definition exclude other conceivable products and services. From this modernized Cartesian observation flow some important implications: in historically monopolized service industries, policy makers face key strategic choices in deciding for what services competition should be promoted.[1]

Mass-market long distance telephone services have been a major focus of competition in U.S. telecommunications. These services have been the core communications business of AT&T, the largest telecommunications company in the U.S. They have also been the core business of MCI and Sprint, two companies that played important roles in U.S. telecommunications liberalization. The U.S. courts and the FCC have played important roles in promoting long distance service competition. Although the effect of competition among AT&T, MCI, Sprint, and other companies on average consumer long distance calling prices is a subject of some contention, there is no question that competition among these companies has been highly visible to policy makers and the public at large.

This paper will consider some costs associated with competition for long distance telephone services in the U.S. In particular, this paper estimates advertising and promotional expenses for U.S. long distance telephone services from 1988 to 1997. The

[1] That there cannot be competition for everything should be interpreted as a description of reality, not a prescription for policy. Governments should try to promote selected dimensions of competition. In

data indicate that advertising and promotional expenses have been a very significant aspect of long distance services competition.

II. Background

The Modified Final Judgement (MFJ) that divested the regional Bell Operating Companies (BOCs) from AT&T in 1984 has played a key role in shaping telecommunications competition in the United States.[2] Prior to the MFJ, AT&T provided consumers with the full range of telephone services. Consumers who sought to use an alternative provider for some telephone services, such as toll calls between Kansas City and Chicago, had to use bypass arrangements with AT&T that resulted in lower quality and less convenient service from the alternative provider. The MFJ established AT&T as a large company ($33 billion in telephone service revenue, 365,000 employees) providing interexchange service independent from the BOCs.[3] The MFJ also required that the BOCs provide exchange access services equal in type and quality to all interexchange carriers and forbid the BOCs from attempting to provide the type of service that had been assigned to AT&T. The MFJ thus defined a set of services generating significant revenue, established a large company with a focus on these services, excluded significant potential competitors from providing them, and ensured competitors equal access to essential inputs to those services. In this way the MFJ played a key role in

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addition, they should not repress other dimensions of competition unless there is a compelling policy reason for doing so.

[2] *United States v. American Telephone and Telegraph Co.* 552 F. Supp. 131 (1982) [MFJ].

[3] See Table 1, FCC *SOCC* 1984. AT&T revenue is net of $20 billion exchange access costs. For comparison, local service revenue, including exchange access revenue, was $51 billion in 1984. See Tables 6.1 and 6.2 in FCC *SOCC* 1996/1997

defining a new, separate market commonly called the U.S. long distance telephone services market.[4]

Competition for residential long distance telephone services in the U.S. consists primarily of competition to acquire subscribers. A consumer chooses to subscribe to a particular long distance service provider, and then all of his or her "direct dialed" long distance calls are automatically routed to that service provider. A consumer is allowed to change his or her presubscribed long distance service provider at any time. Since 1984, access providers (local exchange companies) have generally charged $5 for changing a customer's long distance service provider.[5]

III. Advertising and Promotional Expenses

AT&T has reported consolidated advertising and promotional expenses in the notes to its audited annual reports for 1995-1997. Multiplying AT&T's consolidated advertising and promotional expenses (APE) in its 1996 and 1997 annual reports by the share of its wireline revenue in its total revenue gives an estimate of AT&T's long distance APE for 1994-1997.[6] AT&T reported product advertising for communications services to the FCC for the years 1988-1994. The 1994 APE estimate derived from AT&T's annual reports agrees closely with the figure that AT&T reported to the FCC in 1994. These two

[4] The MFJ assigned at divestiture international services to AT&T, and in what follows international services are considered as a component of U.S. long distance telephone services.
[5] For an analysis of the policy issues associated with prices for shifting between service providers, see Galbi (1999).
[6] AT&T's 1996 and 1997 consolidated figures reflect its divestiture of Lucent and NCR.

data sources are combined in Table 1 to give AT&T's advertising and promotional expenses from 1988 to 1997.[7]

Table 1
AT&T's Advertising and Promotional Expenses
(nominal, in millions of dollars)

Year	Advertising and Promotional Expenses
1988	$526
1989	$592
1990	$821
1991	$977
1992	$956
1993	$1,282
1994	$1,855
1995	$1,986
1996	$2,311
1997	$1,786

Additional evidence on advertising expenses is available through Competitive Media Reporting (CMR), which monitors media outlets and provides advertising occurrence and expenditure estimates for market and competitive analysis. Table 2 gives CMR advertising expenditure estimates for AT&T, MCI, and Sprint, the three largest U.S. long distance service providers.[8] CMR constructs these estimates from monitoring and surveying ten media or advertising outlets: magazine publishers, Sunday magazines, newspapers, outdoor (billboard) advertising space, network television, spot television,

[7] The figures in Table 1, and in all the other tables in this paper, are given in nominal terms to facilitate comparison with other data. Based on the Bureau of Labor Statistics' annualized, not seasonally adjusted consumer price index for urban wage earners and clerical workers, the following multipliers can be applied to express the 1988-1996 figures in 1997 dollars: 1.35, 1.29, 1.22, 1.17, 1.14, 1.11, 1.08, 1.05, 1.02.
[8] WorldCom has acquired MCI. The statistics in this paper refer to the period when MCI was an independent company.

national syndicated television, cable television networks, network radio, and national spot radio.[9]

Table 2
CMR-Reported Advertising Expenditures
(CMR-A, nominal in millions of dollars)

Year	AT&T	MCI	Sprint	AT&T's APE/CMR-A
1988	$341	$51	$42	1.54
1989	$354	$52	$49	1.67
1990	$444	$56	$79	1.85
1991	$392	$94	$78	2.49
1992	$379	$103	$96	2.52
1993	$481	$199	$143	2.66
1994	$669	$318	$177	3.06
1995	$660	$320	$202	3.25
1996	$646	$328	$266	3.91
1997	$469	$447	$285	4.23

Because MCI and Sprint have not reported advertising and promotional expenses (APE) to their stockholders, it is necessary to estimate figures for MCI and Sprint. The last column of Table 2 gives the ratio of AT&T's APE (see Table 1) to its CMR-reported advertising (CMR-A). Note that CMR-A does not include direct mail programs, telemarketing, and new subscriber bonuses. As the AT&T data show, the importance of these types of expenditures in customer acquisition efforts has increased dramatically. Multiplying MCI's and Sprint's CMR-A by AT&T's APE/CMR-A and making some

[9] The CMR figures for 1988 and 1989 do not cover spending on national spot radio. The figures in Table 2 are company advertising figures. The company figures for 1987-1992 are generally 10-20% higher than the sum of advertising specifically associated with particular long distance products. Because no company figure is available for Sprint 1988-1991, its brand aggregate figures for these years were scaled to a company figure using the ratio of the company figure to the brand aggregate figure for Sprint in 1992 (1.17). The AT&T company figure for 1990, $505 million, looked anomalous relative to the trend in AT&T's advertising and AT&T's ratios of company and to brand-aggregate advertising. An alternative figure of $444 million was computed based on the brand aggregate figure and the average of company to brand-aggregate ratios for 1989 and 1991.

additional adjustments gives advertising and promotional expenses for MCI and Sprint.[10] These estimates are in Table 3.

Table 3
Estimated Advertising and Promotional Expenses
(APE – nominal, millions of dollars)

	AT&T		MCI		Sprint		others		total industry	
year	LS	APE	LS	APE	LS	APE	LS	APE	lines	APE
1988	82.2%	$526	8.9%	$78	5.2%	$65	3.7%	$26	122.7	$695
1989	78.9%	$592	10.8%	$87	6.1%	$81	4.3%	$34	126.8	$794
1990	76.2%	$821	12.9%	$103	6.2%	$147	4.7%	$53	130.8	$1,124
1991	75.4%	$977	13.1%	$235	6.5%	$194	4.9%	$73	133.9	$1,479
1992	74.2%	$956	14.0%	$260	6.2%	$242	5.6%	$87	136.7	$1,545
1993	72.4%	$1,282	15.1%	$531	6.1%	$382	6.4%	$151	140.6	$2,346
1994	70.5%	$1,855	15.3%	$974	6.4%	$541	7.8%	$284	145.2	$3,654
1995	68.2%	$1,986	15.6%	$1,024	6.4%	$656	9.8%	$400	150.4	$4,065
1996	63.8%	$2,311	15.6%	$1,164	7.0%	$1,040	13.6%	$708	156.0	$5,222
1997	61.4%	$1,786	14.3%	$1,549	8.0%	$1,205	16.3%	$884	160.8	$5,423

Notes: LS is share of presubscribed lines. Total industry lines are in millions. Presubscribed line counts are from the FCC's *Trends in Telephone Service*. Figures for 1997 are the author's estimates based on Bill Harvesting III data.

As Table 3 suggests, AT&T's advertising and promotional expenses per presubscribed line are much lower than MCI's and Sprint's. In 1997, advertising and promotional expenses per presubscribed line for AT&T, MCI, and Sprint, respectively, were $18, $67, and $94. This probably reflects in part that AT&T has a more inertial subscriber base that other long distance service providers. For example, in the spring of 1996, the share of current customers who had changed long distance service provider in the previous year was 16.4%, 39.0%, 33.8%, and 51.3% for AT&T, MCI, Sprint and

[10] The MCI data includes any advertising associated with local/data services and with its retailing of wireless services, beginning with its acquisition of Nationwide Cellular Service, Inc. in 1995. MCI's advertising for long distance service was computed from its total advertising based on MCI's ratio of long distance service revenue to its total revenue, as reported in its Annual Report for 1996. Because WorldCom acquired MCI, I estimated a 1997 MCI figure based on the trend in the revenue ratio. All of Sprint's advertising revenue was taken to be associated with long distance service.

other long distance carriers, respectively.[11] From 1996 to 1997 AT&T reduced its advertising and promotional expenses by $525 million, while advertising and promotional expenses for MCI and Sprint continued to grow strongly.

To get total industry advertising and promotional expenses, advertising and promotional expenses for other long distance service providers need to be estimated. The churn data cited above indicate that customer acquisition costs for other long distance service providers are likely to be more like Sprint's than AT&T's. On the other hand, other long distance carriers may not be trying to build a national brand, and they may be growing relatively rapidly because they have identified cost-effective ways to attract particular segments of customers. The rapid growth in presubsuscribed line share for other long distance service providers, as shown in Table 3, may indicate the importance of niche marketing strategies. Table 3 shows estimates for other long distance carrier's advertising and promotional expenses based on the over-all average, on a per presubscribed line basis, of AT&T, MCI, and Sprint's advertising and promotional expenses.

Data from other sources provide a cross-check and further insight into the figures in Table 3. Table 4 shows data from corporate tax returns, as compiled by the U.S. Internal Revenue Service, and data form the U.S. Census Bureau's Survey of Communication Services. These sources vary in category definitions and coverage.[12] Revisions in the Census data indicate the difficult of measuring advertising expenses

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[11] These figures are based on a survey of about 20,000 residential long distance telephone subscribers. See PNR & Associates (1996).

[12] The IRS data is from the sourcebook category "Transportation and public utilities: Communication: Telephone, Telegraph, and other communications services". It thus excludes radio and television

consistently.[13] The economically significant categories of retail services provided by telecommunications companies are local services, wireless services, and long distance services. Local exchange carriers report to the FCC data on their product advertising expenses. Subtracting these expenses from total purchased advertising and apportioning the remaining expenses between wireless and long distance services according to their relative revenues, gives an alternative estimate of long distance advertising expenses. The last column of Table 4 gives this estimate. Comparing the last column in Table 4 to the last column in Table 3 suggests that purchased advertising in recent years has amounted to only about half of the long distance industry's advertising and promotional expenses. Other expenses, such as expenses associated with direct mail promotions, telemarketing, and bonus checks, are very important.

Table 4
Other Data on Telecommunications Companies' Advertising
(nominal, in millions of dollars)

	IRS Returns		Census Survey		FCC SOCC		
Year	Business Receipts	Advertising Deductions	Operating Revenue	Purchased Advertising	LEC product advertising	Rev. Share LD / LD+wireless	Est. LD purchased advertising
1989	$199,417	$1,211	$154,474	$1,888	$487	93.6%	$1,311
1990	$201,803	$1,467	$160,482	$2,328	$524	91.9%	$1,657
1991	$207,421	$1,482	$164,738	$2,546	$534	90.9%	$1,829
1992	$215,309	$2,688	$171,578	$2,637	$568	88.3%	$1,828
1993	$223,459	$3,579	$183,538	$3,085	$567	85.6%	$2,157
1994	$247,088	$4,397	$199,259	$3,835	$645	82.8%	$2,641
1995	$261,967	$4,821	$216,296	$3,607	$773	79.2%	$2,244
1996			$238,063	$4,534	$844	76.7%	$2,831

broadcasting. It includes SIC categories 4822 and 4899, which are not included in the Census Survey. These categories do not include retail products.

[13] The 1996 Survey lowered the 1995, 1994, and 1993 figures for purchased advertising from earlier surveys by $853 million, $471 million, and $192 million, respectively. These revisions were associated with the introduction of a new sample of firms into the survey.

Total long distance service advertising and promotional expenses have been growing rapidly and are economically significant. Between 1988 and 1997, advertising and promotional expenses grew 22% per year in real terms. Advertising and promotional expenses in the long distance industry in 1997 amounted to about $5.4 billion. As Table 5 indicates, this figure is more than twice Qwest's total capital budget for a network covering 80% of data and voice traffic originating in the U.S. Table 6 shows some cross-industry comparisons. In terms of expenses for advertising and promotions, the long distance industry has been transformed from a monopolized utility to an industry that advertises at a rate similar to food manufactures and retailers of furniture and home furnishings.

Table 5
Total Capital Costs for Building a National Network

Company	Total Capital Budget	Network Scope
IXC	$950 million	As of Oct. '98, fiber spanned 52 of top 100 US MSA's ; mixed technology: voice switches, ATM, and routers; OC-192 capacity commercially deployed; Will cover 99 of top 100 MSA's by year 2000.
Level 3		
Phases 1-2	$4 billion	25 US cities, 6 European cities by year end 2000; both local and long distance facilities; optimized for Internet Protocol; continuously upgradeable network with 8-10 conduits, but only 1 initially used.
Phases 1-5	$8-10 billion	50 US cities, 21 international cities.
Qwest	$2.1 billion	US trans-national network already lit; 130 US cities covering 80% of data and voice traffic originating in the US to be completed in Q2 1999; OC-192 SONET ring architecture; carry all of today's telecom traffic on just 4 of its 48 fibers.

Source: Company websites and SEC 10Q filings.

Table 6
Advertising Deductions
as a Percent of Business Receipts, 1994

Electric, gas, sanitary services	0.1%
Wholesale trade	0.8%
Auto dealers & service stations	0.9%
Apparel & other textiles	1.7%
Communications	1.8%
Eating and drinking places	2.8%
Long distance telephone service	**3.8%**
Furniture & home furnishing stores	4.1%
Food & kindred product manufactures	4.4%
Credit agencies	4.8%
Banking	5.9%
Tobacco manufactures	7.8%
All goods and services	1.3%

Notes: IRS corporate income tax data, except long distance business receipts from Census Survey of Communications Services. IRS advertising deductions net of LEC product advertising and allocated between LD and wireless in proportional to Census Survey revenue. See Table 4.

IV. Conclusions

Long distance voice telephony has become an industry for which advertising and promotions are much more significant expenses than network facilities. While advertising and promotions are expenses, one should not presume that such expenses are a waste. Information is valuable, and competition is not likely to be effective if consumers are unaware of it. The important point is that disseminating information, attracting attention to it, and making choices based on it are costly economic activities. Business managers need to recognize these facts in their business plans. Policy makers need to recognize these facts in their pro-competitive policies.

Throughout the world the assertion that "competition is good" has been transformed from a battle cry to a platitude. While central planning and state-managed bureaucracies were once presented as alternatives to competition, these policies are now associated with the barking of old-dog ideologues. Companies once justified mergers and acquisitions on the grounds that they would eliminate ruinous or cutthroat competition; now every merger claims to make a more effective competitor. As an economic ideology, competition is better than any other. Nonetheless, twentieth century history teaches that all-encompassing ideology can lead to idiocy. It is important to seek facts and make policy pragmatically.

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