TABLE SEVEN

AVERAGE PRICE-COST MARGINS AND HHIS FOR INTERSTATE SERVICES

(1993 TO 1996)

Service Category	Average Price-Cost Margin AT&T, MCI, and Sprint	Average HHI
MTS	0.64	0.39
Outbound WATS		
Switched	0.71	n.a.
Dedicated	0.75	n.a.
Dedicated - 36 Month Contract	0.69	n.a.
Inbound WATS		
Switched	0.70	0.36
Dedicated	0.72	0.36
Combined		
Switched	0.67	n.a.
Dedicated	0.65	n.a.

Source: See Figures Thirteen through Twenty. Estimated as a simple average using year-end price-cost margins and the most recent data in 1996.

D. Discount Prices and Trends in Price-Cost Margins

63. This analysis of MTS price-cost margins has been criticized in previous publications because it did not take account of prices in the discount calling plans for MTS offered by AT&T, MCI, and Sprint that became numerous in the 1990s.[31] An implication is that had I used discount prices in estimates of price-cost margins I would have found declining margins, as concentration declined, and thus would have come to the conclusion that there was increased competition in long-distance markets as time passed. To address this contention I analyze price-cost margins under the more important discount plans.

My specific findings on discount calling are as follows:

A. Price-cost margins of discount plans did not decrease in the 1990s. Hence, previous findings of an inverse relationship between price-cost margins and concentration from standard tariff prices hold after taking account of discount plan prices.

B. Over 60 percent of MTS customers could not receive the lower prices in MTS discount plans, since their monthly usage levels were too low to qualify them for discounts. Nevertheless, some of these customers signed-up for discount plans and in the end paid more under the discount plan than with standard pricing;

C. Based on a representative calling profile, price-cost margins for the discount plans increased over the 1989-1995 period, to end out at approximately 90 percent of standard MTS tariffs over the 1989-1995 period;

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[31] *Affidavit of R. Glenn Hubbard and William H. Lehr, Attachment 1, An Analysis of Competition in U.S. Long Distance Telephone Service,* December 5, 1995, *United States of America v. Western Electric Company, Inc. and American Telephone and Telegraph Company*, Civil Action No. 82-0192; and *Declaration of Robert E. Hall*, December 2, 1994, *United States of America v. Western Electric Company, Inc. and American Telephone and Telegraph Company*, Civil Action No. 82-0192. B. Douglas Bernheim and Robert A. Willig (October 25, 1996), *The Scope of Competition in Telecommunications*, working paper prepared for the American Enterprise Institute. Other criticisms directed at my work are addressed in Appendix A to this report.

64. The carriers have advertised intensively and the popular press has enthusiastically endorsed discount plans for residential customers. *Business Week* states that discounts "make the basic rate irrelevant - like a car's sticker price," and quotes MCI president Gerald M. Taylor: "Nobody, absolutely nobody, pays sticker price."[32] But these statements and others like them turn out to be highly inaccurate, creating a false impression of competition in MTS services, when there is no more competition there than on standard plans. In fact, the discount plans have benefited only a minority of MTS customers. According to AT&T, over 60 percent of its customers have monthly bills for long-distance service of $10 or less,[33] and customers with such low usage levels cannot obtain prices from discount MTS plans below those in AT&T's standard MTS plan. Since AT&T has approximately 65 million customers, discount calling plans could not offer lower prices to 39 million customers.[34] Hence, the claim that "nobody" pays sticker price is wildly excessive.[35]

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[32] *See* Arust, C. (September 19, 1994), *All Those Long Distance Discounts are Sweet, But . . .*, BUSINESS WEEK 66.

[33] *See* Letter of Alex Mandl, executive vice president and CEO of AT&T's Communications Services Group to The Honorable Reed E. Hundt, Chairman, Federal Communications Commission, October 4, 1994. Bernheim and Willig's 1996 manuscript states that 47 percent (or approximately 30 million) of AT&T's customers have average monthly bills of less than $10. *See* B. Douglas Bernheim and Robert A. Willig (October 25, 1996), *The Scope of Competition in Telecommunications*, working paper prepared for the American Enterprise Institute, p. 55.

[34] According to a 1994 survey compiled by PNR & Associates, 75 percent of AT&T's residential customers in a sample of approximately 9,000 households did not belong to a discount MTS plan, with the comparable figures for MCI and Sprint being 62 percent and 73 percent, respectively. These percentages imply that approximately 49 million of AT&T's residential customers did not belong to a discount MTS plan, with the comparable figures for MCI and Sprint being thirteen million and seven million, respectively.

[35] Bernheim and Willig dispute this view, holding that millions of customers with average bills under $10 per month subscribe and benefit from discount plans in months when their bill exceeds $10 (B. Douglas Bernheim and Robert A. Willig (1996), *The Scope of Competition in Telecommunications*, working paper prepared for the American Enterprise Institute, p. 60). In contrast to AT&T's statement in 1994 that over 60 percent of its customers spend $10 or less

65. The major carriers' discount plans have followed the upward trend in prices in standard plans. Most discount plans have offered percentage reductions off standard MTS tariff rates, so that discount prices increase with standard increases. Prices have risen in many discount plans as these plans have not served the purpose of taking sales away from other carriers. Rather, they have offered lower prices for larger volume, off-peak time-of-day and other characteristic conditions that intend to increase the level of utilization of systems.

66. Long-distance carriers may offer discounts on standard MTS tariffs for a number of other reasons, including: (1) passing on selective cost savings, (2) to discriminate in favor of more price-sensitive customers, and (3) to limit resellers' shares of MTS service volumes. The first is a common rationale for discounts to particular customers when the costs of serving them are relatively low. This type of discounting is found without regard to the competitiveness of the market. Indeed, while lower costs to certain customers drive competitive prices to those customers down, they also lead to selective lower prices by a monopolist because these lower

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per month on long-distance, Bernheim and Willig claim (without documentation) that only 47 percent of AT&T customers have average calling volumes below $10 in any given month and that 66 percent have at least one month over $10 in a three month period (pp. 54-55). They fail to point out, however, that most programs before 1994, such as AT&T's Reach Out America Plan, required a fixed monthly fee so that infrequent long-distance callers paid more per minute under a discount plan than the standard tariff (MacAvoy, *supra*, note 5, pp. 126-127). Hence, most low volume customers did not benefit from the discount plans. Some recent volume discount plans have, however, eliminated the fixed fee. Bernheim and Willig also argue (without providing any evidence) that lack of price discounts to below $10 per month customers is consistent with competition since long-distance companies are forced by regulation to provide service to these customers at less than cost.

prices are more profitable.[36] Hence, such discounts offer no indication of the absence or presence of competition in a market.

67. The second reason is that carriers design discount plans to keep price-sensitive customers on the network. Carriers with market power would find it profitable to offer a plan with a monthly fixed fee and a low per-minute usage price to customers with large volume demands who are likely to increase their purchases of long-distance service as a result. At the same time, carriers facing intense competition have to pass specific cost reductions onto those system subscribers that merit them. Thus, the presence of discounts does not indicate that there is competition.

68. Third, carriers could offer discounts to constrain the growth of resellers that attempt to expand market share at the expense of facilities-based providers of MTS services. According to this rationale the facilities-based carrier sets its discount MTS prices low enough to larger subscribers to squeeze the margins of resellers that purchase WATS and Combined Services and attempt to resell MTS to those larger-volume users only. But the same process would be present if all markets were becoming more competitive, because then resellers would arbitrage price differences across markets until they equaled the cost of reselling. If this were the rationale for the MTS discount plans then there would be one common level of margin in WATS, Combined Services, and MTS for the large, facilities-based supplier - the one (monopoly or competitive) margin to be made at wholesale and retail.

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[36] Tirole, J. (1988), THE THEORY OF INDUSTRIAL ORGANIZATION 66 (Cambridge: MIT Press). "It is a simple yet very general property of monopoly pricing that the monopoly price is a nondecreasing function of marginal cost." *Id.* In other words, if a monopolist's cost of serving a customer falls, its profit-maximizing price to that customer will fall.

1. *Description of Interstate Discount Plan Provisions*

69. Discount calling plans divide into three main classes. The first and most common type of plan, that prevalent in the early 1990s, required the customer to pay a monthly charge to receive an amount of "free" calling time to be used during specific time periods. For example, under AT&T's *Block of Time - One Hour Plan* (*Reach Out America*) a customer paid a fee to receive one hour of no-charge time to be used during a night/weekend period (calls made during the business day were charged the standard MTS rate). Other AT&T plans that fall into this group are: *Small Business Option*; *Block of Time - One-Hour Plan with Evening Option*; *Block of Time - One-Hour Plan with Evening & Day Option*; and *Block of Time - Half Hour Plan*. MCI's discount plans that fall into this group are: *PrimeTime Plan*; *PrimeTime - Day Plan*; *Sure Save Option*; *Sure Save - Evening & Day Plan*; *Sure Save - Half Hour Plan*; and *AnyTime Plan*. Sprint's discount plans that belong to this group are: *Sprint Select*; *Sprint Select - Day Option*; *Sprint Select - Day Plan*; and *Sprint Select - Day Plan - Evening/Night Option.*

70. Prices in the second set of discount plans have had discounts on standard plan tariffs based on monthly usage levels. For example, under AT&T's *True USA Promo*, a customer receives a ten percent discount on a monthly long-distance bill between $10 and $24.99, and higher percentage discounts at higher usage levels. The *True USA Promo* is the only AT&T discount plan examined here that falls in this group. Sprint has three plans that fall into this group: *Dial "1" Usage Discounts*; *Residential Promo*; and *Sprint Plus Usage Discounts*, while the MCI discount plans examined here did not include this type of plan.

71. Prices in the third type of discount plans depend on who is called. MCI has had two plans (*Friends & Family I* and *Friends & Family II*) that gave discounts based on calling

specific other subscribers. For example, under MCI's *Friends & Family I* plan, a customer specified a "Calling Circle" of MCI customers and received a 20 percent discount on calls to those customers. While the apparent identifying characteristic was the name of the call receiver, less apparent was that the calls were to friends and relatives at home in the evening and on weekends, so that this plan was more than likely an off-peak discount plan. The AT&T and Sprint discount plans examined here did not include this type of discount.[37]

2. *Interstate MTS Discount Prices*

72. The extent to which discount plan tariffs have reduced the prices subscribers have paid is not known, because both standard and discount tariffs actually apply on services used by subscribers at different times of the day and on different call volumes. The question is then what these discount plans do to change the "price" of the representative call.

73. The price per minute of the representative long-distance call under any one discount plan can be determined once assumptions are made on (1) the representative customer's monthly usage level; (2) the distribution of that customer's calls by day, evening, and night/weekend; (3) the distribution of that customer's calls by mileage; and (4) the number and length of individual calls.[38] With respect to the first, two different distributions of monthly usage levels are considered, that from survey data compiled by LINK Resources Corporation ("LINK") and that shown in AT&T's letter to the FCC.[39] The LINK data indicates the

[37] Finally, MCI's *EasyRate Option* plan examined here did not fall into any of the above groups.

[38] Calls are assumed to be direct-dialed, not collect, and not to incur any calling card charges.

[39] *See* Letter of Alex Mandl, executive vice president and CEO of AT&T's Communications Services Group to The Honorable Reed E. Hundt, Chairman, Federal Communications Commission, October 4, 1994.

percentage of respondents with monthly long-distance bills falling in certain ranges (as in Table Eight). For example, 36 percent of AT&T's residential customers reported monthly long-distance bills less than $10.99.[40] The distribution of AT&T's residential customers is shown in Table Nine, where that distribution is based on its 1994 statement that 60 percent of its customers have monthly bills of less than $10.[41] The most conservative estimate of prices is based on the LINK data customers' monthly bills, and thus is used in my analysis, since the AT&T distribution results in higher prices.

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[40] In the survey summarized in Table Eight, some customers reported they did not know their monthly usage levels. They were assigned on a pro rata basis to the eleven usage categories. The customers' monthly bills were set equal to the midpoints of the ranges shown in Table Eight.

[41] *See* Letter of Alex Mandl, executive vice president and CEO of AT&T's Communications Services Group to The Honorable Reed E. Hundt, Chairman, Federal Communications Commission, October 4, 1994. According to AT&T's letter, "a total of over 60% [of its customers spend] $10 or less in calling per month. About a quarter of AT&T's customers make between $10 and $75 in long distance calling per month, [and] less than 5% of AT&T customers make more than $75 in long distance calls per month." Since the stated percentages sum to 90 percent, we must assign the remaining ten percent of AT&T's customers. To be conservative, they are assigned to the $10 to $75 class, rather than the less than $10 class, since this has the effect of resulting in lower prices and price-cost margins.

TABLE EIGHT

LINK SURVEY DATA ON MONTHLY BILLS OF RESIDENTIAL CUSTOMERS

(PERCENTAGE OF CUSTOMERS HAVING MONTHLY BILLS IN THE INDICATED RANGES)

Monthly Bill	AT&T	MCI	Sprint
Up to $10.99	36	30	27
$11.00 to $14.99	5	4	4
$15.00 to $24.99	17	14	17
$25.00 to $34.99	13	15	15
$35.00 to $49.99	10	14	12
$50.00 to $74.99	9	10	12
$75.00 to $99.99	4	6	5
$100.00 to $149.99	3	2	6
$150.00 to $199.99	1	2	1
$200.00 to $249.99	1	2	1
Over $250.00	1	1	1

Source: LINK Resources Corp., 1993 HOME MEDIA CONSUMER SURVEY: RESIDENTIAL TELECOMMUNICATIONS, p. 106.

TABLE NINE

AT&T DATA ON MONTHLY

BILLS OF RESIDENTIAL CUSTOMERS

(PERCENTAGE OF CUSTOMERS HAVING

MONTHLY BILLS IN THE INDICATED RANGES)

Monthly Bill	AT&T
Up to $10.00	60
$10 to $75	35
Over $75	5

74. For each of the eleven monthly bill categories provided in the LINK data, standard and discount MTS prices for a representative call of five minutes have been estimated using the time-of-day and mileage distributions for constructing prices from standard tariffs below.[42] The weighted average of these eleven prices, where the weights equal the percentages of customers' monthly bills in that class, yields the index prices per call minute.[43] As noted, by using the LINK data, more weight is given to discount prices than had AT&T's distribution of customers been used.

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[42] The effect of the average length of a call on the average price per minute has become less important in recent years as long-distance carriers have lowered their charges for the first minute relative to charges for subsequent minutes.

[43] MacAvoy, *supra*, note 5. In some cases, low-volume usage levels cause prices to be higher under discount calling plans than under standard MTS. In these cases, the discount prices were excluded from the weighted- average price calculation.

75. Rather than discussing these estimated prices for every AT&T, MCI, and Sprint discount plan, only certain of the more widely used plans are analyzed here: *Reach Out America*[44] (AT&T); *Prime Time Day* and *Friends and Family I* (MCI); and *Sprint Plus* and *Sprint Select Day* (Sprint). I provide a second price series for the two later-date MCI and Sprint plans because they offered lower prices for at least some but not all of the eleven classes of customers.

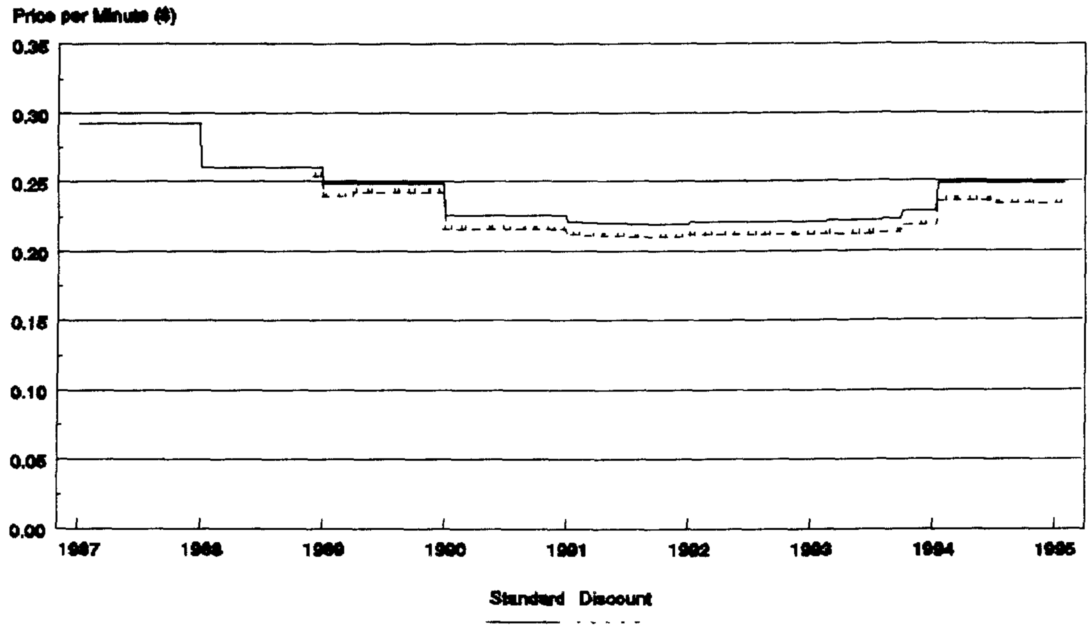
76. For customers with monthly bills large enough to make membership worthwhile, prices under discount plans were lower than those under standard MTS programs. Figures Twenty-One, Twenty-Two, and Twenty-Three indicate the standard and discount prices for customers on those carrier discount plans. The price for AT&T's *Reach Out America* plan was approximately 96 percent of the standard price (see Figure Twenty-One and Table Ten). MCI's *Prime Time Day* customers paid approximately 94 percent of standard price (see Figure Twenty-Two and Table Ten), while Sprint's *Plus* and *Select* customers received discount prices from 94 percent to 77 percent of standard price for that call over the period 1989 to 1994 (see Figure Twenty-Three and Table Ten).[45]

[44] The particular plan was the *Block of Time - One Hour Plan with Evening & Day Option.*

[45] In Appendix 2 (p. 227) of my book, results are reported under the assumption that a customer switches plans immediately whenever a carrier offers a lower price plan, yielding an always minimum price index for each carrier. Minimum prices for AT&T and MCI were approximately $0.03 to $0.04 per minute lower for 1994 than those estimated for the MTS discount plans. Sprint's minimum prices were identical to the prices of its well-known discount plans until mid-1994.

FIGURE TWENTY-ONE

RESIDENTIAL INTERSTATE INDEX PRICES FOR AT&T STANDARD MTS SERVICE AND REACH OUT AMERICA DISCOUNT CALLING PLAN



Note: Discount plan is Reach Out America Block of Time - One-Hour Plan with Day and Evening Option.

TABLE TEN

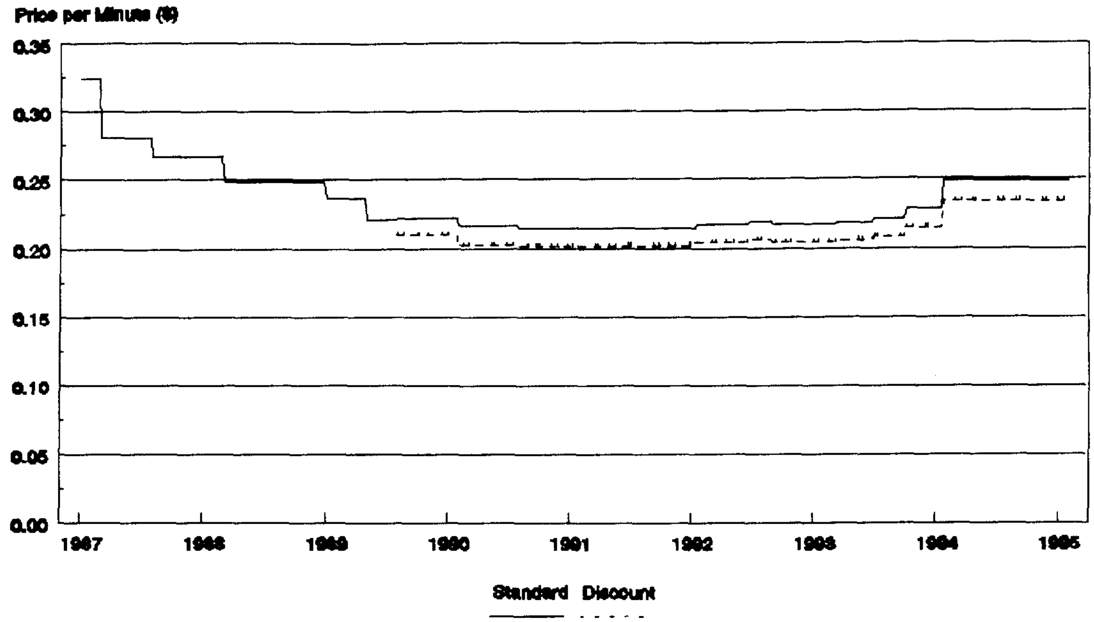
INTERSTATE DISCOUNT PLAN PRICES AS A PERCENTAGE OF STANDARD MTS PRICES

Year	AT&T	MCI	Sprint
1989	96	95	94
1990	96	94	90
1991	96	94	87
1992	96	94	86
1993	96	94	83

1994	94	94	77

FIGURE TWENTY-TWO

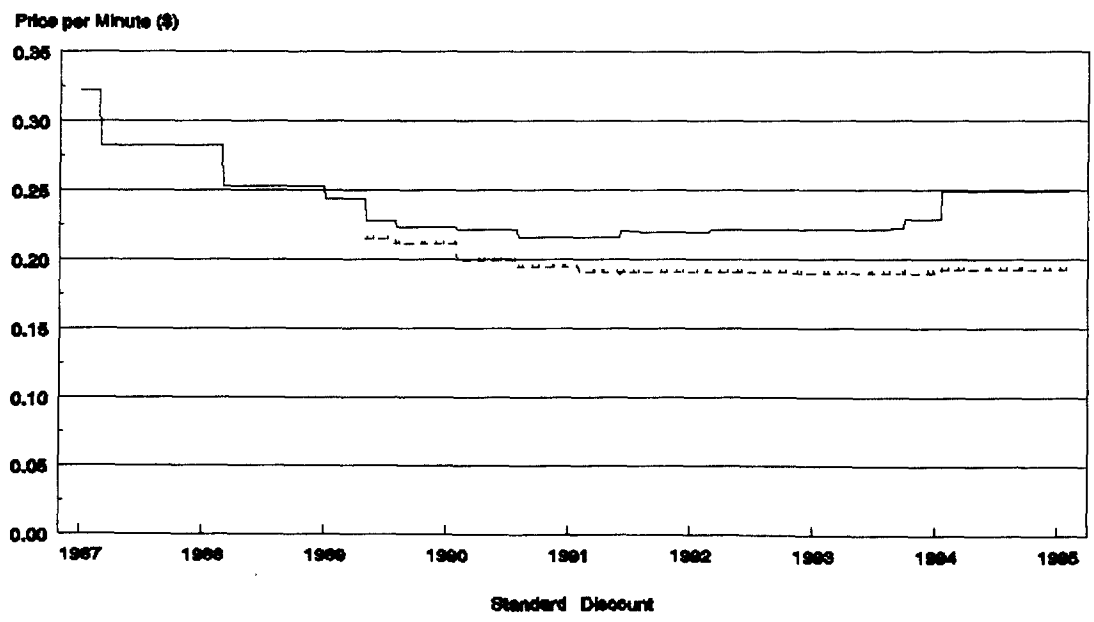
RESIDENTIAL INTERSTATE INDEX PRICES FOR MCI STANDARD MTS SERVICE AND PRIME TIME DAY AND FRIENDS & FAMILY I DISCOUNT CALLING PLANS



Note: Discount plan is Prime Time Day (6/1/89 to 5/31/91) and Friends and Family I (6/1/91 to 2/1/95).

FIGURE TWENTY-THREE

RESIDENTIAL INTERSTATE INDEX PRICES FOR SPRINT STANDARD MTS SERVICE AND SPRINT PLUS USAGE AND SPRINT SELECT DAY DISCOUNT CALLING PLANS



Note: Discount plan is Sprint Plus Usage Discounts (5/1/89 to 2/1/91) and Sprint Select Day Plan (2/1/91 to 2/1/95).

77. These figures indicate that prices from the discount calling plans offered by AT&T, MCI, and Sprint remained approximately constant after 1990, then increased in 1994, except for those from Sprint's plan. Discount prices did not decrease over time however, since plan prices were mostly constant percentages of standard tariff prices. Thus, as concentration declined, the prices of discount plans show no more evidence of reductions than do those of the standard plans.

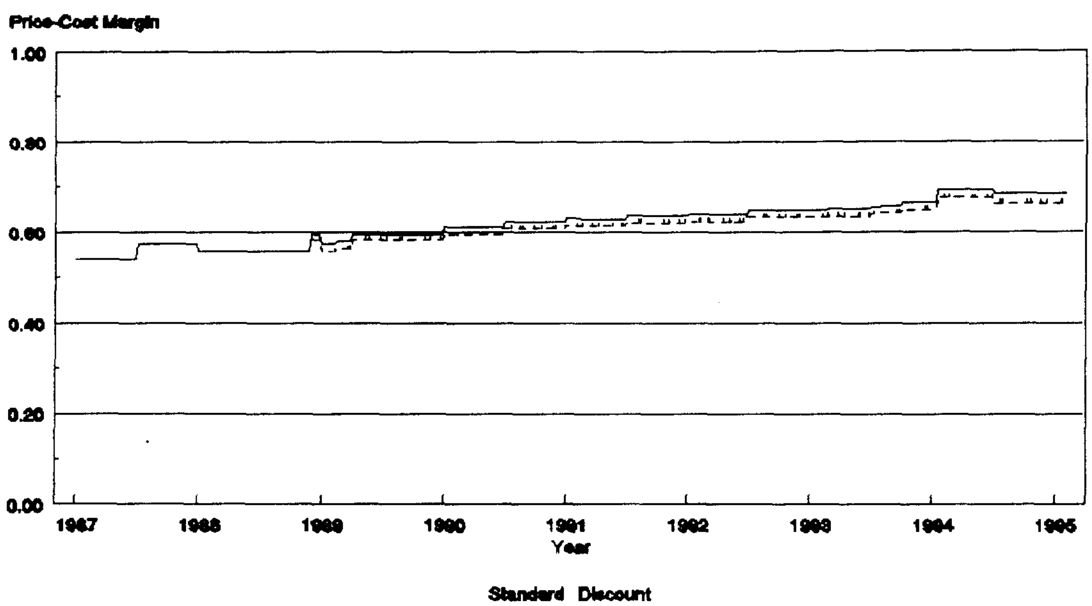
78. Recall that in constructing these prices for discount calling plans, a weighted index was used to compute a representative price based on the number of customers in different monthly bill categories as reported in the LINK survey data. An alternative method for constructing the representative price would be to use weights that reflect the usage volumes in each billing category. Appendix B presents the index prices for the carriers' well-known discount calling plans using this second method. In all cases the resulting prices are virtually identical to those reported here. That is, the index prices are not sensitive to the weighting scheme chosen to formulate the representative call.

3. *Discount Plan Price-Cost Margins*

79. AT&T's price-cost margins on its *Reach Out America* plan were approximately 96 percent of those on its standard MTS plan (see Figure Twenty-Four and Table Eleven).[46] MCI's price-cost margins for its *Prime Time Day* and *Friends and Family I* plans averaged approximately 95 percent of its standard MTS margins (see Figure Twenty-Five and Table Eleven). Sprint's margins earned on its *Sprint Plus* and *Sprint Select* discount plans averaged approximately 90 percent of its standard MTS margins (see Figure Twenty-Six and Table Eleven).

FIGURE TWENTY-FOUR

RESIDENTIAL INTERSTATE PRICE-COST MARGINS FOR AT&T STANDARD MTS SERVICE AND REACH OUT AMERICA DISCOUNT CALLING PLAN



Note: Discount plan is Reach Out America Block of Time- One-Hour Plan with Day and Evening Option.
Sources: Marginal costs from FCC and rates from HTL Telemanagement, Ltd.

[46] AT&T's price-cost margins can also be estimated using as weights the percentages of customers in the three different monthly bill categories shown in Table Seven. The resulting index prices and price-cost margins using AT&T's data are slightly higher than the prices and margins found using the LINK data. This occurs because AT&T's letter reports a higher percentage of customers falling into the less than $10 per month category.

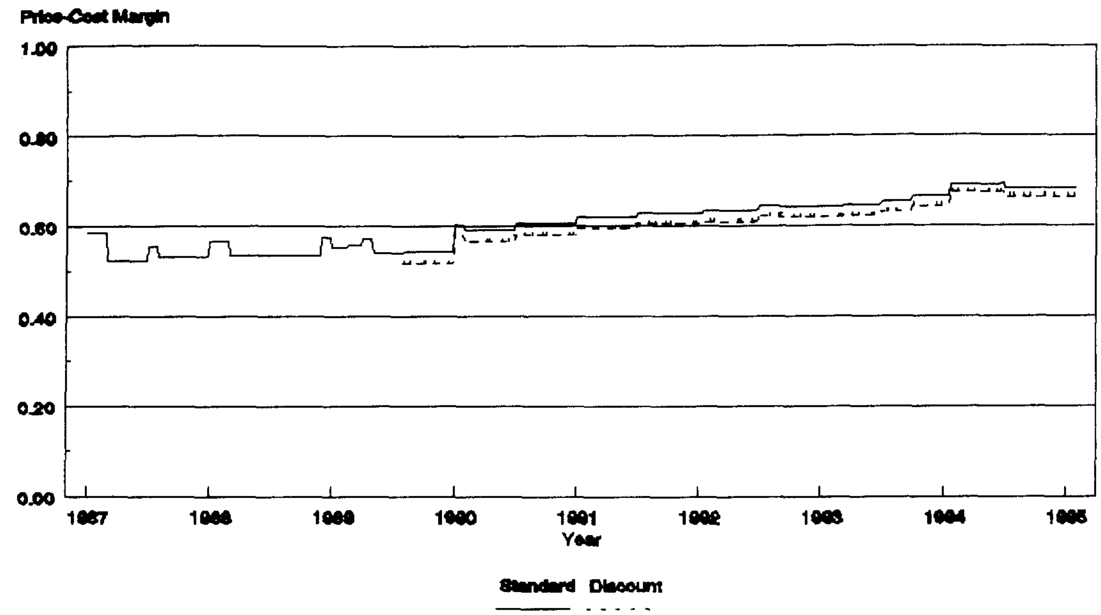
TABLE ELEVEN

INTERSTATE DISCOUNT PLAN PRICE-COST MARGINS AS A PERCENTAGE OF STANDARD MTS PRICE-COST MARGINS

Year	AT&T	MCI	Sprint
1989	98	95	95
1990	97	96	93
1991	97	96	91
1992	98	96	91
1993	98	96	90
1994	98	97	87

FIGURE TWENTY-FIVE

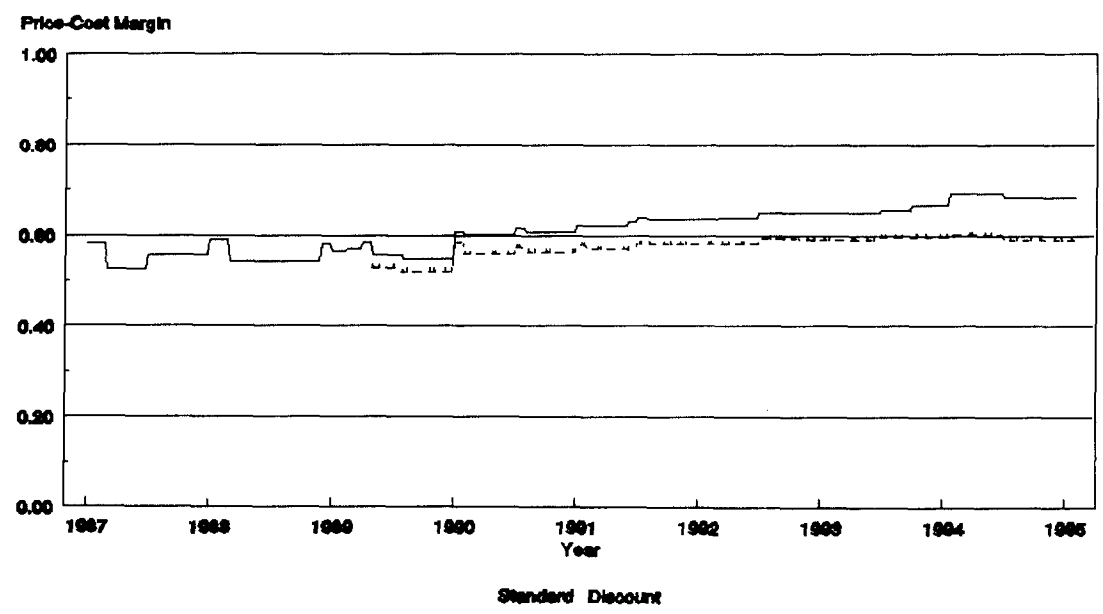
RESIDENTIAL INTERSTATE PRICE-COST MARGINS FOR MCI STANDARD MTS SERVICE AND PRIME TIME DAY AND FRIENDS & FAMILY I DISCOUNT CALLING PLANS



Note: Discount plan is Prime Time Day (8/1/89 to 5/31/91) and Friends and Family I (6/1/91 to 2/1/95).
Sources: Marginal costs from FCC and rates from HTL Telemanagement, Ltd.

FIGURE TWENTY-SIX

RESIDENTIAL INTERSTATE PRICE-COST MARGINS FOR SPRINT STANDARD MTS SERVICE AND SPRINT PLUS USAGE AND SPRINT SELECT DAY DISCOUNT CALLING PLANS



Note: Discount plan is Sprint Plus Usage Discounts (5/1/89 to 2/1/91) and Sprint Select Day Plan (2/1/91 to 2/1/95).
Sources: Marginal costs from FCC and rates from HTL Telemanagement, Ltd.

80. The figures indicate that price-cost margins from discount plans did not depart from the pattern of margins from standard service offerings. Price-cost margins set out in the discount plans offered by AT&T, MCI, and Sprint on MTS services increased over the last ten years, even though that period was marked by substantial decline in concentration among the major sources of supply of those services. Discount plans did not push margins down toward the competitive level, in line with falling concentration, as would result under competitive market conditions. Discount plan margins increased in the 1990s, as did margins under standard plans, moving markets away from and not in the direction of increased competitive performance. Discount plans provided percentage reductions of prices in standard tariffs and as standard prices increased and percentage discounts held constant, discount plan price-cost margins increased. Instead, they may only have passed on cost savings from shifting usage to off peak periods, or they may have offered lower prices to more price-sensitive customers that otherwise would have gone to resellers in MTS services. But even these arguments have limited applicability. If discount plans were designed to pass on large cost savings, then it is doubtful that margins would have increased to the 60 percent range. If these plans sought to offer lower prices to more price-sensitive customers, then margins should not have been higher for WATS users than for MTS customers that are likely to be less price sensitive.

81. With respect to the testing of hypotheses on competitiveness, only the first method is applicable for discount calling plans - the relationship between price-cost margins and the HHI overtime. This is because only one service, discount MTS services, is considered. As was the case with standard MTS, discount MTS plans exhibited rising price-cost margins despite declines in market concentration for MTS. This evidence rejects the hypothesis of increasing competitive market behavior from discount MTS services over the years since the AT&T divestiture.

VI. The Public Interest and Ameritech's Entry into InterLATA Services

A. *"Competitiveness" Benefits from Ameritech's Entry into InterLATA Service*

82. There is no basis for expecting that the high and increasing prices for long-distance services in Ameritech's service area will be reduced by competition breaking out among the top three providers of these services without some outside force working against the established tacitly collusive process. Competition hasn't happened in the first twelve years of antitrust and regulatory reform. The new force is the *Telecommunications Act of 1996*, which brings to these markets additional entry by potential carriers at very large scale -- the Bell Operating Companies -- that by their presence could cause competition to break out in long-distance markets. These new entrants' will struggle for share of market revenues by attracting customers from the incumbent long-distance carriers; they could bring about entirely new competitive interactions among incumbents that effectively reduce prices.

83. Ameritech is well positioned to become that kind of entrant into long-distance services in its region. While it is the case that Ameritech must establish a separate subsidiary in order to provide in-region, interLATA services, nonetheless its favorable contract with Worldcom for transport services, its technical, marketing and financial capabilities, and its strong brand name all ensure that it does not face the significant barriers to entry that other entrants would have to overcome. Its behavior as an independent, large-scale long-distance carrier will cause changes in these markets that will increase consumer welfare. Consequently, allowing Ameritech to provide in-region, long-distance services to challenge existing non-competitive offerings will enhance the public interest.

84. Even in the period during which Ameritech is operating primarily as a reseller of transport capacity, the competitive effects of its entry will be significant. Unlike switchless resellers, Ameritech has been able to negotiate competitively advantageous wholesale rates for transport as a result of its credible threat otherwise to enter on a facilities basis. In other words, Ameritech will exert substantial competitive pressure on long-distance service offerings, based on its reseller operations, given its potential for large-scale entry as a facilities-based carrier.

85. Note that to this point we have not assessed the risks of Ameritech's entry into in-region, interLATA services. These risks are dealt with in great detail in the legal memorandum accompanying this application as well as the affidavits of G. Mitchell Wilk and Steven Fetter, Richard Gilbert and John Panzar, Daniel J. Kocher, Ryan Julian, and Paul V. LaSchiazza. I concur with the conclusions drawn by these affiants that there is no competitive risk associated with Ameritech's entry into the provision of interLATA services in Michigan.

86. This section provides the most realistic estimates of the welfare gains from entry into long-distance services by Ameritech. Estimates of consumer welfare gains have to be based on price reductions that are strategic for the entrant. These result in prices that are more, not less competitive, and therefore are lower than tacitly collusive prices of the incumbent long-distance providers.

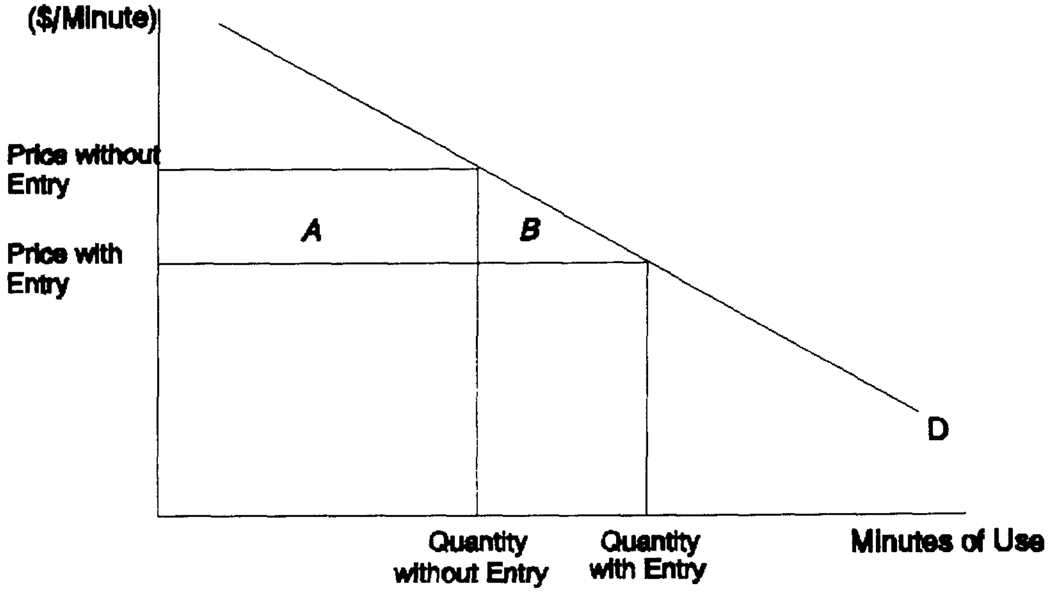
87. Because the volume of interLATA calls is so large, even small reductions in prices that are strategic for a new carrier generate substantial welfare benefits. The benefits would stem from (1) the reduced payments required to purchase the existing volume of service, and (2) the additional sale (net of cost) to consumers who purchase increased levels of service because of lower prices. These two sources of consumer savings are illustrated in Figure

Twenty-Seven, where the rectangle A equals consumer gains from reduced payments for the existing level of service and the triangle B equals their gains from increased purchases. To estimate areas A and B, the price and quantities must be determined for before and after the price reduction caused by entry.

FIGURE TWENTY-SEVEN

GAIN IN CONSUMERS' SURPLUS

RESULTING FROM INTERLATA RELIEF



88. My estimates of reductions in market-wide prices are based first on predictions of the long-distance market share of Ameritech in its region and the response to that share gain of this entrant by the existing interexchange carriers. Post-entry shares have been predicted from the responses to a 1996 market survey of some 1,300 business and residential customers within Ameritech's five-state region.[47] The results vary across individual states, but the

[47] The survey was conducted by Professor Itamar Simonson of Stanford University. The survey methodology was developed in a previous survey of Ameritech residential and business customers in Illinois and Michigan (*See* Itamar Simonson (1995), "User Preferences for One-Stop Telephone Service Providers: Survey Results in Chicago, Detroit, and Grand Rapids

survey indicates that among those making a choice between exclusive service with AT&T, MCI, Sprint, and Ameritech, or remaining with one long-distance and one local carrier, approximately 26 percent would take long-distance from Ameritech in its region. Table Twelve presents the pre-entry shares, and post-entry shares of customers based on the survey for the Ameritech region and individually for Michigan.

89. Given that the relevant geographic market for telecommunication services is national in scope, one could argue that the Ameritech market share should be calculated in the broader national market; however, such an approach would ignore the fact that six other RBOCs likely will be entrants in their separate service regions throughout the United States. If each of them were to obtain post-entry shares in their region approximating that of Ameritech, in its five state region, the net effect of Bell operating company entry nationwide would be the addition of a major new carrier with a market share of approximately twenty-five percent in the relevant national market.

LATAs.") It was updated to collect information on the particular long-distance carrier (AT&T, MCI, or Sprint) consumers would select, if Ameritech was not their preferred carrier. This information, not solicited in Professor's Simonson's original survey, was obtained in 1996 for Ameritech. The results are supported by a December 1995 consumer survey conducted by the Yankee Group. Approximately 27 percent of the consumers polled by Yankee Group indicated they would prefer Ameritech for combined local and long-distance service. (*See* Yankee Group (December 1995), IXCS VERSUS RBOCS: THE BATTLE OF THE CENTURY.)

TABLE TWELVE

CARRIERS' INTERLATA SHARES

FOR BUSINESS AND RESIDENTIAL SERVICE (PERCENTAGE)

	Share Before Ameritech Entry	Share After Ameritech Entry
Ameritech Region Total:		
Ameritech	n.a.	26
AT&T	54	43
MCI	20	10
Sprint	10	5
Michigan:		
Ameritech	n.a.	32
AT&T	51	38
MCI	19	7
Sprint	9	1

Sources: Pre-entry shares are based on total originating and terminating minutes of use for all Ameritech services, as reported by Ameritech. Post-entry shares are based upon Professor Simonson's survey.

90. The response to Ameritech's post-entry shares by the other carriers depends on the extent of their interfirm pricing coordination. There is no reason to believe that interfirm coordination by the top three firms would not continue, at least in the case of depicting a "business as usual" case. While Ameritech acts independently, its entry would not change the tacitly collusive behavior of the existing interexchange carriers. A second "breakdown" case, however, would be one in which the increase in the number of large-scale competitors in interLATA services would make the process of maintaining tacit collusion so difficult that at

least limited competition breaks out among the three large incumbent carriers.[48] Based on these two scenarios, I have estimated entry-induced gains for consumers in Ameritech's region as a whole and for Michigan separately.

B. Consumer Gains from Entry Assuming That Incumbent Carriers Maintain Tacitly Collusive Pricing

91. There is one additional assumption required for the estimation of consumer gains related to the entrant's specific reaction of the incumbents to entry (i.e., conjectural variation). This response should be based on estimates of the existing carriers conjectural variations. The historical values of the conjectural variation for AT&T, MCI and Sprint have been estimated for national markets using annual data on prices, marginal costs, and market shares of the three large incumbent carriers.[49] The estimates for each carrier include individual conjectural variations for MTS, outbound and inbound WATS, and Combined Services from 1988 through 1994, yields samples of thirty-three observations for AT&T and MCI and thirty-two for Sprint. The resulting average conjectural variations are -0.19 for AT&T, 1.53 for MCI and 2.15 for Sprint.[50] These estimates indicate that AT&T has made a minimal (opposite-direction) response

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[48] InterLATA relief would promote competition in intraLATA services as well, because Ameritech could offer "one-stop-shopping" for all toll calls on a presubscribed basis. The interexchange carriers would be forced to market their services without a bundling advantage.

[49] A firm's conjectural variation is defined to equal [(price - marginal cost) (demand elasticity) / (price) (market share)] minus one. This equation formulation is presented in J. Brand and A. Zhang, *Market Conduct in the Airline Industry: An Empirical Investigation*, 21 RAND JOURNAL OF ECONOMICS 56 (1990). Demand elasticity is assumed to equal -0.70. *See* Lester D. Taylor, TELECOMMUNICATIONS DEMAND IN THEORY AND PRACTICE ch. 6 (Kluwer Academic Publishers 1994). Equivalently, the conjectural variation for a firm equals the partial derivative of all other firms' output with respect to a change in that firm's output. *See* Stephen Martin (1993), ADVANCED INDUSTRIAL ECONOMICS ch. 2 (Blackwell).

[50] An alternative computation was undertaken based on the assumption that MTS and WATS price elasticities differed. I used a WATS demand elasticity of -0.83 as reported in Blaine E.