

GAO

Report to the Chairman, Subcommittee  
on Telecommunications and Finance,  
Committee on Energy and Commerce,  
House of Representatives

July 1991

TELECOMMUNICATIONS

1991 Survey of Cable  
Television Rates and  
Services



144611

RELEASED

**RESTRICTED**—Not to be released outside the  
General Accounting Office unless specifically  
approved by the Office of Congressional  
Relations.

\_\_\_\_\_

\_\_\_\_\_

Resources, Community, and  
Economic Development Division

B-226720

July 18, 1991

The Honorable Edward J. Markey  
Chairman, Subcommittee on Telecommunications  
and Finance  
Committee on Energy and Commerce  
House of Representatives

Dear Mr. Chairman:

The cable industry has grown tremendously in providing consumers with a wide range of video programming. Historically, there has been concern about rate increases and how cable systems offer services. As you requested in May 1991, we have completed our third survey of cable television rates and services. The two previous surveys, also made in response to your requests, were completed in August 1989<sup>1</sup> and June 1990.<sup>2</sup>

This report provides information on changes in basic cable television rates for both the lowest priced service available to cable subscribers and the most popular service—the one to which most customers subscribe—offered by cable systems; the number of channels offered; the levels or tiers of service offered; and the overall revenue to cable system operators per subscriber. To obtain this information, we contacted the 1,530 cable television systems that responded to our 1990 survey; we sent that survey to 1,971 systems. We chose this approach of resurveying the respondents to the 1990 survey because we already had information on these operations from 1984 through 1989 that would allow us to look at price changes over time. We also believed this was the only approach that would allow us to respond to your need for information on changes in cable rates by July 1991. Given the excellent response rate of 98 percent (1,505 of 1,530) of the systems surveyed, we believe that relying on information from the respondents to our previously selected sample provides a reasonable representation of changes in basic cable television rates since the completion of our prior study. Because responses were voluntary, we could not have completed our work without the excellent cooperation of the many cable operators,

<sup>1</sup>Telecommunications: National Survey of Cable Television Rates and Services (GAO/RCED-89-193, Aug. 3, 1989) and testimony entitled National Survey of Cable Television Rates and Services (GAO/T-RCED-89-60, Aug. 3, 1989).

<sup>2</sup>Telecommunications: Follow-up National Survey of Cable Television Rates and Services (GAO/RCED-90-199, June 13, 1990) and testimony entitled Follow-up National Survey of Cable Television Rates and Services (GAO/T-RCED-90-89, June 14, 1990).

---

associated corporate officials, and industry representatives whose efforts were essential to the success of this study.

This report presents the results of our most recent survey, which covers the period from December 1989 to April 1991. It also highlights rate and service changes for these same systems since November 1986 (prior to deregulation of cable rates and services).

---

## Results in Brief

Our survey showed that over the period between December 1989 and April 1991:

- Average monthly rates for the lowest priced basic service increased by 9 percent, from \$15.95 to \$17.34 per subscriber; the average number of channels offered dropped by one.
- Average monthly rates for the most popular basic cable service increased by 15 percent, from \$16.33 to \$18.84 per subscriber; the average number of channels offered increased by two.
- The number of systems offering only one tier or level of service decreased from 83.4 to 58.6 percent. The number of systems offering two or more tiers increased from 16.6 to 41.4 percent. Some of the legislative proposals introduced in 1990 would have generally restricted rate regulation to only the lowest priced basic service.
- Overall monthly revenue (basic rate charges, premium services, pay-per-view, etc.) to cable operators per subscriber increased on average by 4.2 percent, from \$26.36 to \$27.47, between December 1989 and December 1990. In comparison, the increase between December 1990 and March 1991 was 4.7 percent for the 3-month period. As discussed later, the increase for the 3-month period was due, in part, to two pay-per-view offerings during March, which generated substantial revenue for some systems.

Appendixes I and II contain tables detailing the results of our survey.

---

## Background

Today cable service offers a wide range of video programming to millions of subscribers, including not only over-the-air television channels but also movies, sporting events, and other programming available only to cable subscribers. In rural areas cable television is seen by some as an essential service, serving as a window to the outside world because of otherwise poor television reception. In other parts of the country, however, cable is considered a multichannel video entertainment service,

---

competing not only with broadcast television but also with other sources of entertainment, such as movie theaters and video rental stores.

When the Cable Communications Policy Act of 1984 (the Cable Act) was passed, about 32 million households had cable subscriptions. In the more than 6 years since passage of the act, Broadcasting magazine reported that cable subscriptions have increased to serve about 54 million households.

Cable systems market several different services—basic, optional, premium, and pay-per-view. Basic service includes any service offering the retransmission of local television broadcast signals and may also include programs available via satellite transmission, such as C-Span and Cable News Network (CNN), either as a single level of service or as two or more “tiers,” each priced individually. Additional tiers of basic service are generally referred to as “expanded basic” service and offer additional channels beyond the basic level of service. Optional services are additional features that can be purchased, such as the set-top converter, the remote control, FM radio, a program guide, and additional television outlets. Premium service generally includes movie channels or other entertainment, such as Home Box Office (HBO) and Cinemax, at an additional monthly fee over and above the charge for basic service. Pay-per-view is selective program viewing for special sporting events, movies, or other shows for an additional fee per showing.

Cable television rates, once subject to broad control at the local or state level for generally the lowest priced basic service, have been deregulated since late 1986 in most communities, when the Federal Communications Commission’s (FCC) effective competition regulations implementing the Cable Act took effect. Since then, local officials and consumer groups around the country have expressed concern about increases in cable rates, and a number of bills to reregulate cable rates have been introduced in the Congress. Cable industry officials, on the other hand, report that rate increases are moderating and are justified due to a number of factors, including cost increases, system upgrades, and improvements in customer services.

The act generally prohibits state and local governments from regulating basic cable service rates in those localities where the cable system is subject to “effective” competition. As defined by FCC, effective competition exists if residents of a locality received three or more television stations using their own antennas as an alternative to cable service.

On June 13, 1991, FCC modified its regulation to redefine the existence of effective competition for purposes of regulating basic cable service rates. The final order on this modification was released July 12, 1991. Effective competition would exist and local authorities could not regulate basic rates under either of the following conditions:

1. Six or more unduplicated over-the-air broadcast television signals are available in the entire cable community. To determine the systems and subscribers that this change could affect, we analyzed the data gathered during our 1990 survey. This analysis indicated that 59 percent of the systems serving 80 percent of the nation's subscribers would not have been subject to regulation under FCC's new criteria.
2. An independently owned, competing multichannel video delivery service provider is available to 50 percent of the homes passed (homes to which cable service is available) by the incumbent cable system, and subscribed to by at least 10 percent of the homes passed by the incumbent cable system. The FCC considers such providers to include a second cable service; multichannel, multipoint distribution systems; home satellite dishes; satellite master antenna television systems; and direct broadcast satellites. FCC noted that it adopted the proposed 50-percent availability/10-percent penetration benchmarks because they are sufficient to indicate the presence of an alternative provider and a viewing choice for the consumer.

## Basic Rates and Services

Over the more than 4 years since deregulation, our surveys showed that the charge for the lowest priced service increased 56 percent, from an average of \$11.14 to \$17.34 per month, and the subscriber on the average received 6 additional channels (24 to 30). The most popular basic service showed a higher increase of 61 percent, from an average charge of \$11.71 to \$18.84 per month; the subscriber on the average received 8 additional channels (27 to 35).<sup>3</sup>

Over the 15-month period—December 31, 1989 to April 1, 1991—the monthly rates for the lowest priced basic service increased by 9 percent, from an average of \$15.95 to \$17.34 per subscriber, with the average number of channels decreasing by 1 (31 to 30). The monthly rates for the most popular service increased by 15 percent, from an average of

<sup>3</sup>During this period, the nation's overall price level for consumer goods, as measured by the gross national product implicit price deflator, rose by about 17.9 percent. Taking inflation into account by adjusting April 1991 cable rates to November 1986 constant dollars results in increases of about 32.0 percent for lowest priced basic service and 36.5 percent for most popular basic service.

\$16.33 to \$18.84, with an increase of 2 in the average number of channels offered (33.6 to 35.3). Table 1 below shows the rate changes since November 30, 1986.

**Table 1: Average Monthly Basic Service Charge per Subscriber**

Date	Average basic service charge per subscriber for:	
	Most popular service	Lowest priced service
11/30/86	\$11.71	\$11.14
12/31/89	\$16.33	\$15.95
4/1/91	\$18.84	\$17.34

Table 2 shows how subscribers were affected by the different ranges of the rate increases. As the table shows, approximately 70 percent of subscribers for the most popular service and 66 percent for the lowest priced service incurred rate increases of more than 10 percent between December 31, 1989, and April 1, 1991. Additional basic service data are detailed in appendix I.

**Table 2: Changes in Basic Rates Since December 31, 1989**

Change in rate	Percentage of subscribers with rate change between 12/31/89 and 4/1/91 for two services	
	Most popular	Lowest priced
No change or decrease	6	12
Increase		
>0≤5	5	6
>5≤10	18	16
>10≤20	40	35
>20≤30	19	17
>30≤40	7	7
>40≤50	1	2
>50	3	5

## Retiering of Basic Service

The results of our most recent survey indicate that there was a sizable decrease in the number of systems offering only one tier of service from 83.4 to 58.6 percent between December 31, 1989, and April 1, 1991.

Correspondingly, the number of systems offering two or more tiers increased from 16.6 to 41.4 percent. Some of the legislative proposals introduced in 1990 would have generally restricted rate regulation to only the lowest priced basic service.

---

## Revenue per Subscriber

Revenue per subscriber includes the revenue received by cable systems from all subscriber services, such as basic and premium services, installation, pay-per-view, and options. Average monthly revenue per subscriber received by cable systems increased from \$21.78 to \$28.76 between November 1986 and March 1991, an increase of 32 percent.<sup>4</sup>

Our survey showed that average monthly revenue per subscriber increased 4.2 percent, from \$26.36 to \$27.47, for the 12-month period between December 1989 and December 1990. Over the 15-month period of our survey between December 1989 and March 1991, the increase in average monthly revenue cable systems received per subscriber was 9 percent, from \$26.36 to \$28.76. The increase for the 3-month period from December 1990 to March 1991 was 4.7 percent (see app. II). The industry believes there was an anomaly in revenue that may have affected the statistics during this period. According to the industry, this increase can be attributable, at least in part, to the pay-per-view events occurring in March 1991. The Tyson-Ruddock fight in March was the third largest pay-per-view event in cable's history. Also, March 1991 included a big professional wrestling event.

The total impact of these pay-per-view events is not clear. Discussions with officials of cable systems contacted during the survey indicated that in spite of the two big events, all cable systems did not show gains for March 1991. Some cable systems that had pay-per-view showed a decrease in the average monthly revenue per subscriber, while others had minimal increases. For example, one multisystem operator provided us average monthly revenue per subscriber for March 1991 with and without pay-per-view for 11 systems. Using the pay-per-view data, of the 11 systems, 3 showed decreases in the average monthly revenue per subscriber of as much as \$.93; and 8 systems had increases of as much as \$5.24. The portion of the increases attributable to pay-per-view ranged from \$.03 to \$2.96.

The cable industry is changing rapidly. Recently, many events have moved from over-the-air broadcasts to cable. Large numbers of championship boxing events are now available only on cable television. Both baseball and football now have games shown only on cable. Many cable systems are showing movies on a pay-per-view basis. The cable industry has expanded to provide more entertainment options to the viewing public. These types of options are becoming a standard. Therefore, we

---

<sup>4</sup>Taking inflation into account by adjusting 1991 revenues to 1986 constant dollars results in increases of about 12.0 percent for the average monthly revenue to cable systems per subscriber.



believe that although the March figure may be inflated over what it would have been without the Tyson-Ruddock fight, it also can be used to show the general revenue/pricing trend in the cable industry. As a further indication of this trend, we noted that in April and June, fights were offered on pay-per-view which exceeded the March revenue for the Tyson-Ruddock fight.

## Scope and Methodology

To obtain updated information on rates, revenue, tiers, and channels from our previous survey, we mailed questionnaires to the 1,530 cable systems that responded to our previous survey, noting that we would be calling to obtain the needed information. We made these calls over a 3-week period, obtaining information from 1,505 systems for a 98-percent response rate. Appendixes I and II contain tables detailing the results of our survey and the sampling errors for all estimates reported. Appendix III provides a complete description of the methodology used.

The detailed work related to conducting our survey took place between April 1991 and June 1991. In accordance with Subcommittee policy, we did not obtain comments on a draft of this report from representatives of the cable industry. However, in letters dated May 10, 1991, to GAO and May 15, 1991, to you, the National Cable Television Association (NCTA) expressed concerns about our survey methodology. Generally, they believed reliance on our previously selected random sample was not appropriate because the number of cable systems had increased; pricing data would not be comparable with prior survey results because NCTA considered this survey a new sample; collection of data over three different time periods would be confusing; and use of March 1991 revenue-per-subscriber data may be misleading because NCTA believes it was an atypical month.

Overall, we believe our survey methodology provides accurate information comparable to our prior survey results. We recognize that the number of cable systems operating has increased since our earlier surveys, primarily as a result of small cable systems not being recognized by the firm from which we obtained our statistics on cable systems. However, we believe that the 98-percent response rate we received in this survey from those cable systems responding to our earlier survey provides a sound basis for asserting that our survey results provide an accurate representation of the changes in cable industry rates for the period from December 1989 to April 1991. We have included tables in our report designed to show the time periods covered by information on price increases gathered in this and earlier GAO surveys, as well as the

---

cumulative effects. As discussed on page 6, pay-per-view can have a significant effect on some systems' revenue, but not on others. In any event, pay-per-view is increasingly becoming a standard cable offering and therefore an integral part of any cable system's revenue base. More details on our responses to NCTA's concerns are contained in appendix III.

---

Major contributors to this report are listed in appendix IV. If I can be of further assistance, please contact me at (202) 275-5525.

Sincerely yours,

A handwritten signature in cursive script that reads "John M. Ols, Jr.".

John M. Ols, Jr.  
Director, Housing and Community  
Development Issues



# Contents

Letter		1
Appendix I Changes in Basic Cable Rates and Services		14
Appendix II Revenue to Cable Systems per Subscriber and Other Information		29
Appendix III Objectives, Scope, and Methodology		33
Appendix IV Major Contributors to This Report	Resources, Community, and Economic Development Division, Washington, D.C.	38 38
Tables		
	Table 1: Average Monthly Basic Service Charge per Subscriber	5
	Table 2: Changes in Basic Rates Since December 31, 1989	5
	Table I.1: Average Monthly Basic Service Charge per Subscriber	14
	Table I.2: Average Number of Basic Channels Received per Subscriber	15
	Table I.3: Average Monthly Charge per Basic Channel	16
	Table I.4: Changes in Basic Service Rates	17
	Table I.5 Expanded: Changes in Rates for Most Popular Priced Basic Service Tier by System Size	18
	Table I.6 Expanded: Changes in Rates for Most Popular Priced Basic Service Tier by System Size	19
	Table I.7: Changes in Most Popular Basic Service Rates by System Size	20

---

**Abbreviations**

CNN	Cable News Network
FCC	Federal Communications Commission
GAO	General Accounting Office
HBO	Home Box Office
NCTA	National Cable Television Association

---

Table I.8 Expanded: Changes in Rates for Lowest Priced Basic Service Tier by System Size	21
Table I.9 Expanded: Changes in Rates for Lowest Priced Basic Service by System Size	22
Table I.10: Changes in Lowest Priced Basic Service Rates by System Size	23
Table I.11: Dollar Changes in Basic Service Rates Since December 1989	24
Table I.12: Dollar Changes in Most Popular Basic Service Rates by System Size	25
Table I.13: Dollar Changes in Lowest Priced Basic Service Rates by System Size	26
Table I.14: Number of Tiers of Basic Service Offered by Cable Systems	26
Table I.15: Rates and Services of Cable Systems Offering One Tier Versus Systems Offering Two or More Basic Services in Areas Receiving Six or More Over-the-Air Signals	27
Table I.16: Rates and Services of Cable Systems Offering One Tier Versus Systems Offering Two or More Basic Services in Areas Receiving Less Than Six Over-the-Air Signals	28
Table II.1: Average Monthly Revenue Each Subscriber Generates for the Cable System	29
Table II.2: Local Over-the-Air Programming Available to Subscribers on December 31, 1989	31
Table II.3: Local Over-the-Air Programming Available from Cable Systems on December 31, 1989	32
Table III.1: GAO Sample Selection Methodology	35

---

## Figures

Figure I.1: Average Monthly Basic Service Charge per Subscriber	15
Figure I.2: Average Number of Basic Channels Received per Subscriber	16
Figure I.3: Number of Tiers of Basic Service Offered by Cable Systems	27
Figure II.1: Average Monthly Revenue Each Subscriber Generates for the Cable System	30



# Changes in Basic Cable Rates and Services

**Table I.1: Average Monthly Basic Service Charge per Subscriber**

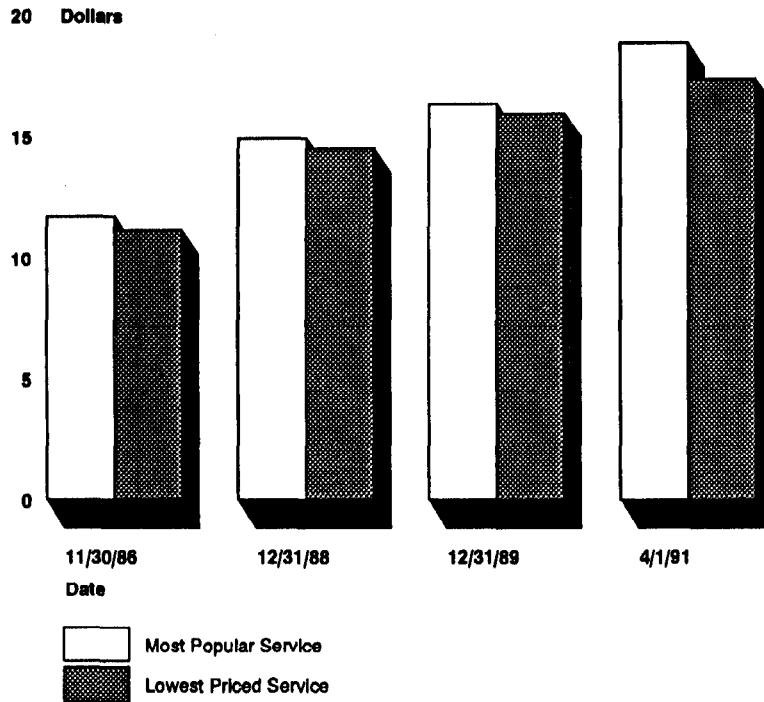
Date	Average basic service charge per subscriber for:	
	Most popular service	Lowest priced service
11/30/86	<b>\$11.71</b> ( $\pm .10$ ) N=4002 ( $\pm 218$ )	<b>\$11.14</b> ( $\pm .11$ ) N=3995 ( $\pm 218$ )
12/31/88	<b>\$14.91</b> ( $\pm .11$ ) N=5405 ( $\pm 227$ )	<b>\$14.50</b> ( $\pm .11$ ) N=5380 ( $\pm 227$ )
12/31/89	<b>\$16.33</b> ( $\pm .10$ ) N=6289 ( $\pm 215$ )	<b>\$15.95</b> ( $\pm .10$ ) N=6284 ( $\pm 215$ )
04/01/91	<b>\$18.84</b> ( $\pm .10$ ) N=6435 ( $\pm 212$ )	<b>\$17.34</b> ( $\pm .22$ ) N=6444 ( $\pm 212$ )
<b>Percent increase</b>		
1989-91	<b>15.3</b> ( $\pm 1.2$ )	<b>8.7</b> ( $\pm 1.9$ )
1986-91	<b>60.8</b> ( $\pm 1.9$ )	<b>55.7</b> ( $\pm 2.8$ )

Note: The table above contains sampling errors in parentheses for the values presented, as well as estimates of the number of cable systems (N) that would have responded had we surveyed all systems.



**Appendix I**  
**Changes in Basic Cable Rates and Services**

**Figure I.1: Average Monthly Basic Service Charge per Subscriber**



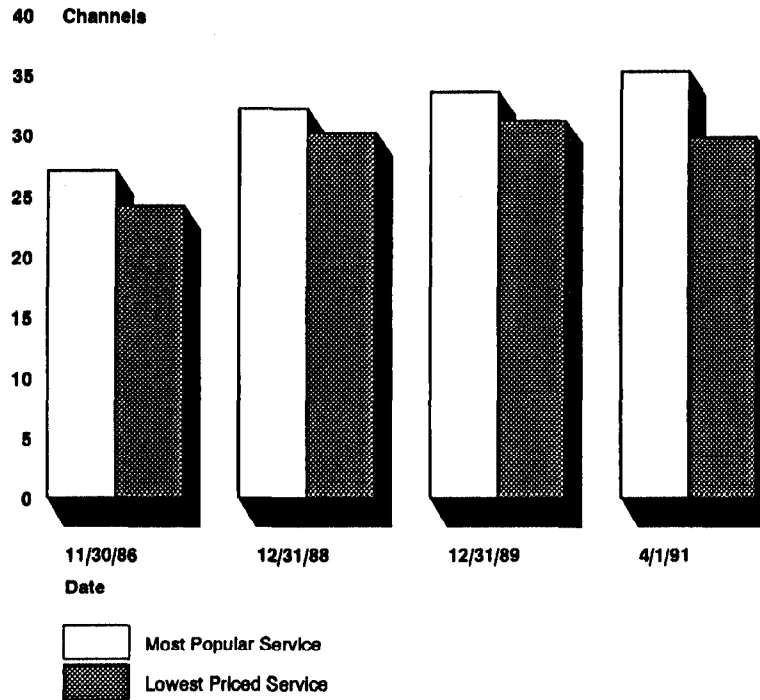
**Table I.2: Average Number of Basic Channels Received per Subscriber**

Dates	Average number of basic channels received per subscriber for:	
	Most popular service	Lowest priced service
11/30/86	27.1 (± 0.5) N=3988 (± 218)	24.2 (± 0.5) N=4005 (± 218)
12/31/88	32.2 (± 0.6) N=5429 (± 227)	30.2 (± 0.7) N=5429 (± 227)
12/31/89	33.6 (± 0.5) N=6327 (± 214)	31.2 (± 0.4) N=6329 (± 214)
04/01/91	35.3 (± 0.4) N=6445 (± 212)	29.8 (± 0.7) N=6454 (± 211)

Note: The table above contains sampling errors in parentheses for the values presented, as well as estimates of the number of cable systems (N) that would have responded had we surveyed all systems.

**Appendix I**  
**Changes in Basic Cable Rates and Services**

**Figure I.2: Average Number of Basic Channels Received per Subscriber**



**Table I.3: Average Monthly Charge per Basic Channel**

Date	Average subscriber charge per channel for:	
	Most popular service	Lowest priced service
11/30/86	<b>\$.44</b> (± .01) N=3980 (± 218)	<b>\$.47</b> (± .01) N=3995 (± 218)
12/31/88	<b>\$.47</b> (± .01) N=5380 (± 227)	<b>\$.49</b> (± .01) N=5380 (± 227)
12/31/89	<b>\$.49</b> (± .01) N=6283 (± 215)	<b>\$.51</b> (± .01) N=6284 (± 215)
04/01/91	<b>\$.53</b> (± .01) N=6435 (± 212)	<b>\$.58</b> (± .01) N=6444 (± 212)

Note: The table above contains sampling errors in parentheses for the values presented, as well as estimates of the number of cable systems (N) that would have responded had we surveyed all systems.

**Appendix I**  
**Changes in Basic Cable Rates and Services**

**Table I.4: Changes in Basic Service Rates**

Change in rate	Percentage of subscribers whose rates changed between 12/31/89 and 4/1/91 for:	
	Most popular service	Lowest priced service
No change or decrease	<b>5.5</b> ( $\pm 1.0$ )	<b>11.9</b> ( $\pm 2.5$ )
Increase >0 $\leq$ 5	<b>5.2</b> ( $\pm 1.4$ )	<b>6.3</b> ( $\pm 1.0$ )
>5 $\leq$ 10	<b>17.7</b> ( $\pm 1.6$ )	<b>16.2</b> ( $\pm 2.9$ )
>10 $\leq$ 20	<b>40.0</b> ( $\pm 2.1$ )	<b>35.0</b> ( $\pm 3.5$ )
>20 $\leq$ 30	<b>19.4</b> ( $\pm 1.8$ )	<b>17.1</b> ( $\pm 3.2$ )
>30 $\leq$ 40	<b>7.2</b> ( $\pm 1.4$ )	<b>6.7</b> ( $\pm 2.4$ )
>40 $\leq$ 50	<b>1.4</b> ( $\pm 0.5$ )	<b>1.5</b> ( $\pm 1.1$ )
>50	<b>3.4</b> ( $\pm 1.1$ )	<b>5.4</b> ( $\pm 2.5$ )

Note: The table above contains sampling errors in parentheses for the values presented. Below are our estimates of the number of cable systems (N) that would have responded had we surveyed all systems.

Most popular service, N = 6139( $\pm 218$ )  
 Lowest priced service, N = 6144( $\pm 217$ )

Note: > means greater than  
 $\leq$  means less than or equal to

Appendix I  
Changes in Basic Cable Rates and Services

**Table I.5 Expanded: Changes in Rates  
for Most Popular Priced Basic Service  
Tier by System Size**

Change in rate	Percentage of subscribers with rate change between 12/31/89 and 4/1/91 for:					
	Very small	Small	Medium	Large	Very large	All systems
No change or decrease	19.4 (±10.2)	8.1 (±3.3)	7.5 (±2.3)	4.8 (±1.9)	2.6 (±0.0)	5.5 (±1.0)
Increase						
>0≤5	<sup>a</sup>	3.7 (±1.8)	2.3 (±1.3)	4.5 (±1.8)	5.9 (±0.0)	5.2 (±1.4)
>5≤10	16.6 (±9.8)	19.8 (±7.3)	18.2 (±3.7)	17.5 (±3.4)	17.5 (±0.0)	17.7 (±1.6)
>10≤20	22.0 (±9.7)	33.2 (±8.7)	40.5 (±4.6)	38.8 (±4.4)	45.9 (±0.0)	40.0 (±2.1)
>20≤30	17.6 (±10.8)	13.1 (±4.0)	22.6 (±4.1)	22.8 (±3.8)	16.0 (±0.0)	19.4 (±1.8)
>30≤40	2.1 (±1.2)	11.5 (±11.0)	4.2 (±1.8)	6.4 (±2.5)	9.4 (±0.0)	7.2 (±1.4)
>40≤50	2.1 (±1.7)	1.6 (±1.4)	3.0 (±1.9)	1.7 (±1.1)	0.4 (±0.0)	1.4 (±0.5)
>50	4.7 (±3.8)	<sup>a</sup>	1.9 (±1.1)	3.5 (±1.8)	2.5 (±0.0)	3.4 (±1.1)
	N= 3281 (±204)	N= 1202 (±64)	N= 799 (±33)	N= 714 (±25)	N= 143 (±0)	N= 6139 (±218)

Note: The table above contains sampling errors in parentheses for the values presented, as well as estimates of the number of cable systems (N) that would have responded had we surveyed all systems.

Note: > means greater than  
≤ means less than or equal to

<sup>a</sup>Unreliable estimate.

**Appendix I**  
**Changes in Basic Cable Rates and Services**

**Table I.6 Expanded: Changes in Rates  
for Most Popular Priced Basic Service  
Tier by System Size**

Change in rate	Percentage of systems with rate change between 12/31/89 and 4/1/91					
	Very small	Small	Medium	Large	Very large	All systems
No change or decrease	<b>21.8</b> (± 4.3)	<b>10.7</b> (± 3.0)	<b>8.0</b> (± 2.2)	<b>6.8</b> (± 2.0)	<b>2.8</b> (± 0.0)	<b>15.6</b> (± 2.4)
Increase						
> 0 ≤ 5	<b>7.8</b> (± 2.8)	<b>5.3</b> (± 2.2)	<b>2.4</b> (± 1.2)	<b>4.7</b> (± 1.6)	<b>3.5</b> (± 0.0)	<b>6.2</b> (± 1.6)
> 5 ≤ 10	<b>19.0</b> (± 4.1)	<b>17.3</b> (± 3.7)	<b>17.9</b> (± 3.1)	<b>18.4</b> (± 3.0)	<b>19.6</b> (± 0.0)	<b>18.5</b> (± 2.4)
> 10 ≤ 20	<b>26.2</b> (± 4.6)	<b>39.0</b> (± 4.8)	<b>41.7</b> (± 4.0)	<b>38.6</b> (± 3.8)	<b>44.1</b> (± 0.0)	<b>32.6</b> (± 2.7)
> 20 ≤ 30	<b>12.8</b> (± 3.5)	<b>17.0</b> (± 3.7)	<b>20.2</b> (± 3.3)	<b>21.4</b> (± 3.2)	<b>18.2</b> (± 0.0)	<b>15.7</b> (± 2.1)
> 30 ≤ 40	<b>5.3</b> (± 2.3)	<b>4.3</b> (± 2.0)	<b>5.1</b> (± 1.8)	<b>5.0</b> (± 1.7)	<b>8.4</b> (± 0.0)	<b>5.1</b> (± 1.3)
> 40 ≤ 50	<b>2.5</b> (± 1.6)	<b>2.0</b> (± 1.4)	<b>2.7</b> (± 1.3)	<b>2.1</b> (± 1.1)	<b>0.7</b> (± 0.0)	<b>2.3</b> (± 0.9)
> 50	<b>4.7</b> (± 2.2)	<b>4.3</b> (± 2.0)	<b>2.1</b> (± 1.2)	<b>3.0</b> (± 1.3)	<b>2.8</b> (± 0.0)	<b>4.0</b> (± 1.3)
	N= 3281 (± 204)	N= 1202 (± 64)	N= 799 (± 33)	N= 714 (± 25)	N= 143 (± 0)	N= 6139 (± 218)

Note: The table above contains sampling errors in parentheses for the values presented, as well as estimates of the number of cable systems (N) that would have responded had we surveyed all systems.

Note: > means greater than  
≤ means less than or equal to

**Appendix I**  
**Changes in Basic Cable Rates and Services**

**Table I.7: Changes in Most Popular Basic Service Rates by System Size**

Change in rate	Percentage of subscribers whose rates changed between 12/31/89 and 4/1/91 for:					
	Very small	Small	Medium	Large	Very large	All systems
No change or decrease	19.4 (± 10.2)	8.1 (± 3.3)	7.5 (± 2.3)	4.8 (± 1.9)	2.6 (± 0.0)	5.5 (± 1.0)
Increase						
> 0 ≤ 20	54.2 (± 14.5)	56.7 (± 11.0)	60.9 (± 4.7)	60.8 (± 4.5)	69.3 (± 0.0)	62.9 (± 2.2)
> 20 ≤ 40	19.7 (± 10.9)	24.6 (± 10.4)	26.7 (± 4.3)	29.2 (± 4.2)	25.4 (± 0.0)	26.7 (± 2.1)
> 40 ≤ 60	3.1 (± 2.1)	3.4 (± 1.9)	3.2 (± 1.9)	2.3 (± 1.2)	1.0 (± 0.0)	2.1 (± 0.6)
> 60 ≤ 80	<sup>a</sup>	<sup>a</sup>	<sup>a</sup>	1.0 (± 1.0)	0.0 (± 0.0)	0.6 (± 0.4)
> 80 ≤ 100	<sup>a</sup>	<sup>a</sup>	1.0 (± 0.8)	<sup>a</sup>	0.6 (± 0.0)	0.6 (± 0.3)
> 100	<sup>a</sup>	<sup>a</sup>	<sup>a</sup>	1.6 (± 1.4)	1.2 (± 0.0)	1.6 (± 1.0)
	N= 3281 (± 204)	N= 1202 (± 64)	N= 799 (± 33)	N= 714 (± 25)	N= 143 (± 0)	N= 6139 (± 218)

Note: The table above contains sampling errors in parentheses for the value presented, as well as estimates of the number of cable systems (N) that would have responded had we surveyed all systems.

Note: > means greater than  
 ≤ means less than or equal to

<sup>a</sup>Unreliable estimate.

**Appendix I**  
**Changes in Basic Cable Rates and Services**

**Table I.8 Expanded: Changes in Rates  
for Lowest Priced Basic Service Tier by  
System Size**

Change in rate	Percentage of subscribers with rate change between 12/31/89 and 4/1/91 for:					
	Very small	Small	Medium	Large	Very large	All systems
No change or decrease	<b>31.0</b> (± 13.7)	<b>13.0</b> (± 5.4)	<b>14.8</b> (± 5.2)	<b>5.1</b> (± 2.7)	<b>9.0</b> (± 0.0)	<b>11.9</b> (± 2.5)
Increase						
> 0 ≤ 5	<b>3.9</b> (± 2.0)	<b>4.7</b> (± 2.9)	<b>5.0</b> (± 2.8)	<b>3.4</b> (± 2.1)	<b>12.7</b> (± 0.0)	<b>6.3</b> (± 1.0)
> 5 ≤ 10	<b>22.1</b> (± 13.5)	<b>19.2</b> (± 8.3)	<b>14.5</b> (± 6.0)	<b>13.3</b> (± 5.1)	<b>16.6</b> (± 0.0)	<b>16.2</b> (± 2.9)
> 10 ≤ 20	<b>19.4</b> (± 8.4)	<b>31.8</b> (± 7.1)	<b>34.1</b> (± 7.7)	<b>32.4</b> (± 8.5)	<b>48.3</b> (± 0.0)	<b>35.0</b> (± 3.5)
> 20 ≤ 30	<b>10.6</b> (± 5.7)	<b>18.8</b> (± 5.7)	<b>24.4</b> (± 7.6)	<b>24.1</b> (± 8.1)	<b>6.0</b> (± 0.0)	<b>17.1</b> (± 3.2)
> 30 ≤ 40	<b>2.1</b> (± 1.6)	<sup>a</sup>	<b>4.7</b> (± 4.1)	<b>10.2</b> (± 6.5)	<b>6.9</b> (± 0.0)	<b>6.7</b> (± 2.4)
> 40 ≤ 50	<sup>a</sup>	<b>2.2</b> (± 2.0)	<sup>a</sup>	<sup>a</sup>	<b>0.0</b> (± 0.0)	<b>1.5</b> (± 1.1)
> 50	<b>8.9</b> (± 1.1)	<b>6.7</b> (± 3.7)	<b>2.6</b> (± 2.0)	<b>8.6</b> (± 5.9)	<b>0.5</b> (± 0.0)	<b>5.4</b> (± 2.5)
	N= 3292 (± 204)	N=1206 (± 64)	N=797 (± 33)	N=707 (± 26)	N=143 (± 0)	N=6145 (± 218)

Note: The table above contains sampling errors in parentheses for the values presented, as well as estimates of the number of cable systems (N) that would have responded had we surveyed all systems.

Note: > means greater than  
≤ means less than or equal to

<sup>a</sup>Unreliable estimate.

**Appendix I**  
**Changes in Basic Cable Rates and Services**

**Table I.9 Expanded: Changes in Rates  
for Lowest Priced Basic Service by  
System Size**

Change in rate	Percentage of systems with rate change between 12/31/89 and 4/1/91 for:					
	Very small	Small	Medium	Large	Very large	All systems
No change or decrease	<b>28.2</b> (± 4.9)	<b>28.8</b> (± 4.7)	<b>43.0</b> (± 4.2)	<b>47.0</b> (± 4.1)	<b>46.3</b> (± 0.0)	<b>32.9</b> (± 2.9)
Increase						
>0≤5	<b>9.6</b> (± 3.2)	<b>7.5</b> (± 2.7)	<b>12.4</b> (± 2.8)	<b>8.2</b> (± 2.2)	<b>5.1</b> (± 0.0)	<b>9.3</b> (± 1.9)
>5≤10	<b>18.9</b> (± 4.3)	<b>15.7</b> (± 3.8)	<b>11.1</b> (± 2.7)	<b>13.2</b> (± 2.8)	<b>12.5</b> (± 0.0)	<b>16.4</b> (± 2.5)
>10≤20	<b>23.4</b> (± 4.6)	<b>25.1</b> (± 4.5)	<b>18.6</b> (± 3.3)	<b>15.5</b> (± 3.0)	<b>22.8</b> (± 0.0)	<b>22.1</b> (± 2.7)
>20≤30	<b>10.3</b> (± 3.3)	<b>13.1</b> (± 3.5)	<b>9.4</b> (± 2.5)	<b>8.6</b> (± 2.3)	<b>2.9</b> (± 0.0)	<b>10.4</b> (± 1.9)
>30≤40	<b>3.4</b> (± 2.0)	<b>3.4</b> (± 1.9)	<b>2.9</b> (± 1.4)	<b>2.3</b> (± 1.2)	<b>5.1</b> (± 0.0)	<b>3.3</b> (± 1.2)
>40≤50	<b>1.7</b> (± 1.4)	<b>2.2</b> (± 1.5)	<sup>a</sup>	<b>2.0</b> (± 1.1)	<b>0.7</b> (± 0.0)	<b>1.6</b> (± 0.8)
>50	<b>4.5</b> (± 2.3)	<b>4.1</b> (± 2.1)	<b>2.3</b> (± 1.3)	<b>3.3</b> (± 1.5)	<b>4.4</b> (± 0.0)	<b>4.0</b> (± 1.3)
	N= 2975 (± 210)	N= 1070 (± 68)	N= 730 (± 35)	N= 644 (± 28)	N= 136 (± 0)	N= 5554 (± 225)

Note: The table above contains sampling errors in parenthesis for the values presented, as well as estimates of the number of cable systems (N) that would have responded had we surveyed all systems.

Note: > means greater than  
≤ means less than or equal to

<sup>a</sup>Unreliable estimate.



**Appendix I**  
**Changes in Basic Cable Rates and Services**

**Table I.10: Changes in Lowest Priced Basic Service Rates by System Size**

Change in rate	Percentage of subscribers whose rates changed between 12/31/89 and 4/1/91 for:					
	Very small	Small	Medium	Large	Very large	All systems
No change or decrease	31.0 (± 13.7)	13.0 (± 5.4)	14.8 (± 5.2)	5.1 (± 2.7)	9.0 (± 0.0)	11.9 (± 2.5)
Increase >0≤20	45.4 (± 13.9)	55.7 (± 8.1)	53.6 (± 8.2)	49.1 (± 9.1)	77.6 (± 0.0)	57.4 (± 4.0)
>20≤40	12.7 (± 6.1)	22.4 (± 6.5)	29.1 (± 8.0)	34.3 (± 9.1)	12.9 (± 0.0)	23.8 (± 3.7)
>40≤60	2.8 (± 2.4)	5.8 (± 3.4)	<sup>a</sup>	3.9 (± 3.3)	0.0 (± 0.0)	2.5 (± 1.3)
>60≤80	<sup>a</sup>	<sup>a</sup>	<sup>a</sup>	<sup>a</sup>	0.0 (± 0.0)	0.3 (± 0.3)
>80≤100	<sup>a</sup>	<sup>a</sup>	<sup>a</sup>	<sup>a</sup>	0.0 (± 0.0)	0.5 (± 0.4)
>100	<sup>a</sup>	<sup>a</sup>	<sup>a</sup>	6.8 (± 5.7)	0.4 (± 0.0)	3.6 (± 2.4)
	N= 3292 (± 204)	N= 1206 (± 64)	N= 797 (± 33)	N= 707 (± 26)	N= 143 (± 0)	N= 6145 (± 218)

Note: The table above contains sampling errors in parentheses for the value presented, as well as estimates of the number of cable systems (N) that would have responded had we surveyed all systems.

Note: > means greater than  
 ≤ means less than or equal to

<sup>a</sup>Unreliable estimate.

**Appendix I**  
**Changes in Basic Cable Rates and Services**

**Table I.11: Dollar Changes in Basic Service Rates Since December 1989**

Change in rate	Percentage of subscribers whose rates changed between 12/31/89 and 4/1/91 for:	
	Most popular service	Lowest priced service
0 ≤ \$2.00	40.0 (± 2.2)	48.4 (± 3.9)
> \$2.00 ≤ \$4.00	44.4 (± 2.2)	39.3 (± 3.9)
> \$4.00 ≤ \$6.00	11.7 (± 1.5)	7.4 (± 2.4)
> \$6.00 ≤ \$8.00	1.7 (± 0.6)	1.2 (± 0.7)
> \$8.00 ≤ \$10.00	0.6 (± .03)	<sup>a</sup>
> \$10.00 ≤ \$12.00	0.4 (± 0.3)	<sup>a</sup>
> \$12.00	1.1 (± 0.9)	2.1 (± 1.9)

Note: The table above contains sampling errors in parentheses for the values presented. Below are our estimates of the number of cable systems (N) that would have responded had we surveyed all systems.

Most popular service, N = 6139(± 218)

Lowest priced service, N = 6145(± 218)

Note: > means greater than  
 ≤ means less than or equal to

<sup>a</sup>Unreliable estimate.

**Appendix I**  
**Changes in Basic Cable Rates and Services**

**Table I.12: Dollar Changes in Most Popular Basic Service Rates by System Size**

Change in rate	Percentage of subscribers whose rates changed between 12/31/89 and 4/1/91 for:					
	Very small	Small	Medium	Large	Very large	All systems
0 ≤ \$2.00	63.8 (± 12.9)	41.9 (± 9.5)	46.7 (± 4.7)	36.3 (± 4.3)	37.1 (± 0.0)	40.0 (± 2.2)
> \$2.00 ≤ \$4.00	25.7 (± 11.4)	35.9 (± 9.0)	41.6 (± 4.7)	48.3 (± 4.5)	46.1 (± 0.0)	44.4 (± 2.2)
> \$4.00 ≤ \$6.00	5.6 (± 4.2)	13.7 (± 10.8)	9.0 (± 2.6)	11.2 (± 3.0)	13.9 (± 0.0)	11.7 (± 1.5)
> \$6.00 ≤ \$8.00	1.6 (± 1.3)	1.8 (± 1.4)	<sup>a</sup>	2.4 (± 1.4)	1.0 (± 0.0)	1.7 (± 0.6)
> \$8.00 ≤ \$10.00	<sup>a</sup>	<sup>a</sup>	1.1 (± 0.9)	<sup>a</sup>	0.6 (± 0.0)	0.6 (± 0.3)
> \$10.00 ≤ \$12.0	<sup>a</sup>	<sup>a</sup>	<sup>a</sup>	<sup>a</sup>	0.5 (± 0.0)	0.4 (± 0.3)
> \$12.00	<sup>a</sup>	<sup>a</sup>	<sup>a</sup>	<sup>a</sup>	0.8 (± 0.0)	1.1 (± 0.9)
	N= 3281 (± 204)	N= 1202 (± 64)	N= 799 (± 33)	N= 714 (± 25)	N= 143 (± 0)	N= 6139 (± 218)

Note: The table above contains sampling errors in parentheses for the value presented, as well as estimates of the number of cable systems (N) that would have responded had we surveyed all systems.

Note: > means greater than  
 ≤ means less than or equal to

<sup>a</sup>Unreliable estimate.

**Appendix I**  
**Changes in Basic Cable Rates and Services**

**Table I.13: Dollar Changes in Lowest Priced Basic Service Rates by System Size**

Change in rate	Percentage of subscribers whose rates changed between 12/31/89 and 4/1/91 for:					
	Very small	Small	Medium	Large	Very large	All systems
0 ≤ \$2.00	68.8 (± 12.0)	51.6 (± 8.2)	49.8 (± 8.2)	31.9 (± 7.6)	57.6 (± 0.0)	48.4 (± 3.9)
> \$2.00 ≤ \$4.00	19.2 (± 7.5)	36.3 (± 7.7)	43.8 (± 8.3)	48.5 (± 9.1)	35.9 (± 0.0)	39.3 (± 3.9)
> \$4.00 ≤ \$6.00	3.6 (± 2.4)	6.8 (± 3.4)	4.7 (± 4.1)	11.1 (± 6.7)	6.5 (± 0.0)	7.4 (± 2.4)
> \$6.00 ≤ \$8.00	<sup>a</sup>	4.8 (± 3.3)	<sup>a</sup>	<sup>a</sup>	0.0 (± 0.0)	1.2 (± 0.7)
> \$8.00 ≤ \$10.00	<sup>a</sup>	<sup>a</sup>	<sup>a</sup>	<sup>a</sup>	0.0 (± 0.0)	<sup>a</sup>
> \$10.00 ≤ \$12.00	<sup>a</sup>	<sup>a</sup>	<sup>a</sup>	<sup>a</sup>	0.0 (± 0.0)	<sup>a</sup>
> \$12.00	<sup>a</sup>	<sup>a</sup>	<sup>a</sup>	5.7 (± 5.5)	0.0 (± 0.0)	2.1 (± 1.9)
	N = 3292 (± 204)	N = 1206 (± 64)	N = 797 (± 33)	N = 707 (± 26)	N = 143 (± 0)	N = 6145 (± 2178)

Note: The table above contains sampling errors in parentheses for the value presented, as well as estimates of the number of cable systems (N) that would have responded had we surveyed all systems.

Note: > means greater than  
 ≤ means less than or equal to

<sup>a</sup>Unreliable estimate.

**Table I.14: Number of Tiers of Basic Service Offered by Cable Systems**

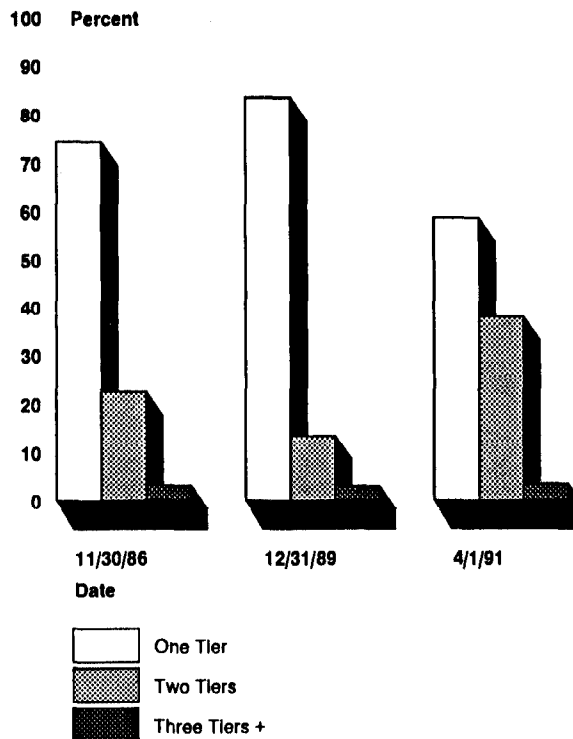
Date	Percentage of systems offering:		
	One tier	Two tiers	Three tiers +
11/30/86	74.3 (± 2.3)	22.5 (± 2.2)	3.2 (± 0.9)
12/31/89	83.4 (± 1.9)	13.5 (± 1.7)	3.1 (± 0.9)
04/01/91	58.6 (± 2.5)	38.0 (± 2.5)	3.4 (± 0.7)

Note: The table above contains sampling errors in parentheses for the values presented. Below are our estimates of the number of cable systems (N) that would have responded had we surveyed all systems.

11/30/86, N = 5258(± 227)  
 12/31/89, N = 6527(± 209)  
 04/01/91, N = 6470(± 211)

**Appendix I**  
**Changes in Basic Cable Rates and Services**

**Figure I.3: Number of Tiers of Basic Service Offered by Cable Systems**



**Table I.15: Rates and Services of Cable Systems Offering One Tier Versus Systems Offering Two or More Basic Services in Areas Receiving Six or More Over-the-Air Signals**

Monthly average per subscriber as of 04/01/91	One basic service	Two or more basic services	
		Most popular	Lowest priced
Basic service rate	<b>\$17.97</b> (± .27) N=1963 (± 198)	<b>\$19.21</b> (± .11) N=1671 (± 132)	<b>\$14.59</b> (± .44) N=1686 (± 134)
Number of channels	<b>32.7</b> (± 0.7) N=1963 (± 198)	<b>37.7</b> (± 0.6) N=1671 (± 132)	<b>22.6</b> (± 2.1) N=1686 (± 134)
Cost per channel	<b>\$.55</b> (± .01) N=1968 (± 198)	<b>\$.51</b> (± .01) N=1671 (± 132)	<b>\$.65</b> (± .05) N=1690 (± 134)

Note: The table above contains sampling errors in parentheses for the values presented, as well as our estimates of the number of cable systems (N) that would have responded had we surveyed all systems.

Note: We used information from our previous survey to determine those cable systems located in areas receiving six or more over-the-air signals.

**Appendix I**  
**Changes in Basic Cable Rates and Services**

**Table I.16: Rates and Services of Cable Systems Offering One Tier Versus Systems Offering Two or More Basic Services in Areas Receiving Less Than Six Over-the-Air Signals**

Monthly average per subscriber as of 04/01/91	One basic service	Two or more basic services	
		Most popular	Lowest priced
Basic service rate	<b>\$17.35</b> (± .41) N=1641 (± 194)	<b>\$18.90</b> (± .38) N=866 (± 113)	<b>\$15.06</b> (± 1.03) N=862 (± 113)
Number of channels	<b>25.2</b> (± 1.0) N=1651 (± 195)	<b>32.6</b> (± 0.9) N=866 (± 113)	<b>20.0</b> (± 2.3) N=862 (± 113)
Cost per channel	<b>\$.69</b> (± .03) N=1641 (± 194)	<b>\$.58</b> (± .02) N=866 (± 113)	<b>\$.75</b> (± .06) N=866 (± 113)

Note: The table above contains sampling errors in parentheses for the values presented, as well as our estimates of the number of cable systems (N) that would have responded had we surveyed all systems.

Note: We used information from our previous survey to determine those cable systems located in areas receiving less than six over-the-air signals.

# Revenue to Cable Systems per Subscriber and Other Information

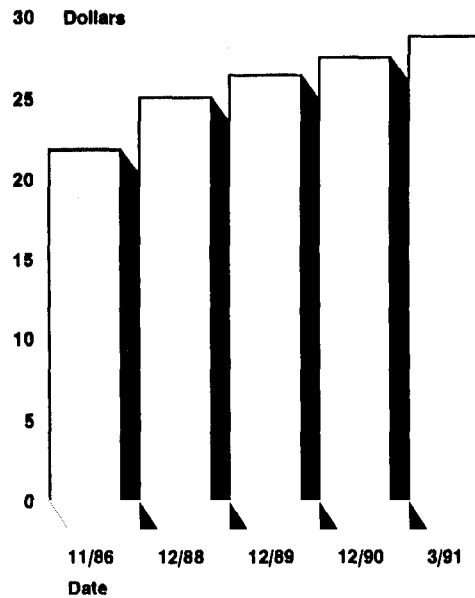
**Table II.1: Average Monthly Revenue Each Subscriber Generates for the Cable System**

	<b>Average revenue per subscriber</b>
November 1986	<b>\$21.78</b> (± .21) N=3295 (± 207)
December 1988	<b>\$25.00</b> (± .21) N=4753 (± 228)
December 1989	<b>\$26.36</b> (± .22) N=5532 (± 226)
December 1990	<b>\$27.47</b> (± .25) N=6220 (± 216)
March 1991	<b>\$28.76</b> (± .26) N=6201 (± 217)
<b>Percent increase</b>	
1989-90	<b>4.2</b> (± 1.6)
1989-91	<b>9.1</b> (± 1.7)
1990-91	<b>4.7</b> (± 1.7)
1986-91	<b>32.0</b> (± 2.0)

Note: The table above contains sampling errors in parentheses for the values presented, as well as our estimates of the number of cable systems (N) that would have responded had we surveyed all systems.

**Appendix II**  
**Revenue to Cable Systems per Subscriber and**  
**Other Information**

**Figure II.1: Average Monthly Revenue**  
**Each Subscriber Generates for the Cable**  
**System**





**Appendix II**  
**Revenue to Cable Systems per Subscriber and**  
**Other Information**

**Table II.2: Local Over-the-Air  
Programming Available to Subscribers  
on December 31, 1989**

<b>Cable system size</b>	<b>Percentage of subscribers with less than six local over-the-air signals</b>
Very small	<b>46.5</b> ( $\pm 15.4$ ) N=3363 ( $\pm 202$ )
Small	<b>33.3</b> ( $\pm 5.1$ ) N=1182 ( $\pm 65$ )
Medium	<b>29.1</b> ( $\pm 4.1$ ) N=806 ( $\pm 33$ )
Large	<b>17.0</b> ( $\pm 3.2$ ) N=729 ( $\pm 24$ )
Very large	<b>13.5</b> ( $\pm 0.0$ ) N=150 ( $\pm 0$ )
All systems	<b>19.8</b> ( $\pm 1.8$ ) N=6230 ( $\pm 216$ )

Note: The table above contains sampling errors in parentheses for the values presented, as well as our estimates of the number of cable systems (N) that would have responded had we surveyed all systems.

Note: We used information from our previous survey to determine the percentage of subscribers with less than six local over-the-air signals.

**Appendix II**  
**Revenue to Cable Systems per Subscriber and**  
**Other Information**

**Table II.3: Local Over-the-Air  
Programming Available from Cable  
Systems on December 31, 1989**

<b>Cable system size</b>	<b>Percentage of systems with less than six local over-the-air signals</b>
Very small	<b>50.0</b> ( $\pm 5.1$ ) N=3394 ( $\pm 201$ )
Small	<b>38.1</b> ( $\pm 4.8$ ) N=1198 ( $\pm 64$ )
Medium	<b>34.4</b> ( $\pm 3.8$ ) N=816 ( $\pm 32$ )
Large	<b>19.9</b> ( $\pm 3.1$ ) N=733 ( $\pm 24$ )
Very large	<b>15.9</b> ( $\pm 0.0$ ) N=151 ( $\pm 0$ )
All systems	<b>41.4</b> ( $\pm 3.0$ ) N=6291 ( $\pm 215$ )

Note: The table above contains sampling errors in parentheses for the values presented, as well as our estimates of the number of cable systems (N) that would have responded had we surveyed all systems.

Note: We used information from our previous survey to determine the percentage of systems with less than six local over-the-air signals.

# Objectives, Scope, and Methodology

The Chairman, Subcommittee on Telecommunications and Finance, House Committee on Energy and Commerce, requested that we update our 1990 national survey of cable television rates and services. The Chairman requested that the data be current as well as compatible with the previous survey so that historical information trends could be developed and further examinations could be made of the effects of the Cable Act on changes in rates and services. After discussions with the Chairman's office, we agreed to obtain current information from the 1,530 cable systems that responded to our previous survey and specifically address the following questions:

1. What have been the changes in the cost of service for the lowest priced tier and number of channels offered?
2. What have been the changes in the cost of service for the most popular basic service and number of channels offered?
3. How many basic tiers of service are offered?
4. What have been the changes in the average monthly revenue per subscriber?

Responding to these objectives, we asked for the basic rate and number of channels, number of tiers of service, and subscriber information as of April 1, 1991. Revenue per subscriber was collected for December 1990 so that we could compare it with the previous 12-month time period, and also with March 1991 so that we could have the most current information.

The 1,530 cable systems we contacted had reported information for our last survey, which covered the period from December 31, 1984, to December 31, 1989, using a mail survey questionnaire. To initiate data collection for this survey, we mailed a preliminary questionnaire to the general managers of 1,530 cable systems, informing them of the information to be collected and also providing them with the appropriate instructions on when to expect our telephone calls. The letters were mailed April 24, 1991. The telephone calls began May 1, 1991, and continued for 3 weeks.

Although the current information was obtained over the telephone, the questions were structured the same as those in our previous mail survey. Surveying the same systems has the advantage of combining information from the same cable systems without requiring that a

---

system provide GAO with data from 1984 to the current period. In receiving responses from 1,505 systems, we are receiving information from essentially the same sample as in the previous survey. The current sampling approach was selected because we wanted to make estimates of pricing changes over time, which a "fresh" sample would not have allowed us to make, unless the cable systems provided longitudinal data, which would have required a large commitment of time and resources by the cable systems.

---

## Sample Selection

As indicated above, the 1,530 cable systems used in our sample for 1991 current information are the same systems that responded to the mail questionnaire survey in our 1990 rate survey. For that survey, we obtained cable system names and addresses from the 1989 data base maintained by Television Digest, Inc., publisher of the annual Television and Cable Factbook, a well-known industry reference book. Television Digest, Inc., canvasses cable systems annually to update its data base.

The cable television industry has a wide range of different-sized systems, based on numbers of subscribers. To capture the industry's diversity and accurately represent any significant differences in rates and services based on size, our sample was previously designed using five size groupings (or strata) of systems as indicated in table III.1. However, to sample by cable system size, it was essential that the universe of systems from which we selected our sample include a subscriber count for each system. Of the 9,850 systems in Television Digest's 1989 data base, we eliminated 895 systems from our universe that did not have an accompanying mailing address or subscriber count, leaving 8,955 systems.

From that data base, we selected 1,971 systems according to five different-sized groupings to capture the diversity of the cable industry and accurately represent significant differences in rates and services based upon system size. As shown in table III.1, of the original sample of 1,971 systems, we had a 77.6-percent response rate (1,530 respondents) in our 1990 follow-up nationwide survey. We contacted the 1,530 systems and obtained responses from 1,505 of them, resulting in a response rate of 98 percent for this survey and a 76-percent response rate for the original sample of 1,971 systems used in our previous survey.

**Table III.1: GAO Sample Selection Methodology**

System size (no. of subscribers)	All systems (as of 1989) according to Television Digest	GAO sample			
		Number of systems	Number of subscribers (millions)	1990 response rate, percent	1991 response rate, percent
1-1,000	5,111	500	0.17	70.6	68.6
1,001-3,500	1,703	425	0.82	74.8	73.6
3,501-10,000	1,070	450	2.69	79.3	79.1
10,001-50,000	900	425	9.32	82.6	81.9
50,001 and up	171	171	16.12	88.3	84.8
<b>Total</b>	<b>8,955</b>	<b>1,971</b>	<b>29.12</b>	<b>77.6</b>	<b>76.4</b>

Our sample of 1,971 cable systems contained about 29 million subscribers, according to Television Digest, Inc. This sample represents about 20 percent of the universe of cable systems and accounts for about 62 percent of all cable subscribers as of 1989.

Because our respondents are the same cable systems that responded to our previous survey, we are using the data they provided last year for the years 1986 through 1989. In addition, to help to ensure that we received valid responses to our latest survey, we randomly selected 30 cable systems to verify the accuracy of the information collected. Acting as potential subscribers, we called the customer service departments of the 30 cable systems to obtain information on cable rates and services being offered. Seventeen of the 30 systems had two or more tiers, according to our survey, but when we contacted them as potential customers, only eight systems acknowledged having a lower priced tier. The other nine, even when asked, did not acknowledge the existence of the lower tier. Aside from this, the information the 30 systems did provide generally tracked with the rate and service data we had obtained during our survey. While this was a small sample, it is an indication that the rate data in this report can be considered conservative compared to the rates subscribers are actually paying.

Since we used a sample (called a probability sample) of cable systems to develop our estimates, each estimate has a measurable precision, or sampling error, which may be expressed as a plus/minus figure. A sampling error indicates how closely we can reproduce from a sample the results that we would obtain if we were to take a complete count of the universe using the same measurement methods. By adding the sampling error to and subtracting it from the estimate, we can develop upper and lower bounds for each estimate. This range is called a confidence

interval. Sampling errors and confidence intervals are stated at a certain confidence level—in this case, 95 percent. For example, a confidence interval, at the 95-percent confidence level, means that in 95 out of 100 instances, the sampling procedure we used could produce a confidence interval containing the universe value we are estimating.

As with our past survey, we agreed to keep information obtained from the cable systems confidential. No individual cable system's or company's response is identified or reported individually.

On May 10, 1991, the National Cable Television Association (NCTA) wrote to GAO expressing the following concerns about the methodology we were using in our survey:

1. We should have drawn a fresh random sample of systems because the universe of systems has grown and limiting our survey to only those systems that responded to our earlier survey automatically results in a biased, non-random sample.
2. Pricing changes over time across different samples will offset the reliability of the pricing changes because the resulting data would not be comparable.
3. The 3 different months for which we were collecting data will be confusing.
4. We should not be using March 1991 for revenue-per-subscriber data because it was obviously an atypical month.

On May 15, 1991, NCTA wrote to Chairman Markey expressing its concerns and enclosed a copy of its letter to us. Our response to the NCTA concerns is as follows:

1. Our time constraints for completing the survey did not permit the drawing of a "fresh" random sample of systems. We already had rate and service information back to 1984 for 1,530 systems, which had been randomly selected. While we are aware that the universe of cable systems has increased to some extent, we have been advised by the firm that collects these data that those are generally small systems which had not been previously recognized.
2. In this survey, we strove for a very high response rate because we were aware before we began that having two "samples" would seriously

affect the reliability of the survey results. Thus, our 98-percent response rate ensured that we have, in effect, one sample. We believe our data base has high credibility because we have rate and service data from 1984 to 1991 on 1,505 cable systems that provide service to almost 27 million subscribers, which is about half of all subscribers. Our sample can be used to make estimates of price changes affecting about 45 million of the 54 million current cable subscribers.

3. We used the different months for two reasons. We selected December 1990 to be consistent with the data base we already had on these systems, where December was the annual data benchmark. March and April were selected because we wanted to obtain the most current data available. As we began our survey on May 1, systems would not have had revenue-per-subscriber data for April, but they would have had March revenue data and basic service rate data for April 1, which they readily provided. In making the decision on the months to be used, we favored currency.

4. NCTA contended at the time that March was atypical because of the pay-per-view events, suggesting instead that we use February or June 1991. According to industry information the March events have been surpassed by fights in April and June, as previously noted. The June fight was apparently one of the richest pay-per-view television fights in history.

In its May 15 letter to Chairman Markey, NCTA mentioned that it had virtually no opportunity to review the survey before it was mailed out. The four questions used in this survey were four of those used in the previous survey, the only change being the months to be covered. NCTA had reviewed those survey questions before they were used in the previous survey. Moreover, NCTA was provided a copy of our current survey early in the morning on April 22, and the survey was mailed late in the day on April 24, which was the day Chairman Markey made the final decision to go ahead with the survey. NCTA had no comments on the survey questions prior to mailing.

---

# Major Contributors to This Report

---

Resources,  
Community, and  
Economic  
Development Division,  
Washington, D.C.

Paul J. O'Neill, Assistant Director  
Jacqueline A. Cook, Evaluator-in-Charge  
John A. Thomson, Jr., Senior Evaluator  
Jonathan T. Bachman, Senior Social Science Analyst  
Sarah Ann W. Moessbauer, Operations Research Analyst



---

### **Ordering Information**

**The first five copies of each GAO report are free. Additional copies are \$2 each. Orders should be sent to the following address, accompanied by a check or money order made out to the Superintendent of Documents, when necessary. Orders for 100 or more copies to be mailed to a single address are discounted 25 percent.**

**U.S. General Accounting Office  
P.O. Box 6015  
Gaithersburg, MD 20877**

**Orders may also be placed by calling (202) 275-6241.**

---

**United States  
General Accounting Office  
Washington, D.C. 20548**

**Official Business  
Penalty for Private Use \$300**

<p><b>First-Class Mail Postage &amp; Fees Paid GAO Permit No. G100</b></p>
--