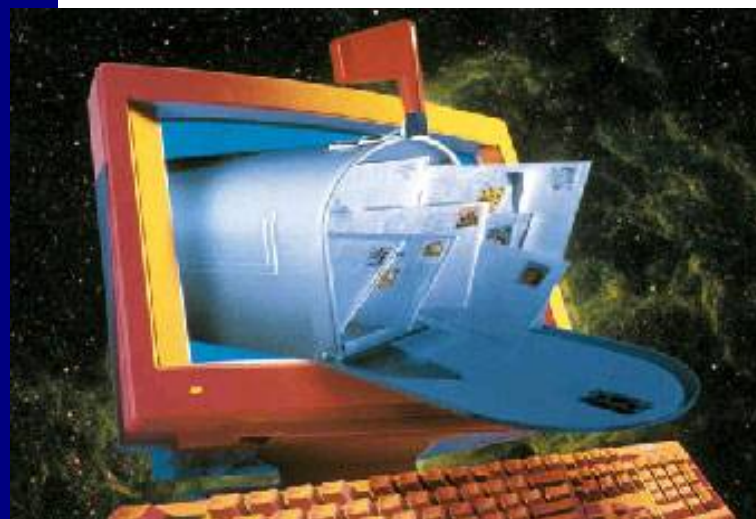




# The National Regulatory Research Institute

**Consumer Utility  
Benchmark Survey:  
Value for Money: The  
Relationship between  
Consumer Perceptions  
of Price and Quality of  
Service for Local and  
Long Distance  
Telephone Services**



**CONSUMER UTILITY BENCHMARK SURVEY:  
VALUE FOR MONEY: THE RELATIONSHIP BETWEEN  
CONSUMER PERCEPTIONS OF PRICE AND QUALITY OF  
SERVICE FOR LOCAL AND LONG DISTANCE TELEPHONE SERVICES**

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## EXECUTIVE SUMMARY

The increase in the number of consumer complaints about telephone service submitted to state regulatory commissions and to the Federal Communications Commission in the past few years emphasizes the need to better understand the factors that drive consumers to complain. Price and quality are two fundamental characteristics of any service and tend to trigger reactions from customers when the level in which they are provided does not match consumer expectations of service. To express their dissatisfaction with the price and quality of the service provided by their telephone companies, consumers may switch providers when alternative operators or technologies are available, complain to their operator or to an authority or use a mix of both tactics to obtain results. Other consumers, however, choose to do nothing about it.

This report looks at the interaction of price and quality factors in consumer perceptions of the telephone service provided by their local and long distance companies, as revealed in the NRRI's Consumer Utility Benchmark Survey (CUBS). Specifically, the report compares the opinions about quality of service and the type of actions taken (complain and/or switch providers) of consumers who considered that the price of local and long distance telephony was high (High Price group) to those who considered the price to be fair or low (All Others group). The impact of consumers' knowledge of the availability of competition in local service on their perceptions of quality is also explored.

People who said prices were high showed statistically significant differences from the rest of the respondents: (a) They were more dissatisfied with customer service, (b) they were more likely to contact the service provider to complain about quality of service problems, and (c) they were more likely to think that competition had a negative impact on the price and quality of local and long distance telephony.

Compared to consumers who thought the price of telephone service was fair or low, consumers in the High Price group were more likely to be dissatisfied with the customer service provided by their local and long distance telephone companies. On average, respondents in the High Price group gave their operators a "C-" (1.59 and 1.45 grade point average for local and long distance telephony customer service, respectively) compared to a "C" from the rest of the respondents.

Respondents in the High Price group were also more likely to contact their local and long distance telephone companies to complain about a quality of service issue and contacted them more often. Among the different areas of quality of service included in the survey, billing and rates were the problems that prompted consumers to contact their telephone companies the most.

Interestingly, consumers in the High Price group were more likely to think that they had no choice of local service provider in their area of residence, with an average of 47 percent of respondents compared to an average of 34 percent of consumers in the All Others group. Consumers who perceived the price of service to be high were also more likely to have a negative perception of the impact of competition (choice) on the local telephone industry, which they believed had lowered the quality of service provided and increased the price they paid for the service.

Despite their higher level of dissatisfaction with their original local and long distance service provider, respondents in the High Price group tended to stay with these

providers in higher numbers than the rest of the respondents. Those who did switch were more likely to be dissatisfied with the service provided by their new local and long distance telephone service operators, and they also switched long distance service providers in higher numbers. All these results partially explain the tendency of consumers in the high price group to be more active complainers than those who thought the price of telephone service was fair or low.

In conclusion, precisely because not all dissatisfied consumers complain, analyzing the perceptions of those who do complain is useful from a regulatory perspective. The analysis of consumers' perceptions regarding price and quality of service provides insights on consumer expectations, priorities and concerns that might help regulators address areas of telephone service that are problematic for consumers, such as billing, as well as identify issues in which consumer education might be beneficial in order for consumers to take advantage of the choice of providers and technologies currently available to them.

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## INTRODUCTION

A total of 18,793 internet users offered opinions on their utility service quality in a survey conducted by the National Regulatory Research Institute and BIGresearch between Jan. 9 and Feb. 3, 2003. The purpose of the survey was to provide state public utility commissions, utilities, and other stakeholders with insights regarding consumer perceptions of utility service, as well as the impact of competition on consumer perceptions of utility service and prices.

Consumers tend to expect that the price of a service will closely correspond to the level of quality with which such service is provided. In this sense, when the price of a service increases it is expected that quality will improve or at least remain equal, if considered adequate. When this positive relationship is not satisfied, consumers express their dissatisfaction according to their sensitivity to changes in price and/or quality (price and quality elasticity of demand), as well as to their availability of options, such as substitute services and providers. The literature on consumer complaints points out that, when expressing dissatisfaction with quality deterioration, active consumers usually opt between complaining (expressing voice), changing service providers (exit), or a combination of both.<sup>1</sup> The choice between voice and exit is clearly influenced by the consumers' access to information regarding available substitute services and providers, as well as the facility with which they are able to complain to the provider or respective authority, such as the state public utility commission.

This report examines the relationship of consumers' perceptions of price to their opinions of the quality of service provided by their local and long distance telephone service providers. Specifically, the report looks at the differences in opinions about quality of service and actions taken (voice and exit) by consumers who considered that the price of local and long distance telephony was high and those who considered it to be fair or low. The impact of consumers' knowledge of the availability of competition in local service on their perceptions of quality is also explored.

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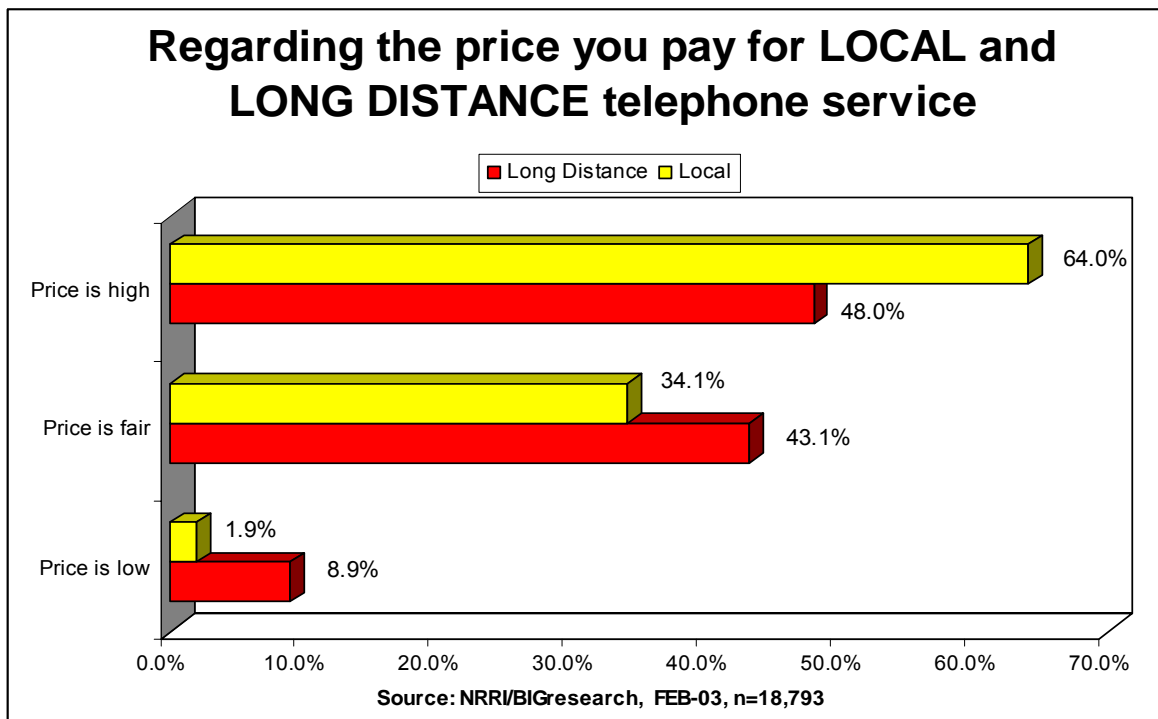
<sup>1</sup>A. Hirschman, *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States*. (Cambridge, MA: Harvard University Press, 1970).



## METHODOLOGY

The survey conducted by the NRRRI and BIGresearch asked participants to classify the price they paid for local and long distance service as being, in their opinion, high, fair or low.<sup>2</sup> As illustrated in Figure 1, of the 18,793 total participants in the survey, 12,028 (64 percent) thought that the price of local service was high and 9,021 participants (48 percent) thought the same for long distance service.

To examine whether the consumers' perceptions of price of telephone service had any connection to their opinions about telephone quality of service and the impact of competition on price and quality, we compared the responses of the group of participants who considered the price of service to be high ("High Price") to those who



**Fig. 1** Opinion of total survey participants of the price of local and long distance telephone service

<sup>2</sup> Information on the methodology employed by BIGresearch to conduct the survey is included in Appendix A.

**TABLE 1  
DISTRIBUTION OF RESPONDENTS BY TYPE  
OF SERVICE CONSIDERED TO BE PRICED HIGH**

<b>Service</b>	<b>Number of participants who considered price of service to be high (High Price)</b>	<b>All Others*</b>	<b>Total respondents selected (n)</b>
Local	12,065	5,980	18,045
Long distance	8,006	8,432	16,438
Local and long distance	6,488	3,812	10,300

Source: NRRRI/BIGresearch, February 2003

\* All Others are those who considered the price of service fair or low.

considered it to be fair or low (“All Others”). The comparison looked at opinions for local service, long distance service and for both local and long distance service. Therefore, the High Price group is composed of three subgroups: (a) those who considered the price of local service to be high (High \$ local), (b) those who considered the price of long distance service to be high (High \$ LD), and (c) those who considered both services to be priced high (High \$ local & LD).

The comparison of each of these subgroups to the rest of the survey respondents resulted in different numbers of total respondents (n) per comparison and different distributions of respondents in each of the two groups being compared, as shown in Table 1.

This report compares the opinions of respondents in the two groups (High Price versus All Others) regarding their local and long distance telephone services on the following dimensions:

- Evaluation of telephone customer service
- Tendency to contact their service provider about quality of service issues within the last 12 months
- Frequency of contact with their service provider about quality of service issues within the last 12 months
- Perception of the consumer’s ability to choose a local telephone service provider in his or her area of residence

- Impact of competition on telephone quality of service and the price paid for this service
- Switching experiences in the last 12 months

General trends observed in each of these dimensions are presented below.



## CONSUMER PERCEPTION OF CUSTOMER SERVICE

Survey participants were asked to grade the customer service provided by their local and long distance telephone companies, among other utilities and telecommunications sectors.<sup>3</sup> Tables 2 and 3 show the respondents' evaluations of local and long distance customer service respectively. Similarly, Figures 2 and 3 provide a graphic comparison of the grades for the two services.

The highest percentage of respondents in both the High Price (local, long distance and both local and long distance) and the All Others groups gave a "C" to the customer service offered by their local and long distance companies. Overall, however, the High Price group graded customer service lower than the rest of the respondents. On average, respondents in the High Price group gave the customer service provided by their local and long distance operators a "C-" grade point average (GPA) (a GPA of 1.59 and 1.45, respectively). In contrast, the rest of the respondents graded the customer service provided by their local and long distance operators at a "C" level with grade point averages of 2.25 for local operators and 2.18 for their long distance companies.

The groups also differed in their distribution among the rest of the grades, where they followed opposite directions. While most of the respondents in the High Price group graded the customer service of both local and long distance companies as "C" or lower, the majority of respondents in the All Others group graded it "C" or better. The percentage of High Price respondents who graded service in the Poor and Very Poor categories ranged from 40.9 percent to 47.3 percent for local service and from 44.6 percent to 64.7 percent for long distance. In contrast, the percentage of respondents in the All Others group that graded customer service as being Poor or Very Poor ranged from 12.4 percent to 26.9 percent for local service and from 14.2 percent to 22.0 percent for long distance.

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<sup>3</sup> The other industries included in the survey were airlines, banks, cable companies, car dealerships, cellular telephone companies, electric companies, financial institutions (credit card companies), hospitals, insurance companies, internet service providers, natural gas companies and water utilities. For a comparison of consumer perceptions of customer service among all these companies see Francine Sevel & LingBei Xu, *Consumer Utility Benchmark Survey: A Comparison of Consumer Perceptions of Customer Service*. (Columbus, OH: NRRI, February 2003).

There were also slight differences within the High Price respondents, as those who considered prices for both local and long distance services to be high tended to give lower overall grades for both types of services (1.52 for local customer service and 1.35 for long distance) than those who considered only one of these services to be highly priced.

These results point out a clear connection between price dissatisfaction and negative consumer perceptions of telephone quality of service. These negative perceptions seem to get even more pronounced as the number of services that consumers considered to be priced high increased, as exemplified by the opinions of consumers in the High \$ local & LD subgroup.

**TABLE 2  
CONSUMER EVALUATION OF  
LOCAL TELEPHONE CUSTOMER SERVICE**

Grade	Percentage		Percentage		Percentage	
	High \$ local	All Others	High \$ L.D.	All Others	High \$ Local & L.D.	All Others
A - Excellent	3.0%	11.6%	4.5%	7.0%	3.0%	11.7%
B - Very Good	12.3	29.9	13.9	22.7	10.7	31.4
C - Good	40.0	44.9	40.7	43.5	38.9	44.6
D - Poor	28.3	10.4	26.6	17.6	30.1	9.3
F - Very Poor	16.4	3.3	14.3	9.3	17.2	3.1
<b>Grade Point Average</b>	<b>1.57</b>	<b>2.36</b>	<b>1.68</b>	<b>2.01</b>	<b>1.52</b>	<b>2.39</b>

Source: NRRI/BIGresearch, February 2003

**TABLE 3  
CONSUMER EVALUATION OF LONG  
DISTANCE TELEPHONE CUSTOMER SERVICE**

Grade	Percentage		Percentage		Percentage	
	High \$ local	All Others	High \$ L.D.	All Others	High \$ Local & L.D.	All Others
A- Excellent	3.1%	8.5%	2.2%	7.4%	1.8%	10.4%
B - Very Good	12.0	23.6	9.3	23.0	7.5	27.2
C - Good	40.3	47.0	37.7	47.5	36.0	48.3
D - Poor	28.0	15.6	31.5	16.2	33.2	11.3
F - Very Poor	16.6	5.4	19.4	5.8	21.5	2.9%
<b>Grade Point Average</b>	<b>1.57</b>	<b>2.14</b>	<b>1.43</b>	<b>2.10</b>	<b>1.35</b>	<b>2.31</b>

Source: NRRI/BIGresearch, February 2003

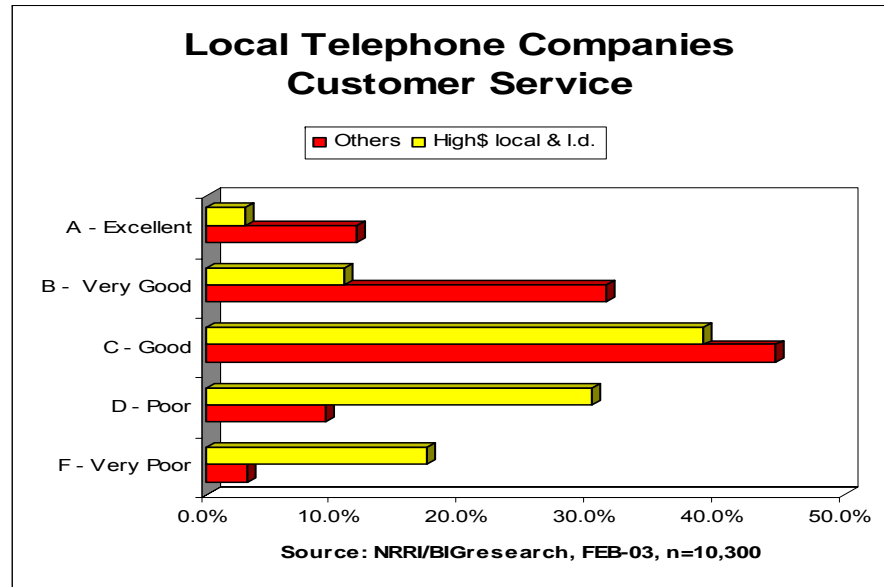
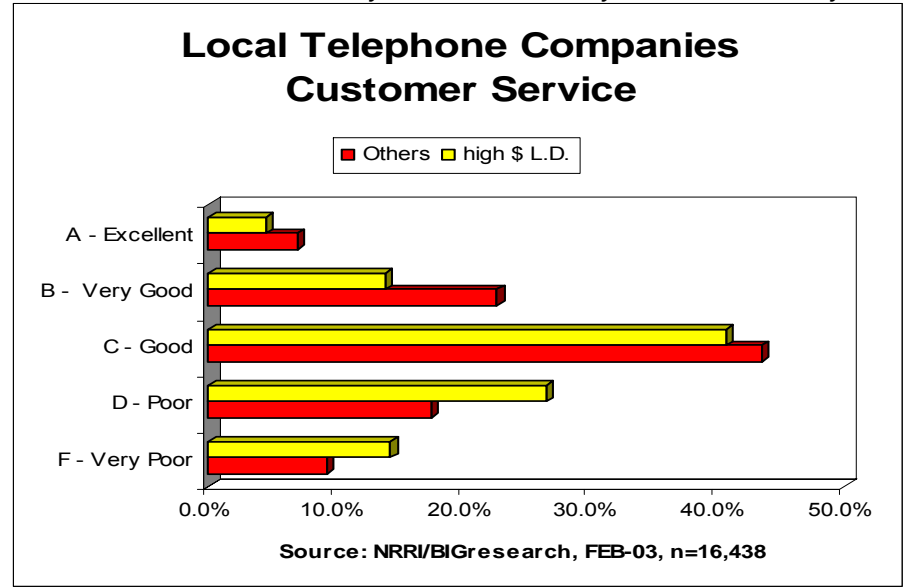
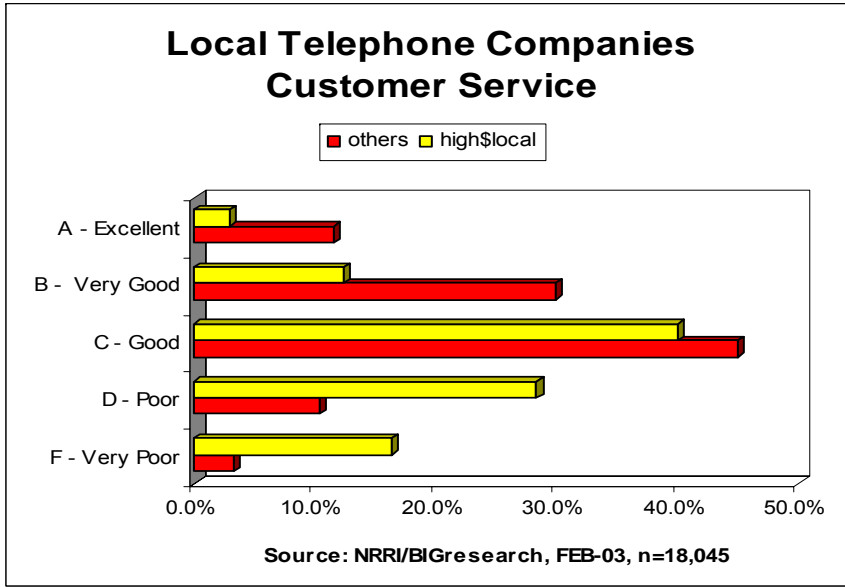
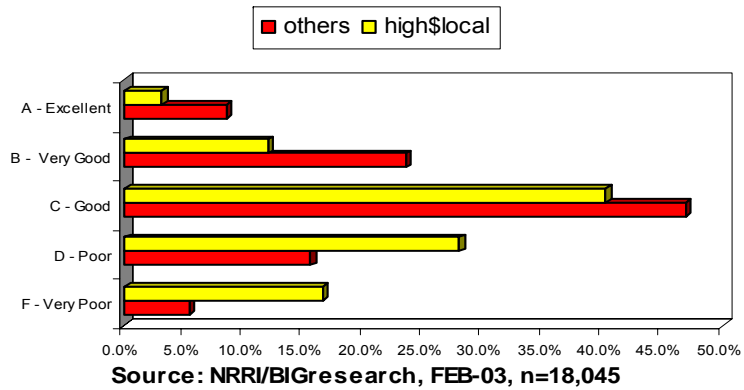
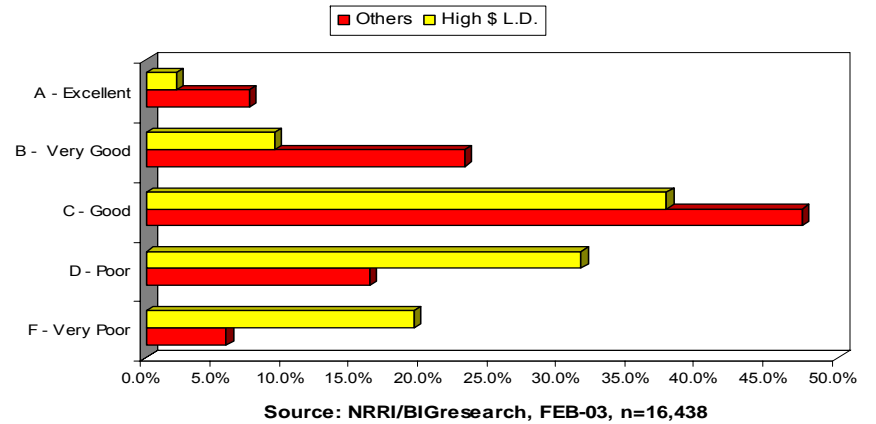


Fig. 2. Comparison of consumer evaluations of local telephone companies' customer service

### Long Distance Telephone Companies Customer Service



### Long Distance Telephone Companies Customer Service



### Long Distance Telephone Companies Customer Service

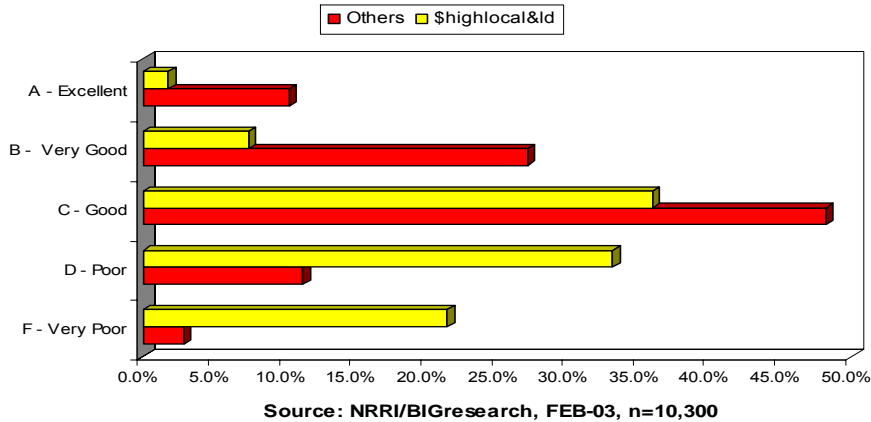


Fig. 3: Comparison of consumer evaluations of long distance telephone companies' customer service

## CONSUMER TENDENCY TO CONTACT THEIR SERVICE PROVIDER AND FREQUENCY OF CONTACT

Consumers were asked whether or not they had contacted their local and long distance telephone companies in the past 12 months regarding nine different quality of service issues (billing, installation, outages, rates, repairs, sales practices, termination issues, unauthorized change of provider and other issues). If they had done so, they were requested to provide the approximate number of contacts they had made with their company. The results for each of the three High Price subgroups are presented in Tables 4 to 6 for both local and long distance services. The tables compare only those consumers in the High Price and All Others groups who had actually contacted their telephone company.

As previously reported by Sevel and Xu, billing for both local and long distance telephone services was the issue that prompted the highest number of consumer contacts among all respondents.<sup>4</sup> An average of 64 percent of respondents in the High Price group and 47 percent of respondents in the All Others group contacted their local service company regarding problems with billing; while an average of 51 percent of the High Price respondents and 35 percent of the rest of the respondents contacted their long distance company regarding this same issue. Consumer contacts about rates ranked second, with an average of 48 percent and 29 percent of respondents in the High Price and All Others groups respectively contacting their local service company and 42 percent and 25 percent of respondents on each group contacting their long distance company.

As shown in Tables 4 through 6, consumers in the High Price group were more likely to contact their local and long distance telephone companies than the rest of the respondents.<sup>5</sup> Consumers in the High Price group also tended to contact their local and long distance companies more frequently than the rest of the survey participants, as illustrated in Table 7 and Figure 4 for the case of billing.

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<sup>4</sup> Sevel, Francine and Ling Bei Xu, *Consumer Utility Benchmark Survey: A Comparison of Consumer Contacts with Utility and Telecommunications Industries*. (Columbus, OH: NRRI, June, 2003).

<sup>5</sup> Exceptions for the High \$ local subgroup were for local and long distance billing, local installation and local other issues, where consumers in the All Others group had a higher percentage of first contacts. The High\$ L.D. subgroup also got a lower percentage of first contacts for local and long distance installation than the All Others group, and the High\$ local & LD did so too for local installation and long distance billing.

**TABLE 4**  
**CONSUMERS CONTACTING THEIR TELEPHONE COMPANY AT**  
**LEAST ONCE IN THE PAST 12 MONTHS, PER CATEGORY OF SERVICE**  
**(GROUP THAT CONSIDERED PRICE OF LOCAL SERVICE TO BE HIGH)**

Category of Service	CONTACTED LOCAL SERVICE CO.		CONTACTED LONG DISTANCE CO.	
	Percentage		Percentage	
	High \$ local	All Others	High \$ local	All Others
Billing	62.9%	46.8%	45.3%	34.8%
Installation	30.5	29.7	17.6	15.1
Outages	32.4	24.9	10.7	8.0
Rates	46.4	27.6	36.5	25.1
Repairs	34.2	27.8	8.4	7.0
Sales	27.2	18.5	18.7	13.3
Slamming	23.1	14.8	16.8	10.8
Termination	22.9	17.2	14.8	11.1
Other	22.6	16.3	11.4	8.2

Source: NRRR/BIGresearch, February 2003, N=18,045

**TABLE 5**  
**CONSUMERS CONTACTING THEIR TELEPHONE COMPANY AT**  
**LEAST ONCE IN THE PAST 12 MONTHS, PER CATEGORY OF SERVICE**  
**(GROUP THAT CONSIDERED PRICE OF LONG DISTANCE SERVICE TO BE HIGH)**

Category of Service	CONTACTED LOCAL SERVICE CO.		CONTACTED LONG DISTANCE CO.	
	Percentage		Percentage	
	High \$ L.D.	All Others	High \$ L.D.	All Others
Billing	62.4%	50.8%	52.1%	36.1%
Installation	29.1	28.4	18.6	16.4
Outages	33.3	25.7	13.6	7.1
Rates	46.1	33.3	43.4	25.7
Repairs	33.8	29.2	11.3	5.4
Sales	27.2	20.4	22.6	12.6
Slamming	24.0	16.2	20.6	10.6
Termination	22.7	18.2	19.2	9.2
Other	23.1	17.5	14.5	7.5

Source: NRRR/BIGresearch, February 2003, N=16,438

**TABLE 6**  
**CONSUMERS CONTACTING THEIR TELEPHONE**  
**COMPANY AT LEAST ONCE IN THE PAST 12 MONTHS,**  
**PER CATEGORY OF SERVICE (GROUP THAT CONSIDERED**  
**PRICE OF BOTH LOCAL AND LONG DISTANCE SERVICES TO BE HIGH)**

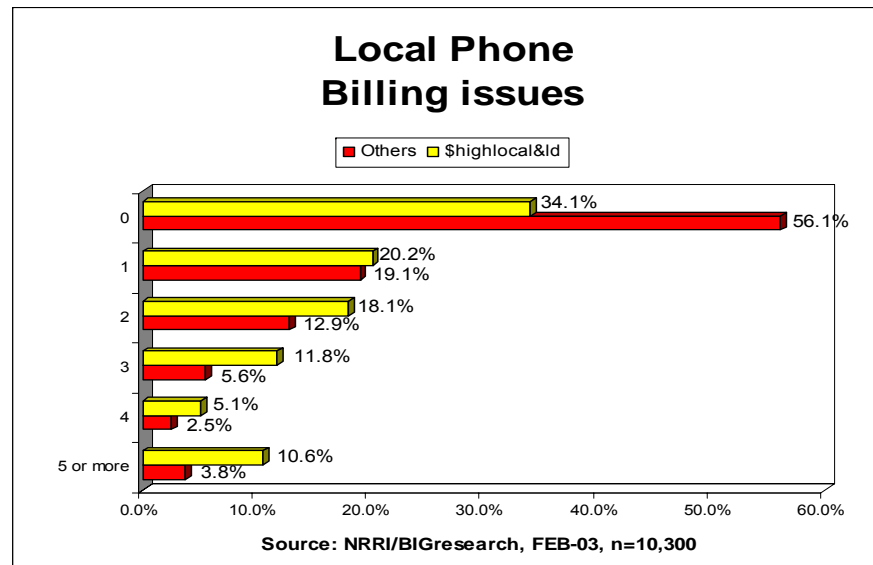
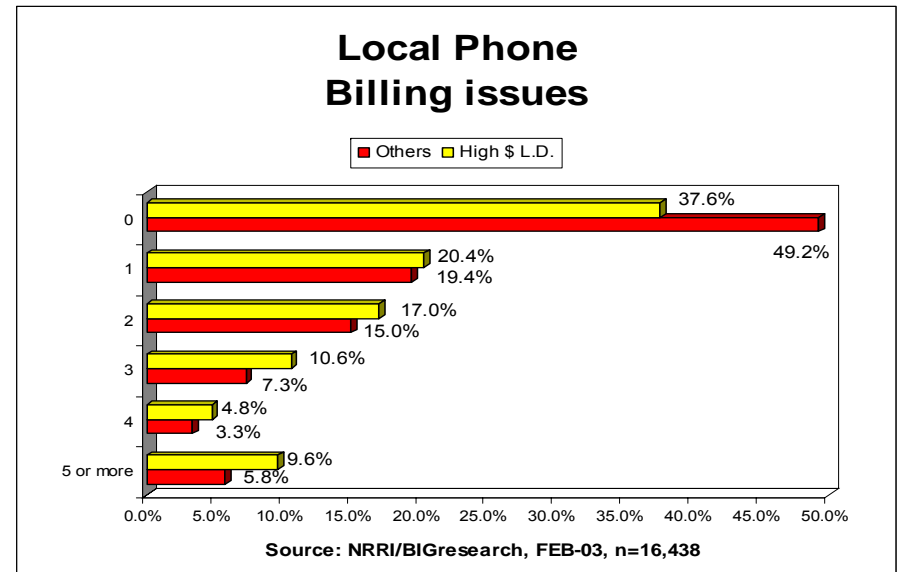
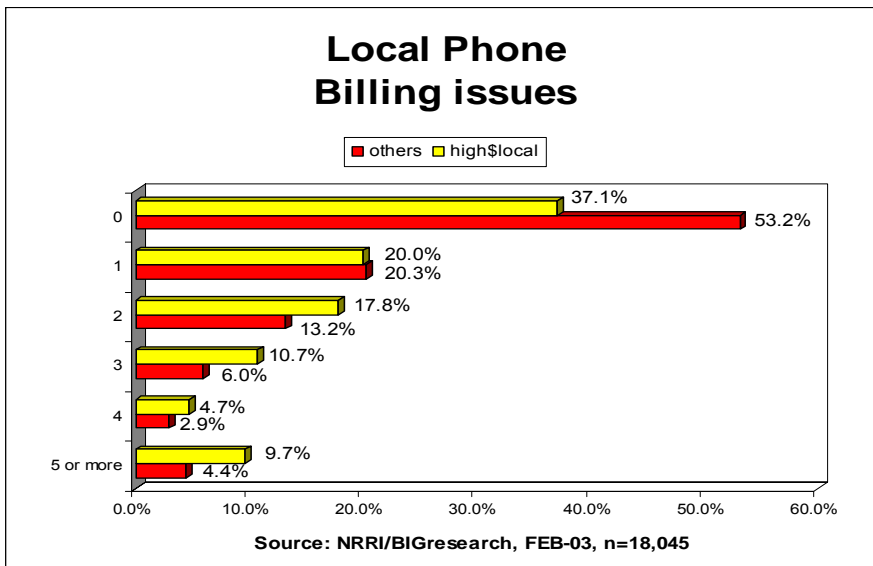
Category of Service	CONTACTED LOCAL SERVICE CO.		CONTACTED LONG DISTANCE CO.	
	Percentage		Percentage	
	High \$ Local & L.D.	All Others	High \$ Local & L.D.	All Others
Billing	65.9%	43.9%	54.0%	34.4%
Install	29.3	27.1	19.2	15.5
Outages	34.3	22.2	14.1	7.1
Rates	50.0	25.0	45.2	23.3
Repairs	34.8	26.1	11.9	6.5
Sales	29.0	16.4	23.8	12.2
Slamming	25.5	12.4	21.7	9.3
Termination	23.6	15.2	19.7	9.0
Other	24.1	14.7	14.6	6.8

Source: NRRI/BIGresearch, February 2003, N=10,300

**TABLE 7**  
**FREQUENCY OF CONSUMER CONTACT WITH THEIR LOCAL**  
**SERVICE COMPANY IN THE LAST 12 MONTHS FOR BILLING ISSUES**

No. of Contacts	Percentage		Percentage		Percentage	
	High \$ local	All Others	High \$ L.D.	All Others	High \$ Local & L.D.	All Others
0	37.1%	53.2%	37.6%	49.2%	34.1%	56.1%
1	20.0	20.3	20.4	19.4	20.2	19.1
2	17.8	13.2	17.0	15.0	18.1	12.9
3	10.7	6.0	10.6	7.3	11.8	5.6
4	4.7	2.9	4.8	3.3	5.1	2.5
5 or more	9.7	4.4	9.6	5.8	10.6	3.8

Source: NRRI/BIGresearch, February 2003



**Fig. 4:** Frequency of consumer contact with local service provider regarding billing issues during last 12 months

**TABLE 8  
CONSUMERS' PERCEPTION OF THEIR ABILITY  
TO CHOOSE THEIR LOCAL TELEPHONE COMPANY**

Ability to Choose	Percentage		Percentage		Percentage	
	High \$ local	All Others	High \$ L.D.	All Others	High \$ Local & L.D.	All Others
Yes	34.4%	50.2%	34.4%	43.2%	32.0%	51.8%
No	47.2	32.1	46.5	39.5	48.7	31.5
Don't know, uncertain	18.3	17.6	19.0	17.3	19.3	16.7

Source: NRR/BIGresearch, February 2003

Interestingly, consumers in both the High Price and the All Others groups were more likely to contact their local telephone company than their long distance company regarding a quality of service issue. This may be related to the perceptions held by a high number of High Price respondents that they were unable to change local service providers. When asked whether they were able to choose their local telephone company in their area of residence, an average of 47 percent of consumers in the High Price group answered “No,” compared to an average of 34 percent of those in the All Others group, as shown in Table 8.

Finally, as in the case of the evaluations of customer service, consumers who considered the price of both local and long distance to be high were more likely to contact their telephone companies and did it more often for the different categories of quality of service included in the survey than respondents in the other two High Price subgroups. In the case of billing, for example, 66 percent of the consumers who considered the price of local and long distance service to be high contacted their local company at least once, compared to 63 percent in the High \$ local group and 62 percent in the High \$ L.D. group.



## PERCEPTION OF THE IMPACT OF COMPETITION IN THE TELEPHONE INDUSTRY ON PRICE AND QUALITY OF SERVICE

As stated above, research on consumer complaints points out that when consumers are dissatisfied with the quality of service provided by their companies, they express their dissatisfaction in two main ways: exit and voice.<sup>6</sup> Albert Hirschman defines exit as the expression of consumer disappointment through the market.<sup>7</sup> Consumers *exit* by leaving the firm and shifting to a different product or service of equal or higher quality, thus affecting the revenues of the deteriorating firm. Voice, on the other hand, refers to the intent of consumers to exert change in the firm's performance without leaving it. This is achieved by alerting the firm of its deteriorating performance through complaints to the firm's management, to an authority to whom the firm is accountable, or as Hirschman states "to anyone who cares to listen."<sup>8</sup>

The decision between using voice, exiting, or using a combination of these actions depends on several factors. Among them, the literature points out the structure of the market (competitive, monopoly, oligopoly or monopolistic competition), the availability of substitute products, the consumers' quality elasticity of demand, the relative effectiveness of voice, the relative cost of exit and voice and the degree of loyalty towards the product or firm.

So far, we have seen that consumers in the High Price group tend to evaluate telephone quality of service more negatively than the rest of the respondents; they are also more likely to use voice and use it more often to express their opinions about the service provided by their local and long distance telephone companies. The decision of consumers in the High Price group to choose voice over exit as a means to express dissatisfaction may be partially influenced by the fact that a high number of respondents in this group (47 percent on average) thought that they were not able to choose their local service provider.

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<sup>6</sup> See R. Day, K. Grabicke, T. Shaetzle and F. Staubach, The Hidden Agenda of Consumer Complaining, *Journal of Retailing*, 57(3), 1981, pp. 86-106; H. Hunt, Consumer Satisfaction, Dissatisfaction, and Complaining Behavior, *Journal of Social Issues*, 47(1), 1991, pp. 107-117; R. Warland, R. Herrmann and J. Willits, Dissatisfied Consumers: Who Gets Upset and Who Takes Action, *Journal of Consumer Affairs*, 9(2), 1975, pp. 148-163.

<sup>7</sup> A. Hirschman, *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States*. (Cambridge, MA: Harvard University Press, 1970).

<sup>8</sup> A. Hirschman, *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States*. (Cambridge, MA: Harvard University Press, 1970), p. 4.

**TABLE 9**  
**CONSUMER PERSPECTIVE OF THE IMPACT OF COMPETITION**  
**(CHOICE) IN LOCAL TELEPHONE INDUSTRY ON QUALITY OF SERVICE**

Opinion of impact	Percentage		Percentage		Percentage	
	High \$ local	All Others	High \$ L.D.	All Others	High \$ Local & L.D.	All Others
My service is better	11.3%	26.0%	11.9%	21.7%	8.8%	27.2%
My service is the same	73.3	69.1	72.9	70.4	74.1	68.9
My service is worse	15.4	4.9	15.2	7.8	17.1	3.9

Source: NRR/BIGresearch, February 2003

The opinions of consumers in the High Price group regarding the impact of competition on the price and quality of telephone services and their switching experiences in the last 12 months provide more clues on the reasons why consumers in this group may not choose exit as frequently as the rest of the respondents.

When asked to evaluate the impact of competition on the quality of service provided by their local and long distance telephone companies, most of the consumers in both the High Price and All Others groups considered that the quality of service had remained the same after the introduction of competition. Yet, an average of 16 percent of the respondents in the High Price group answered that competition had worsened the quality of their local service, compared to an average of 5.5 percent of respondents in the All Others group, as illustrated in Table 9.

**TABLE 10**  
**CONSUMER PERSPECTIVE OF THE IMPACT OF COMPETITION**  
**(CHOICE) IN LONG DISTANCE TELEPHONE INDUSTRY ON QUALITY OF SERVICE**

Opinion of impact	Percentage		Percentage		Percentage	
	High \$ local	All Others	High \$ L.D.	All Others	High \$ Local & L.D.	All Others
My service is better	16.9%	18.1%	8.3%	27.2%	8.2%	23.2%
My service is the same	71.7	76.8	75.1	70.3	74.4	74.6
My service is worse	11.4	5.2	16.6	2.6	17.4	2.2

Source: NRR/BIGresearch, February 2003

The contrast between the evaluations of the two groups was even more pronounced for long distance service, as it is illustrated in Table 10. When asked about this service, an average of 15 percent of the High Price respondents answered that competition had worsened quality of service, compared to an average of 3.3 percent for the rest of the respondents.

Once again, consumers in the subgroup who considered the price of both local and long distance services to be high were the most critical among the High Price subgroups. This subgroup also differs the most from the rest of the survey respondents regarding the percentage of respondents who considered the quality of service for local and long distance telephony to have worsened with competition.

**TABLE 11**  
**CONSUMER PERSPECTIVE OF THE IMPACT OF COMPETITION (CHOICE) IN**  
**LOCAL SERVICE INDUSTRY ON THE PRICE OF LOCAL TELEPHONE SERVICE**

Opinion of impact on price	Percentage		Percentage		Percentage	
	High \$ local	All Others	High \$ L.D.	All Others	High \$ Local & L.D.	All Others
Higher	42.2%	11.6%	41.7%	18.7%	49.5%	8.5%
The same	47.0	55.1	45.8	53.4	42.0	54.4
Lower	10.7	33.3	12.5	27.9	8.5	37.1

Source: NRRRI/BIGresearch, February 2003

The responses of the High Price group followed a similar pattern when asked about the impact of competition on the price of local telephone service, as shown in Table 11. The highest percentage of respondents in both the High Price and the All Others group considered that competition has had no impact on price, that is, that the price of local telephone service was the same after competition.

Nevertheless, when examining their overall responses, consumers in the High Price group were more likely to consider the price of service to be the same or higher after the introduction of competition in local service than the rest of the respondents.<sup>9</sup> In contrast, those who considered the price of service to be fair or low tended to have a more positive opinion about the impact on price of competition in local service.<sup>10</sup> In general, an average of 44.5 percent of respondents in the High Price group considered that competition had made the price of local service higher, while only an average of 12.9 percent of the rest of the respondents thought so.

<sup>9</sup> An average of 89.4 percent of respondents in the High Price group considered the price of local telephone service to be the same or higher after competition, compared to 67.2 percent of the rest of the survey respondents.

<sup>10</sup> An average of 87.1 percent of respondents in the All Others group considered that the price of service was the same or lower after competition compared to 55.5 percent of respondents in the High Price group.

## SWITCHING EXPERIENCES

The answers given by consumers on their experiences when switching local and long distance providers in the last 12 months prior to the survey also provided interesting information, as shown in Tables 12 and 13 respectively. Although the percentage of satisfied High Price consumers who stayed with their original local service provider is smaller than that for the rest of the respondents (an average of 48 percent compared to 76 percent for all other respondents), it still represents the highest percentage among the different options. Yet in view of the negative opinions that respondents in the High Price group tended to have about the price and quality of service provided by their local telephone companies, it was surprising that most of them stayed with their original provider, even when dissatisfied.

This trend might be explained by the interaction of different factors, such as the high number of respondents in the High Price group who thought were unable to choose their local provider, their higher tendency to try to improve the performance of their service provider through complaints, their negative perception of the impact of competition and even loyalty factors.

Interestingly, about four of every ten High Price respondents who actually switched local service providers were dissatisfied with the new provider compared to an average of two of every ten in the All Others group. Their dissatisfaction with the new service provider might be connected to their negative opinion about the impact of competition on local service quality and price discussed above.

The switching experiences of the High Price group for long distance service also provided interesting information. As in the case of local service, the majority of respondents in both groups tended to stay with their original service provider. Nevertheless, both groups are significantly different from those respondents who stayed even when dissatisfied. Once again, a much higher percentage of respondents in the High Price group (29 percent on average) stayed with the original long distance service provider, even when dissatisfied, compared to the rest of the respondents (5.6 percent on average).

**TABLE 12  
CONSUMER SWITCHING EXPERIENCE FOR  
LOCAL SERVICE DURING THE LAST 12 MONTHS**

Switching experience	Percentage		Percentage		Percentage	
	High \$ local	All Others	High \$ L.D.	All Others	High \$ Local & L.D.	All Others
Stayed with original provider--Satisfied	47.7%	81.4%	52.5%	66.5%	45.1%	81.3%
Stayed with original provider--Dissatisfied	41.6	6.3	36.6	21.7	44.0	5.5
Switched, Satisfied with new provider	6.3	10.5	6.1	9.5	5.7	11.5
Switched, Dissatisfied with new provider	4.5	1.9	4.7	2.4	5.3	1.6

Source: NRRI/BIGresearch, February 2003

**TABLE 13  
CONSUMER SWITCHING EXPERIENCE FOR LONG  
DISTANCE SERVICE DURING THE LAST 12 MONTHS**

Switching experience	Percentage		Percentage		Percentage	
	High \$ local	All Others	High \$ L.D.	All Others	High \$ Local & L.D.	All Others
Stayed with original provider--Satisfied	44.3%	66.2%	36.3%	65.0%	32.9%	70.4%
Stayed with original provider--Dissatisfied	22.2	8.1	31.8	5.0	34.1	3.8
Switched, Satisfied with new provider	23.9	21.3	19.1	26.4	19.1	22.7
Switched, Dissatisfied with new provider	9.7	4.3	12.7	3.6	13.9	3.1

Source: NRRI/BIGresearch, February 2003

As for those who switched, a higher percentage of respondents in the High Price group tended to be satisfied with the service provided by their new operator, but still a higher percentage of consumers in the High Price group tended to be dissatisfied with their new provider compared to the rest of the survey respondents.

Following the general trend, respondents in the subgroup who considered the price of local and long distance service to be high were more likely to be dissatisfied with the service provided by their original provider and even their new provider—for those who had switched—than the rest of the High Price respondents.



## DISCUSSION

The comparison of survey respondents who considered the price of telephone service to be high and those who did not provided interesting insights about the relationship of perceptions of price and the assessment of the quality of service provided by local and long distance telephone companies. The two groups showed statistically significant differences in three areas: (a) their evaluation of telephone customer service, (b) their propensity to contact the service provider to complain about quality of service problems, and (c) their assessment of the impact of competition on the price and quality of local and long distance telephony.

The opinions about quality of service, the availability of choice for local service and the impact of competition on price and quality for those respondents in the High Price group were generally more negative than that of the All Others group, regardless of the type of service being considered (local, long distance, or both local and long distance). Consumers in the High Price group were more likely to have a negative impression of customer service and were more prone to contact their service provider about billing and quality of service issues than the rest of the respondents.

Interestingly, consumers in both the High Price and the All Others groups were more likely to contact their local telephone company than their long distance company regarding a quality of service issue. This last relationship may be a consequence of the consumers' perception of their inability to change local service providers. When asked whether they were able to choose their local telephone company in their area of residence, a higher percentage of consumers in the High Price group answered "No," compared to those in the All Others group, as shown in Table 8 above.

The perception of lack of choice of local providers seems to make consumers even more prone to contact their telephone company and complain about quality of service issues. In this sense, consumers would benefit from more and better information on the existence of new local telephone service providers by area of residence that could be provided by state utility regulators and especially by new competitors.

Perhaps influenced in part by their perception of lack of choice, a higher percentage of consumers in the High Price group stayed with their original local

telephone service provider than the rest of the respondents, even when dissatisfied with the service being offered. Furthermore, when they switched providers, a higher proportion of High Price consumers tended to be dissatisfied with the service provided by the new operator, particularly in the case of long distance service.

When faced by the choice of using voice or exit as a means to express dissatisfaction, consumers in the High Price group used a mix of them. However, they seemed to prefer staying with their current provider and using voice—that is, contacting their telephone companies more often about quality of service issues—to improve the performance of their telephone service providers through complaints. Based exclusively on the results of this survey, it is difficult to determine if the preference of this group for using voice over exit is the result of their perception of not having the option to exit or if they did so because of some of their negative switching experiences and their negative perceptions of the impact of competition on price and quality of service. Further research may provide more insights on this issue.

In summary, compared to those respondents who thought that the price of telephone service was fair or low, those participants who thought that the price of local and long distance service was high were more likely to:

- Be dissatisfied with the customer service provided by their local and long distance telephone companies
- Contact their local and long distance telephone companies in the past 12 months regarding a quality of service issue and contacted them more often during that period of time
- Think that they had no choice of local service provider in their area of residence
- Answer that competition (choice) in the local telephone industry had lowered the quality of service provided and increased the price they paid for the service
- Be dissatisfied with their original local and long distance service provider, but still have stayed with these providers in higher numbers than the rest of the respondents
- After switching, be dissatisfied with the service provided by their new local and long distance telephone service operators. They also switched long distance service providers in higher numbers

The confluence of the last four characteristics mentioned above (not being able to choose their local telephone service provider, having a bad opinion about the impact of competition on local telephony, being more likely to stay with their original provider even when dissatisfied with the quality of service it provides and being more likely to be dissatisfied with their new provider after switching) partially explains the tendency of this group of consumers to be more active complainers than those who thought the price of telephone service was fair or low.<sup>11</sup>

These results may provide regulators, telephone companies and consumer organizations some insights on one of the multiple factors behind the increasing trend in consumer complaints about telephone quality of service received by state public utility commissions and the FCC in the last few years.

Precisely because not all dissatisfied consumers complain, analyzing the perceptions of those who do complain is useful from a regulatory perspective. The analysis of consumers' perceptions regarding price and quality of service provides insights on consumer expectations, priorities and concerns that might help regulators address areas of telephone service that are problematic for consumers, such as billing, as well as identify issues in which consumer education might be beneficial in order for consumers to take advantage of the choice of providers and technologies currently available to them.

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<sup>11</sup> Research on consumer expectations and satisfaction classifies consumers into satisfied and dissatisfied consumers. Yet, since not all dissatisfied consumers do something about their unsatisfactory experiences, this group is subdivided into "activists", that is, dissatisfied consumers that take action, and "non-action" dissatisfied consumers. See M. Moyer, Characteristics of Consumer Complainers: Implications for Marketing and Public Policy, *Journal of Public Policy and Marketing*, 3, 1984, pp. 67-84; J. Singh, A Typology of Consumer Dissatisfaction Response Styles, *Journal of Retailing*, 66(1), 1990, pp. 57-99.



**APPENDIX A**



## SURVEY METHODOLOGY

BIGresearch collects all responses online from the largest online community of over 60 million people. BIGresearch surveys are anonymous, self administered and free of interviewer bias. Questionnaires are designed to be completed very quickly, usually in less than five minutes. BIGresearch's collection method is an excellent example of the application of human factors engineering principles to eliminate barriers to consumer participation. It's easy and fun to participate.

A computer controlled system tied to market realities ensures more than adequate representation of all consumer groups defined by age, sex, income, ethnic composition and geographic distribution. BIGresearch takes 14 samples simultaneously - seven age groups for males and seven age groups for females. These fourteen large samples are woven together for a huge market sample usually between 5,000 and 10,000. Samples of this size allow for detailed cross-tabulation and for a more accurate measurement of the market. Each cross-tabulation is dynamically balanced, through computer intensive statistical procedures, to known market realities. The benefits of this are:

- The collection of "mega" samples to insure representation of all types of consumer groups.
- The utilization of 14 sampling frames with short age spans, (i.e., males 14-17 yrs., 18-24 yrs, etc.) to insure far greater homogeneity within groups.
- Market balancing with a computer model driven by known, real world information, which adjusts the samples to the marketplace.
- The short (unannounced) time period over which the data are collected precludes merchants and advertisers from modifying behavior to influence results.
- As an online research company, BIGresearch adheres to a survey standards policy which is based upon a "well posed random sample", and is weighted to reflect the U.S. population. A similar policy has been adopted by All Others such as American Demographics.

Ongoing technical review process of data collection methodology and BIGresearch's application of computer intensive statistics to analyze and manage the data:

- The gender distribution of online uses is identical to that of the general population (as reported by the US Census).
- The marital status along all dimensions is identical to the general populations.
- The age distribution of online individuals is also approaching that of the general population.

### **Consumer Utility Benchmark Studies from the NRRI/BIGresearch**

The NRRI was established by the National Association of Regulatory Utility Commissioners in 1976 at the Ohio State University. The NRRI provides client-driven research and services to inform and advance regulatory policy. NRRI programs of regulatory research and service include utility infrastructure; utility markets; consumer affairs and education; and commission organization, process and development.

BIGresearch is a consumer market intelligence firm that provides unique consumer insights that are gathered online utilizing very large sample sizes. BIGresearch's syndicated *Consumer Intentions and Actions* survey monitors the pulse of more than 7,000 consumers each month providing insights for identifying opportunities in today's competitive and changing marketplace.

<http://www.bigresearch.com>

**APPENDIX B**  
**STATISTICAL SIGNIFICANCE OF RESULTS**



The appendix reports results of Chi Square tests of significance for appropriate tables in the report.

**Consumer Evaluation of Local Telephone Customer Service (Table 2)**

High \$ Local v. All Others

Degrees of freedom: 4

Chi-Square= 2341.41       $p \leq 0.001$       Distribution is significant

High \$ LD v. All Others

Degrees of freedom: 4

Chi-Square= 466.17       $p \leq 0.001$       Distribution is significant

High \$ Local & LD v. All Others

Degrees of freedom: 4

Chi-Square= 1730.70       $p \leq 0.001$       Distribution is significant

**Consumer Evaluation of Long Distance Customer Service (Table 3)**

High \$ Local v. All Others

Degrees of freedom: 4

Chi-Square= 1261.80       $p \leq 0.001$       Distribution is significant

High \$ LD v. All Others

Degrees of freedom: 4

Chi-Square= 1812.01       $p \leq 0.001$       Distribution is significant

High \$ Local & LD v. All Others

Degrees of freedom: 4

Chi-Square= 2100.85       $p \leq 0.001$       Distribution is significant

**Consumers Contacting their Telephone Company at Least Once in the Past 12 months, per Category of Service (Group that Considered Price of Local Service to be High) (Table 4)**

A. Contact Local Service Co.

Degrees of freedom: 8

Chi-Square= 185.14       $p \leq 0.001$       Distribution is significant

B. Contact Long Distance Co.

Degrees of freedom: 8

Chi-Square= 37.70       $p \leq 0.001$       Distribution is significant

**Consumers Contacting their Telephone Company at Least Once in the Past 12 months, per Category of Service (Group that Considered Price of Long Distance Service to be High) (Table 5)**

A. Contact Local Service Co.

Degrees of freedom: 8

Chi-Square= 101.63       $p \leq 0.001$       Distribution is significant

B. Contact Long Distance Co.

Degrees of freedom: 8

Chi-Square= 220.84       $p \leq 0.001$       Distribution is significant

**Consumers Contacting their Telephone Company at Least Once in the Past 12 months, per Category of Service (Group that Considered Price of Both Local and Long Distance Services to be High) (Table 6)**

A. Contact Local Service Co.

Degrees of freedom: 8

Chi-Square= 194.56       $p \leq 0.001$       Distribution is significant

B. Contact Long Distance Service Co.

Degrees of freedom: 8

Chi-Square= 120.27       $p \leq 0.001$       Distribution is significant

**Frequency of Consumer Contact with Their Local Service Company in the Last 12 Months for Billing Issues (Table 7)**

High \$ Local v. All Others

Degrees of freedom: 5

Chi-Square= 563.06       $p \leq 0.001$       Distribution is significant

High \$ LD v. All Others

Degrees of freedom: 5

Chi-Square= 292.21       $p \leq 0.001$       Distribution is significant

High \$ Local & LD v. All Others

Degrees of freedom: 5

Chi-Square= 590.10       $p \leq 0.001$       Distribution is significant

**Consumer Perception of their Ability to Choose their Local Telephone Company (Table 8)**

High \$ Local v. All Others

Degrees of freedom: 2

Chi-Square= 470.04       $p \leq 0.001$       Distribution is significant

High \$ LD v. All Others

Degrees of freedom: 2

Chi-Square= 136.43       $p \leq 0.001$       Distribution is significant

High \$ Local & LD v. All Others

Degrees of freedom: 2

Chi-Square= 414.50       $p \leq 0.001$       Distribution is significant

### **Consumer Perspective of the Impact of Competition (Choice) in the Local Telephone Industry on Quality of Service (Table 9)**

#### High \$ Local v. All Others

Degrees of freedom: 2

Chi-Square= 909.60       $p \leq 0.001$       Distribution is significant

#### High \$ LD v. All Others

Degrees of freedom: 2

Chi-Square= 436.10       $p \leq 0.001$       Distribution is significant

#### High \$ Local & LD v. All Others

Degrees of freedom: 2

Chi-Square= 865.84       $p \leq 0.001$       Distribution is significant

### **Consumer Perspective of the Impact of Competition (Choice) in the Long Distance Telephone Industry on Quality of Service (Table 10)**

#### High \$ Local v. All Others

Degrees of freedom: 2

Chi-Square= 182.21       $p \leq 0.001$       Distribution is significant

#### High \$ LD v. All Others

Degrees of freedom: 2

Chi-Square= 1693.75       $p \leq 0.001$       Distribution is significant

#### High \$ Local & LD v. All Others

Degrees of freedom: 2

Chi-Square= 866.40       $p \leq 0.001$       Distribution is significant

**Consumer Perspective of the Impact of Competition (Choice) in Local Service on the Price of Local Service (Table 11)**

High \$ Local v. All Others

Degrees of freedom: 2

Chi-Square= 2339.92       $p \leq 0.001$       Distribution is significant

High \$ LD v. All Others

Degrees of freedom: 2

Chi-Square= 1252.72       $p \leq 0.001$       Distribution is significant

High \$ Local & LD v. All Others

Degrees of freedom: 2

Chi-Square= 2286.48       $p \leq 0.001$       Distribution is significant

**Consumer Switching Experience for Local Service during the Last 12 Months (Table 12)**

High \$ Local v. All Others

Degrees of freedom: 3

Chi-Square= 2603.68       $p \leq 0.001$       Distribution is significant

High \$ LD v. All Others

Degrees of freedom: 3

Chi-Square= 575.77       $p \leq 0.001$       Distribution is significant

High \$ Local & LD v. All Others

Degrees of freedom: 3

Chi-Square= 1924.14       $p \leq 0.001$       Distribution is significant

**Consumer Switching Experience for Long Distance Service during the Last 12 Months (Table 13)**

High \$ Local v. All Others

Degrees of freedom: 3

Chi-Square= 980.13       $p \leq 0.001$       Distribution is significant

High \$ LD v. All Others

Degrees of freedom: 3

Chi-Square= 2814.84       $p \leq 0.001$       Distribution is significant

High \$ Local & LD v. All Others

Degrees of freedom: 3

Chi-Square= 1989.72       $p \leq 0.001$       Distribution is significant