

THE IMPACT OF MEASURED TELEPHONE RATES
ON TELEPHONE USAGE OF GOVERNMENT
AND NONPROFIT ORGANIZATIONS

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ABSTRACT

This project was undertaken for the purpose of estimating whether there is significant negative impact on the public/social service type agencies as a result of using a measured rate structure for the telephone. Specifically, the question was whether the use of such a rate structure would alter telephone usage in such a way as to significantly reduce the quality and/or quantity of community services provided. In pursuing the question of measured service impact, studies and comparisons of two cities, one with a flat rate structure (Cincinnati) and one with a measured rate structure (Cleveland), were undertaken.

Prior to undertaking the main study of Cleveland and Cincinnati a pilot study was done of organizations in Columbus, Ohio, a city which has recently instituted measured rates. The pilot study resulted in several important changes in the questionnaire to be used in the Cleveland-Cincinnati study. In addition to suggesting refinements to the main study methodology, the pilot study yielded information about the initial adjustments made by organizations in response to the measured rate structure. Although the results of the pilot study cannot be considered statistically valid, the results do give insight into the impact of measured rate service.

The majority of the organizations (82%) responding to the pilot questionnaire felt that the change to measured service did not affect their ability to serve the public. However, a number of organizations did change the way they operated because of the rate structure change in Columbus. The use of measured rates has led in many cases to a greater awareness of telephone usage, more efficient telephone usage, and improved allocation of the costs of telephone usage within organizations. There were also numerous statements made by organizations that indicate a number have experienced increased costs due to measured service. Chapter 4 discusses the results of the Columbus Pilot study in detail.

The Cleveland-Cincinnati study involved three phases: case studies of some "like" organizations; surveys of a larger sample of organizations; and comparisons of telephone traffic data collected by the telephone companies in each city.

The case studies examined three like organizations in each city. Two techniques were used to obtain information: the nominal group technique and interviews with upper level administration. The results of the case studies indicate only limited differences between the two cities with respect to the ways in which the telephone is used. The case studies did indicate that if measured rates were imposed on the organizations in Cincinnati, local telephone usage would be evaluated more closely and the telephone would more clearly be viewed as an economic resource with a cost. That is, the organization would examine programs that require extensive use of local telephone service and evaluate the telephone and alternative means of communication in terms of cost/benefit analyses. This potential reaction is similar to organizational behavior which already exists in Cleveland. This is, the Cleveland organizations tend to evaluate the costs and benefits of telephone usage in structuring the delivery of their services. The results of the case studies can be found in Chapter 5.

The survey technique involved lengthy interviews with organizations in Cleveland and Cincinnati. In all cases the interviews were conducted with the person in the organization who had knowledge of the organization's telephone usage.

The survey results suggest occasional differences between the cities for various strata. In particular, the libraries, charities and schools were most likely to exhibit variations, and the same strata tended to exhibit more reaction to measured rates (both hypothetically and in reality). However, there was no consistent pattern of response indicating any substantial negative impact from measured rates. Also, some data collected suggest that differences observed in some strata may be due to factors other than the telephone rate structure, such as management discretion. There was no significant difference between the cities with respect to the reasons for local telephone usage, and the importance of the telephone was equally evident in both cities.

In addition to directly comparing the responses obtained in both cities, the responses were restratified on the basis of various factors. The purpose of this restratification was to determine whether significant differences between cities might become apparent if each of the factors was isolated. Chapter 7 contains the results and discussion of the restratifications. The results indicate again only limited differences between Cincinnati and Cleveland, and no consistent pattern of differences.

The telephone company in each city was requested to collect and supply traffic data both for the entire city and for specific organizations. The results of the analyses that were done suggest there could be a significant difference between the cities in the actual quantity of usage, though this is not a certain conclusion. Weaknesses in the data collection, along with potential weaknesses in the methodology employed, limit the conclusions which can be drawn. A detailed discussion of the traffic data is contained in Chapter 8.

In summary, most test procedures used did not indicate a significant difference between Cleveland and Cincinnati in the quality of services provided by social service type organizations. The data suggests that total usage is different for the two cities. One could conclude that over the long run measured service will not affect the quality of service but could reduce the number of outgoing calls made by these organizations.

PREFACE

This report was prepared by the National Regulatory Research Institute's Telecommunications Research Division in response to a request by the Public Utilities Commission of Ohio to investigate the effects of measured service. A complete work statement can be found in Appendix A and a chronology of the project in Appendix B.

The reader that is interested in the findings of our study need only read Chapters 1 and 9. Those readers who are not familiar with the issues surrounding measured service or other studies on measured service should read Chapter 2. A detailed explanation of our study methods can be found in Chapter 3. Chapter 4 contains the detailed results of our pilot study that was conducted in Columbus, Ohio. The detailed results of our main study that was done in Cincinnati and Cleveland, Ohio, can be found in Chapters 5, 6, 7, and 8.

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CHAPTER 1 INTRODUCTION

Traditionally, the pricing of telephone service has been formulated primarily on the basis of "value of service." That is, customers were divided into classes, and the rate charged was a function both of the average cost of supplying service to that class and the "value of service" to that class (demand elasticity). The result was a substantial degree of price discrimination that may or may not have reflected the actual cost incurred by a ratepayer's usage.

In recent years, however, there has been a trend toward pricing these services to reflect more accurately the costs per individual within a class, rather than the average of all members of a class. Full-scale use of such a technique in the telephone industry would require that price be related to the number of calls, length of calls, time of day, day of week, and distance. As a first approximation of this goal, rates based on the number of calls made are being implemented in many areas. The generic term used to describe this method of pricing is "usage sensitive pricing" or, as in Ohio, "measured service rates." The general measured service rate structure requires the individual to pay for local telephone service based on actual usage (i.e., number of calls made) rather than on a flat rate related to average usage. A typical telephone company tariff for measured service includes a flat monthly fee and a charge per call for all calls after an initial call allowance; for example, message rate business service in the Cleveland

exchange is \$16.45 per month plus 9¢ for each call in excess of the initial allowance of 80 calls per month.¹

Use of measured service rate structures gives the ratepayer greater control over his total bill. In addition, such rates should move the rate structure closer to the marginal cost pricing standard long favored by economists for its economic efficiency (see Chapter 2, pages 6 and 7). However, since telephone bills for some would rise (while for others they would drop) under an accurately calculated MRS standard, it has been alleged that such a rate structure may force changes in the operations of public or social service (and other) institutions.² The primary objective of this study is to determine whether the use of measured rates as opposed to flat rates does in fact significantly affect the delivery of social services to a community.

The potential impact of measured rate service on social service organizations is an important question. These organizations fill a unique niche in our society. They provide goods and services (education, roads, protection, etc.) that are essentially public in nature, i.e., goods that would not be purchased and supplied in optimum amounts from private firms. In some cases these organizations also serve to help meet society's goals of equity among its citizens.

Unlike typical business enterprises, public or social service type organizations cannot directly pass onto their customers or clients the full cost of providing service to the public. Instead, these services are typically funded either through taxes or contributions or

¹See PUCO No. 3, Exchange Rate Tariff, Section 2, 2d Revised Sheet No. 9, August 13, 1976.

²For the purpose of this study, social service type organizations were divided into the following strata: local government agencies, state government agencies, hospitals, schools, universities, charities and libraries.

both. Since changes in cost components typically cannot be instantly recovered through increased prices, some other adjustments will occur-- increased efficiency, and/or decreased quantity or quality of service.

In fairness, it should be pointed out that a profit making business may not have the ability or willingness to pass on increased costs in the short run. However, the business firm does have the option of absorbing the increased cost (in the short run) by reducing its profitability, an option not open to the social service type agency. The business firm, like the social agency, can attempt to increase efficiency. As mentioned, the objective of this study is to see if one can quantify a difference in the quality and/or quantity of social services provided to a community as a result of different telephone rate structures.³

The study utilizes a survey method to estimate the effects of measured rate service. The study was conducted in three major Ohio cities: Cleveland, Cincinnati, and Columbus. Cleveland has used a measured rate structure since 1919. Cincinnati uses a flat rate structure, and Columbus recently switched to a measured rate structure for all but residential customers. (The Cleveland and Columbus areas are served by the Ohio Bell Telephone Company, and Cincinnati is served by the Cincinnati Bell Telephone Company.)

An initial pilot study was field tested in Columbus and was used to determine the usefulness of the survey method for the major study areas of Cleveland and Cincinnati. Also, since Columbus has recently changed from flat rates to measured use rates, the Columbus questionnaire included questions relating to the ways in which social service type agencies responded to the rate structure change.⁴

³See Appendix A for the work statement.

⁴See Appendix B for a brief project chronology.

Upon completion of the pilot study, a questionnaire was developed and used in both the Cincinnati and Cleveland metropolitan areas, and traffic data were collected by the telephone companies in each area. In addition, case studies of several like agencies were completed to examine more fully the effects of rate structure on telephone usage. Comparable public service type agencies were identified in Cincinnati and Cleveland, and the agencies were placed into the seven strata (see footnote 2, pg. 2) and a statistically significant sample was determined.

The survey questionnaire sought data on amounts and variations of customer usage under each of the rate structures. The data obtained from the survey were used to infer the impact of measured service pricing on telephone usage by public service institutions. The data were also used to evaluate any impact on the quality of service such as possible delays in service caused by using alternate forms of communication, lost revenue, or other impacts related to telephone usage. In addition, total budgets and telephone budget data were collected and examined to estimate the extent of fiscal constraints on these agencies.

The following chapter briefly explains the theoretical basis for measured rate service and discusses the perceived advantages and disadvantages. It also contains summaries of two previous studies of measured rate structures. Chapter 3 explains the methodologies employed and scope of the full study. Chapter 4 explains the Columbus Pilot Study and discusses its results. Chapter 5 discusses the method and results of the case studies conducted in Cleveland and Cincinnati. The methods and results of the Cleveland-Cincinnati survey are contained in Chapter 6. Chapter 7 contains a further analysis of the data obtained from the Cleveland and Cincinnati surveys. In Chapter 8, we discuss the telephone usage data. Chapter 9 contains the conclusions derived from the study.

CHAPTER 2
SOME PERSPECTIVES ON MEASURED RATE SERVICE

This study is concerned with only one aspect of measured rate service. That is, how significant, if at all, is the effect of such a rate structure on the performance of social service type agencies. Nevertheless, since there is controversy over the concept, it is useful to review the rationale underlying measured rate service. In addition, a review of two major studies on the effects of measured service can be found in Section C.

A. Theoretical Basis -- Marginal Cost Pricing

Traditionally, the major objectives in determining the general level of rates and the rate structure in regulated industries have been threefold: first, that the company recover its true costs; second, that the firm earn a profit sufficient to attract the necessary new capital (a fair rate of return); and third, that the pricing structure be such that it encourages an efficient operation of the firm. In addition, with respect to the rate structure itself, there are two other considerations. One, equity goals require that there should not be undue price discrimination among customers. Two, the public interest may require some adjustments for particular groups. One might more concisely define these goals as equity, efficiency, and fair rate of return.

While the objectives are easily stated, the problem of implementing a pricing standard that will most nearly achieve these goals is not so easily resolved. Economic theory tells us that in a perfectly

functioning, highly competitive economy, the marginal cost pricing standard will usually yield the greatest efficiency for both the individual consumer and for society as a whole.

Efficiency for the society is achieved when the limited resources available at any given time are used in a way that maximizes output in accordance with the preferences of the consumers. Every resource has an opportunity cost; i.e., it could be used to produce an alternative output. Marginal cost measures the extra cost of producing an additional unit of output and thus is a measure of the value of the additional resources used (or their opportunity costs). When consumers purchase that good at a price equal to its marginal cost they are, in effect, voting to use resources for this output rather than an alternative. Thus, the good has a value to the consumer equal to the value of resources used. If the price were greater than marginal cost (given the consumer's response to higher prices), less of the good would be purchased and produced and a less than optimal amount of resources would be devoted to its production. At prices below marginal cost, consumers would naturally increase their purchases, and thus a greater than optimal amount of resources would go to that output. Marginal cost pricing yields the optimum resource allocation and thus economic efficiency for the society.¹

From the firm's standpoint, marginal cost pricing means that for each additional unit produced the firm will receive increased revenues sufficient to cover the increased costs. The rational firm would not, of course, choose to produce where price is less than marginal cost. The same rational firm might prefer to produce where price is greater than marginal costs and thus earn monopoly profits (or what economists term "economic profit"), but either competition or regulatory agencies could hold the price equal to marginal cost and thus offer an adequate

¹Alfred E. Kahn, The Economics of Regulation: Principles and Institutions, vol. 1 (New York: John Wiley and Sons, 1970), pp. 66-67.

but not excessive profit.² Thus, accurate marginal cost pricing can yield an optimum allocation of society's scarce resources, allow for rational consumer choice, and give the firm a just but not excessive profit,³ thereby encouraging efficiency of operations.

Economic literature is filled with discussions and examples of the merits of marginal cost pricing, and, in a fully competitive economy, such a system would be achieved. In practice, true and complete marginal cost pricing is not pursued by all firms and may be difficult to obtain for the public utilities. Beyond the obvious and difficult problems of accurately defining and measuring marginal costs, there are a variety of definitional and theoretical problems associated with marginal cost pricing for the utilities. Just one example of these problems arises from the fact that marginal cost is essentially a short-run concept, i.e., the change in variable costs for producing one additional unit. Utilities, however, typically have a very high proportion of fixed costs and there arises the problem of how to treat depreciation, cost of capital and other significant long-run costs under a marginal cost standard.⁴

Thus, while marginal cost pricing may be viewed as an economic ideal, it may not be feasible or possible to utilize fully such a pricing mechanism. Nevertheless, on efficiency grounds alone, attempts to move toward an approximate marginal cost pricing should be encouraged.

The use of measured rate service is just such a step toward marginal cost pricing. Under the more commonly used flat rate price

²This assumes the firm is in a profit making position. If the firm were in a loss position, the same marginal cost pricing would minimize losses.

³Economists define excessive profit as that amount of profit above the minimum amount necessary to induce the entrepreneur to maintain operations of the firm.

⁴Kahn, op. cit., pp. 70-75.

structure, there is an averaging of costs for a group of consumers that are then reflected in the fees charged for telephone service. In other words, customers within a certain class of service pay the same monthly rate regardless of the extent to which an individual may use the service. These classes of customers are categorized on the basis of "value of service." That is, the price charged for telephone service reflects the value of that service to different classes of customers. Measured rate service, while using some average cost calculations, recognizes that price should be related to the actual cost created by the individual usage. It allows for individual variations in use and also moves a step away from value of service pricing and toward pricing based on costs. Thus, there is more equity to the rate structure.

B. The Issues

The following paragraphs contain a brief summary of the perceived advantages and disadvantages of measured rate services. Advantages are discussed first.

(1) An often cited advantage to measured rate service is that the consumer has more control over his telephone bill. Any consumer is faced with two facts: a limited amount of money (at any one time) and relatively unlimited wants. The goal of the rational consumer is to spend that money in such a way to maximize his satisfaction. Different goods have different values to each consumer, and the rational consumer spends his money so that the extra satisfaction per dollar received from the last unit of a good/service purchased is equal to the extra satisfaction per dollar from the last unit of each other good purchased. This objective is referred to as "consumer's equilibrium," i.e., an optimum point where the consumer has maximized his satisfaction subject to a budget or income constraint. Consumers are prevented from achieving this optimum when goods are packaged and

priced in such a manner so as to prevent the purchase of only the desired quantity. Use of flat rates for telephone service is one example of such a barrier to the consumer's equilibrium. Measured rate service gives greater flexibility to consumer expenditure and allows the ratepayer to determine whether the extra satisfaction from an additional call is worth the extra cost.

(2) Some proponents say that the measured rate service, as mentioned in the previous section, moves the telephone company closer to a price equal to marginal cost and begins the movement away from the value of service standard (a standard that creates greater price discrimination). This provides greater economic efficiency from the standpoint of the whole economy.

(3) The costs of providing telephone service have been driven up by the high rate of inflation that now plagues the economy. For instance, the cost of capital itself in the 1970s has more than doubled over those of previous decades.⁵ The Bell System suggests that measured service will allow customer to control costs.

"The only alternative is to raise prices, a course which the Bell System has reluctantly pursued during the past decade. A continuing series of rate actions has stimulated resistance from both consumers and regulators. Under a flat rate system, inflation forces customers to pay higher and higher local rates with little price flexibility or option. Measured service helps the telephone company cover its costs and offers customers an option which could help them hold down the cost of their basic service."⁶

⁵"Measured Local Telephone Service: Regulatory Perspective and Rationale," Keynote Address by Charles A. Zielinski, Chairman, New York Public Service Commission, before the Telecommunications Industry Workshop on Local Measured Service, Kansas City, Missouri, March 13, 1979, p. 4.

⁶"The Rationale for MS Pricing," Informational paper provided by Cincinnati Bell, p. 2.

(4) Proponents indicate the growing usage of telephone services is driving up the costs of providing those services. Usage of telephone services has an important economic impact upon the provision of both service and equipment, and "When the number and average duration of calls increase, more equipment and facilities must be provided. Under measured service, the growth in usage which increases costs would tend to be offset by increases in revenue."⁷

(5) A question of fairness arises. It is felt by proponents of measured rate service that those who use telephone services the most should pay the costs associated with their heavier use of these services. Further, they note that low and moderate users are paying for some of the usage created by heavy users. To the extent that this occurs, we have what amounts to a subsidy of heavier users by other users of the various telephone services, regardless of abilities to pay.

(6) To the extent that "prices for local telephone usage more closely reflect the incremental cost of providing that usage, there is the claim that telephone companies are more likely to be able to earn the revenues needed to cover additional costs without having to return repeatedly to regulatory commissions for rate relief."⁸

The opponents of a measured rate pricing structure cite many disadvantages of measured rate service as reasons why it should not be implemented. The following is a brief review of the major disadvantages of measured rate service and the arguments against its implementation.

⁷Ibid., p. 3.

⁸Zielinski, op. cit., p. 6.

(1) The implementation of a measured rate pricing structure may force changes in the operations of social and/or public service type organizations that could, in turn, result in a decline in the quality of services provided to a community. It is argued that implementation of measured rate service will result in high telephone costs to the aforementioned organizations that cannot pass on their cost as can profit-making businesses. It is alleged that the increase in operating costs would be significant enough to affect the quantity and quality of programs, services, etc., that they offer.

(2) A frequent and serious criticism of the telecommunications industry is that the costs of providing telephone service are not well defined. Further, the insufficient availability of cost data prohibits any objective analysis of the costs on which measured rate service is based. However, critics of measured rate service defy the telecommunications industry to produce satisfactory cost data.

(3) There are increased costs and, thus, potentially higher rates associated with a measured rate pricing structure. These increased costs derive from the need for recording messages in central offices and the even more complex accounting and billing procedures that measured rate service necessitates.⁹

(4) Measured rate service may result in variations in telephone usage relative to economic fluctuations. Consequently, telephone company revenues would become unstable unless there was sufficient growth to offset the cyclical variations.

(5) Contrary to the view of the industry that a significant revenue loss is occurring as a result of competition, critics of measured service allege "that existing competition in telecommunications services results in a comparatively small loss of revenues to

⁹"Southern New England Telephone Usage Study," presented before the Public Utilities Control Authority of Connecticut in February of 1977.

the telephone companies."¹⁰ Thus, "consumers should be skeptical about the extent to which LMS (Local Measured Service) rate structures are necessitated by telephone industry losses inflicted by this type of competition."¹¹ It should be noted that the industry has yet to substantiate its claim.

(6) Some critics allege that certain groups may face financial hardships as a result of implementation of measured rate service (e.g., low income consumers).

C. Other Studies

General Telephone of Illinois Study

Some years back GTE began a four-phase study of usage sensitive pricing.¹² Phase 1 involved constructing mathematical and econometric studies of demand for local telephone services. The lack of adequate data for this phase led to the startup of Phase 2 - a pricing experiment. A brief summary of results from Phase 2 follows.

Three central Illinois communities were selected for the experiment that began in May 1975 and continued until April 1977. During this time period, local telephone usage (under a flat rate) was metered and analyzed. Initially, the measurements occurred without public knowledge. Later, the public was informed, and the metering and analysis continued with public awareness. Customers were given duplicate bills showing

¹⁰"Every Home Needs a Pay Phone?," Keynote Speech by Lee Richardson of the U.S. Office of Consumer Affairs, before the Telecommunications Industry Workshop on Local Measured Service, given on March 13, 1979, at Kansas City, Missouri, p. 5.

¹¹Ibid.

¹²Testimony of Witnesses in the Matter of General Telephone Company of Illinois before Illinois Commerce Commission, Docket No. 76-0069, March 3, 1976.

what they would have paid under measured rate service, while continuing to pay the flat rate tariff. Customers were surveyed regarding reactions to measured rate service before the first duplicate billing was received. A second opinion survey was conducted after at least two duplicate billings were received. While the duplicate billing had no appreciable effect on telephone usage,¹³ it did significantly alter opinions.

The first survey indicated that only 16% of the residential customers had a preference for measured rate service, while the second survey (following at least two duplicate billings) indicated 32% (of residential customers) preferred measured rates.¹⁴ Similarly the first survey reported 34% perceived measured rates as being more fair than flat rates and this figure increased to 48% on the second survey.¹⁵ For business customers those who preferred measured rates increased from 4% to 30% from the first to the second survey.¹⁶

The survey also provided some evidence of potential changes in the patterns of telephone usage. The second survey showed a change from 47% to 56% in the number of residential customers who would reduce telephone usage if their marginal rate billings were higher than their flat rate charges.¹⁷ In fact, 70% of all customers (in the second survey) indicated they would decrease telephone usage, as opposed to 56% from the first survey.¹⁸

¹³It should be remembered that customers were still paying the flat rate charges during the survey period.

¹⁴Testimony of Mr. Ellard in the matter of General Telephone Company of Illinois, Exhibit No. 1, Chart 8.

¹⁵Ibid., Chart 11.

¹⁶Ibid., p. 107.

¹⁷Ibid., Chart 12.

¹⁸Ibid., Chart 13.

The surveys also reported some data regarding demographic impact of measured rates. Peak telephone usage (both in minutes and number of calls) occurred in homes where the head of the household was in the age group 50-59 years. Lowest usage was for families with heads of household in the age group 60 and above.¹⁹ Some indication of the economic impact of measured rates is found in the survey data contained in the following table.

Table 2-1
GTE - Illinois Study 1976
Residence One-Party Mean Usage
As a Function of Household Income²⁰

| | Household Income | | | |
|-----------------------------|------------------|----------------------|------------------------|------------------|
| | <u>\$0-7000</u> | <u>\$7000-12,000</u> | <u>\$12,000-16,000</u> | <u>\$16,000+</u> |
| Average Minutes | 332.80 | 352.80 | 288.90 | 355.50 |
| Average Calls | 113.40 | 92.35 | 79.80 | 90.93 |
| Average Minutes Per Call | 2.94 | 3.82 | 3.62 | 3.68 |

The data suggest that a somewhat greater economic burden would lie on low income groups.²¹

Phase 3 of the GTE study involved the actual implementation of non-optional measured rate service beginning September 1, 1977 for residence one party customers. A third survey was taken in April 1978.

Among the study results is the fact that local usage did change after implementation of measured rates. The absolute level of usage

¹⁹Ibid., Exhibit 2.

²⁰Ibid., Exhibit 3.

²¹However, definitive conclusions would be questionable due to the limited number of income categories used and the possibility that income brackets of another size might yield different results.

has been reduced, as has the variance in usage. However, there has been little change in the hourly pattern of use. Further, after implementation, the survey showed that 44% preferred measured rates, 42% flat rates, 12% indifferent, and 2% uncertain.²²

Southern New England Telephone Study

Southern New England Telephone, in conjunction with Bell Telephone Laboratories, conducted a study of usage sensitive pricing in nine electronic switching system (EES) offices in Connecticut.²³ The results were presented before the Public Utilities Control Authority (PUCA) of Connecticut in February 1977. As with the GTE study, no substantial data were collected on social service type agencies. Also, some results were somewhat contradictory to results obtained in the GTE study. A review of the two studies is still useful, however, for the general insights gained, and also to point up the need for more definitive studies of all the issues surrounding usage sensitive pricing.

In the SNET study usage data were collected daily (24 hours a day for 1 year) and analyzed on a sample of 3,043 customers.²⁴ The demographic characteristics of the sample group (e.g., income, race, etc.) were generally consistent with 1970 census data for the area. The following are just a few of the study results.

²²Gerald, Cohen "Implementing Non-Optional Usage Sensitive Pricing," Proceedings of the First NARUC Biennial Regulatory Information Conference, October 1978.

²³Southern New England Telephone Study, ordered in Docket 11671 in October 1975 by, and presented to, the Public Utilities Control Authority of Connecticut in February 1977.

²⁴1748 Residence Lines and 1295 Business Lines.

- (1) Lower income families made fewer calls per day than higher income families, but minutes per call were greater for low income groups.
- (2) Blacks made an average of 4.3 calls per day, as compared to 2.6 per day for whites. Minutes per call were not significantly different between the races (5.0 for whites, 5.2 for blacks).
- (3) Those persons between 18 and 21 and those over 70 had the fewest calls per day, but these same groups had the most minutes per call.
- (4) Businesses (on the average) made more than twice as many calls per month than residents, but the average minutes per call for businesses was less than half that for residents. Thus, there was no significant difference in total usage.
- (5) A June 1976 survey of Connecticut subscribers reported 55% opposed measured rates.²⁵

²⁵Southern New England Telephone Study, op. cit.

CHAPTER 3 METHOD AND SCOPE OF STUDY

As previously stated, the primary objective of this study is to determine whether the use of a measured rate structure has any significant impact on the quality and or quantity of services provided to a community by its public or social service agencies. The term quality is somewhat nebulous--its precise interpretation being subject to one's individual perceptions. Within the context of this study, quality was defined to refer to the following: first, how effective is an agency in either remedying a problem it is designed to remedy, and/or addressing a need it was designed to meet; second, and not mutually exclusive of effectiveness in providing the service, is efficiency. Is the service provided in a timely manner? Is it performed in a reasonable time period, and at a reasonable cost? While more could be said about the meaning of quality as it relates to individual agencies, these general statements suffice for the needs of this study.

Quantity refers essentially to the number of clients served, number of problems resolved, number of services provided--with the specific meaning being a function of the objectives of the particular organization.

It is quite valid to pursue the issue of measured rate service (MRS) impact on these social agencies. In part, the need for study arises from the public's concern for such organizations. However, the issue

goes beyond the realm of public opinion. These agencies, for the most part, provide what economists call "community" or "social" goods. That is, goods whose benefits cannot be confined to one person; for example, if a health clinic provides measles vaccinations, those persons who do not get vaccinated will still have increased protection, since the likelihood of a measles outbreak decreases when some do get vaccinated. Similarly, the community at large benefits from the increased education of any member of the community. The list of examples could continue at length, but the essential characteristic is that these services generally create "external benefits," i.e., benefits to persons other than the primary recipient. This is in contrast to the typical transaction in the private marketplace, where the individual who purchases clothing, food, automobiles, etc., has the ability to confine the benefits of the purchase to himself. Due to the existence of these external benefits, an optimum amount of such goods/services would not be provided and purchased in the private marketplace. Consequently, those goods/services are typically provided either by government agencies or charitable groups. Since the goods/services provided by those organizations are generally considered to be necessary and/or highly desirable, it becomes important to give consideration to any factor that might have a negative impact on their provision.

In beginning the study, one of the first steps was to determine which agencies should be included in the analysis. Ultimately seven categories or strata of social service organizations were defined. Other classifications could have been used, but these seven were deemed to be sufficiently representative to infer the information needed. The strata chosen were:

- (1) Local government agencies (city and county)
- (2) State government agencies
- (3) Hospitals
- (4) Schools
- (5) Universities and colleges
- (6) Charities
- (7) Libraries

Having selected the strata, the next step was to define the population within each stratum. A variety of sources was used for this. The Yellow Pages listings of the telephone book (for each city) were used to define the populations of the library, university, charity, local government, and state government strata. The Ohio Educational Directory for 1978-79, published by the Ohio Department of Education, was used for delineating the school stratum. The population of the Hospital stratum was defined from the listings in A Guide to the Health Care Field 1978, published by the American Hospital Association.

The study focuses on the Cleveland and Cincinnati metropolitan areas. Cleveland is a measured rate service area, and Cincinnati utilizes a flat rate. Since the two areas have many similar demographic features, but different rate structures, it was felt that study results from each metropolitan area would provide useful comparisons.¹

The main study consists of a three-part approach: (1) surveys of sample groups in each stratum for each city; (2) quantitative count data and general usage data on subsets of those interviewed; (3) case studies of selected agencies so as to obtain more detailed information and to help check the validity of the survey results.

A. Surveys

Survey questions were designed to provide information about the following subjects for each agency surveyed.

- (1) The significant reasons for telephone usage, and the importance of the telephone in accomplishing the major function(s) of the organization;

¹See Appendix G, "Demographic Considerations," for a summary of the demographic characteristics of Cleveland and Cincinnati.

- (2) The calling characteristics of the organization, e.g., ratio of incoming to outgoing calls, personal vs. business calls etc.;
- (3) The size and costs of current telephone operations;
- (4) The importance of other means of communication;
- (5) Organizational characteristics;
- (6) The size of the population served by the organization;
- (7) The impact of measured rate service.

Before proceeding to survey the agencies in Cleveland and Cincinnati, a pilot study was done in Columbus. Any survey runs the risk of bias and ambiguity in its design, that could then nullify the usefulness of its results. One way of minimizing this risk is to do a pilot study and test the questionnaire itself. Problems with a questionnaire can arise from several sources. The following are some primary causes of bias and error. One, the questions themselves, may be ambiguous, or they may be worded in such a way as to elicit ambiguous responses. Two, the questions may be arranged in such an order that they elicit self-serving responses. Three, relevant questions may be omitted and/or irrelevant questions included. A pilot study provides an opportunity to discover these problems and thus refine the questionnaire for greater accuracy.

As a result of the Columbus pilot study, a number of revisions were made in the questionnaire for use in Cincinnati and Cleveland (copies of the two questionnaires are contained in Appendix C):

- some questions were rephrased to clear up existing ambiguities;
- some questions were dropped altogether;
- Polimetrics² observed that while the interviewer contacted that person in the called organization who was responsible for handling telephone services,

²Polimetrics was subcontracted to do the actual interviewing. See p. 22 for a fuller discussion of their role.

often the interviewee didn't have immediate (if any) access to all the information needed to complete the survey. For example, the person in charge of telephone services may not know the number of people employed on a part-time basis by the organization; an estimate of the budget for the organization; or what percentage of the organization's staff could be considered professionals, clerical. It was suggested that, for the main study, a letter be sent to all organizations that would be called, informing them of the survey and the types of information that would be asked of them.

The pilot study was also used to help determine valid sample sizes for the surveys in Cleveland and Cincinnati. Sample sizes for the main study were based upon the pilot study responses to the five questions tested below.

- percent in each stratum who answered that their organization could not accomplish its main function without making outgoing phone calls;
- percent in each stratum who answered that the quality of service their organization provides would decline if the price of a telephone call increased;
- percent in each stratum who answered that besides the telephone, mail was a mode of communication used by their organization;
- percent in each stratum who answered that, in those situations where either the telephone or another mode of communication are equally appropriate, the telephone is used most often;
- percent in each stratum who answered that if the telephone could not be used, there would be significant delays in the service or benefits provided by their organization.

B. Design of the Survey Sample

An initial plan was to sample 600 to 800 agencies in the two city areas. Since the total population in the seven strata in both cities consisted of about 1,500 agencies, the sample size was a significant proportion of the entire population. Therefore, in making estimates

about proportions of the populations answering questions specific ways, considerable precision could be gained by using a sampling plan without replacement rather than one using replacement (replacement means that a sample element could be selected again). This meant that our sample of agencies responding in a certain way to a question would follow a hypergeometric distribution rather than the binomial distribution. There are advantages and disadvantages to each of these sampling plans. The one resulting in the hypergeometric distribution offers greater precision for given amounts of data, but the binomial distribution, being more tractable, leads to a number of standard statistical procedures for testing hypotheses about differences between strata and/or cities. It was decided that, considering the cost of data, the best plan was to maximize precision; therefore, the "without replacement" plan was adopted.

Since it was anticipated that final analysis of results would consist of identifying and testing for significant differences between cities and between cities within strata, a test procedure was needed. The procedure devised consisted of establishing a 95% confidence interval for the proportion of a given population responding in a specific way to a question, and for the population to which a comparison was to be made, similarly to establish a 95% confidence interval. If these confidence intervals did not overlap, the difference between the proportion of the two populations to be statistically significant. If they overlap by more than .01, one declares no significant difference. Finally, if they overlap by .01 or less, the difference in proportion is declared marginal. The main reason for the marginal category is that the approximation procedures were used to establish the confidence interval.³ The exact locations of interval endpoints was not known precisely.

³ Leo, Katz, "Confidence Intervals for the Number Showing a Certain Characteristic in a Population When Sampling Is Without Replacement," American Statistical Association Journal, June 1953, pp. 256-261.

Given the analysis procedures, it was possible to define a model that could be used to allocate the samples to the various strata in an optimal way. Let $C_{ij}^+(n_i, p_{ij})$ be the size of that portion of the confidence interval lying to the right of p_{ij} given n_i where:

- i stands for the i^{th} stratum, $i = 1, 2, \dots, 14$
- p_{ij} stands for the proportion of the population of stratum i responding a specific way to question j , $j \in J$
- n_i stands for the size of the sample in stratum i
- J stands for the set of questions considered the most important (i.e. those listed in the previous section).

Similarly, define $C_{ij}^-(n_i, p_{ij})$ to be the left portion of the confidence interval. Since, in the planning phase, one does not know where differences in strata may exist nor which strata will be involved, it is reasonable to minimize the largest portion of all confidence intervals. Another way to state the objective is to minimize the maximum imprecision. Define the imprecision of any given interval as follows

$$I_{ij}(n_i, p_{ij}) = \max C_{ij}^-(n_i, p_{ij}), C_{ij}^+(n_i, p_{ij})$$

The sampling plan design problem may now be defined:

Determine values for n_1, n_2, \dots, n_{14} so as

to Minimize I_{ij} /Maximize $I_{ij}(n_i, p_{ij})$

subject to $\sum_{i=1}^{14} n_i = \text{TOTAL SAMPLE SIZE}$

n_i for each i

n_i integer for each i

The pilot study results were used to estimate the values for p_{ij} that may be encountered. The problem was then solved by a dynamic programming technique.⁴ The resulting sample sizes served as ideal targets for actual sample sizes. Of course, in a telephone interview process there is little control over whether each interview is successfully completed, so that obtaining an actual sample exactly equal in size to the optimal sample is unlikely. The optimal sample size is the best goal, however.

C. Telephone Usage Data

General usage information and exchange information were obtained from Ohio Bell (for Cleveland) and Cincinnati Bell. In addition, the two companies were given a list of names and numbers from the survey strata to be sampled so as to obtain an objective measure of their usage. A sample from the middle of September to the end of October 1979 was taken. The data from Ohio Bell and Cincinnati Bell were used for analysis and correlation with survey results.

D. Case Studies

Six agencies were selected for the case study approach. While this sample number was too small to make statistical inferences, the case study approach yields information which aids in the understanding of the effects of measured rate service on an organization's operations. The case studies involved personal interviews of the senior administration of selected agencies and a nominal group process with a group of program directors and implementors. The approach allowed for more substantive questions and answers than were possible with the telephone surveys. Three similar agencies in each of the two cities were selected for the case studies. By comparison of these organizations, an attempt was made to delineate differences in operations that may be attributable to measured rate service.

⁴G.L., Nemtauser, Introduction to Dynamic Programming (New York: John Wiley & Sons, Inc.) p. 56.

CHAPTER 4 THE COLUMBUS PILOT STUDY

The Columbus pilot study was undertaken for the purpose of testing the questionnaire and the survey techniques to be used in the Cleveland-Cincinnati study. It provided information that led to refinements in the approach of the later study. It also generated information yielding general insights into telephone usage by the public/social service type agencies in Columbus. The sample size in Columbus was small, and technically not statistically valid, so the survey responses cannot, by themselves, be used to justify any given policy decision. However, the responses are interesting and useful to a limited extent. The survey results give an indication of the dimensions of the impact of measured rate service on the organizations interviewed. They also indicate some of the adjustments made by organizations and also suggest the parameters of a situation in which measured rates might have a significant negative impact.

The results of the pilot study suggest that there has been no adverse impact due to the change to measured rates. Organizations sampled in Columbus are now evaluating telephone service as a resource with a cost. This has led to more efficient use of the telephone service and improved intra-organizational allocation of telephone costs.

A total of 101 organizations were surveyed in Columbus.¹ The organizations were distributed among the strata in the following manner.

| <u>Strata</u> | <u>Sample Size</u> |
|---------------------------|--------------------|
| Charities | 20 |
| Hospitals | 5 |
| Libraries | 11 |
| Local government | 24 |
| Schools | 21 |
| State government | 15 |
| Universities and colleges | 5 |

The sample sizes were determined by estimating the percentage of the total population represented by the population of any one stratum. This percentage was then applied to the number of interviews to be conducted. The resulting number became the sample size for a given stratum, with the restraint that no sample size be smaller than five. Again, it should be stressed that these are not statistically valid sample sizes (the primary objective was not to survey Columbus but to reduce problems in the Cleveland-Cincinnati study), and therefore the survey results are useful only for insights gained. A discussion of the results of the key questions follows. Complete survey results can be found in Appendix D.

The importance of the telephone itself to the agencies is clearly seen by their answers to three questions (3, 15, 16). Of the 101 organizations surveyed, 91 responded that they could not accomplish their main purpose without the telephone. For 61 organizations, most of their contacts with the public take the form of incoming calls.

¹100 samples were completed by Polimetrics, and one sample was done by the Institute because it represented a large group of organizations.

Eighty-four organizations responded that there would be significant delays in the service or benefits provided if the phone could not be used. The need for the telephone is well established. The question remains whether the change to measured rates has a significant negative effect on the performance of these organizations.

When asked to identify the three most significant reasons for placing local telephone calls, 66 of the organizations mentioned calls involving a service or program provided by the organization.² General business calls and calls within organizations were the second and third most frequently cited reasons. Since this study is concerned with the impact on the quality of service provided, more detailed observations were made of these 66 organizations. It should be mentioned that only two of these 66 also mentioned personal calls as a significant reason for telephone usage. Cross-tabulations were compiled in order to examine the responses of these 66 agencies to other questions.

Fifty-nine of the 66 reported that their organizations could not accomplish their main function without making local outgoing phone calls. If the telephone could not be used, 53 of the 66 claimed that significant delays (11 claimed that minor delays) would result in the service or benefits provided by their organizations.

Twenty-four of the 66 (34 of 101) claimed that the quality of service would decline if the cost of a call increased. It is interesting to note that when asked if the change from flat to measured rates affected the organization's ability to serve the public, only 14 (of the 101) responded "yes." This apparent contradiction in

²Note: the results of all responses to this question can be found on pg. 191, Appendix D. However, the figures in the Appendix represent the total number of responses and therefore differ from those discussed here that represent number of organizations.

responses to the two questions has several possible explanations including: (1) the change to measured rates may not have increased telephone costs for some organizations; (2) the response may be simply the natural response to any suggested price increase; (3) the agency may have responded to higher costs by increasing efficiency.

Of primary interest among the various questions asked were those responses relating to the impact of the change to measured rate service on the various organizations. These will be discussed in the following paragraphs.

The organizations were asked whether they were on measured rates. Sixty-nine responded they were on measured rates, 13 believed they were on flat rates, and 19 either did not know or did not respond. Thus, 32 organizations were unaware that they are subject to measured rates. There are several possible explanations. One possible explanation is, of these 32, 18 are schools, and schools are subject to a topping rate. That is, their billings are based on the measured rate structure until the billing reaches a specified maximum. Under the topping rates, the telephone billing may not exceed this maximum. (That is, having reached the maximum, additional calls will be at zero cost to the subscriber.) It is possible that the topping rate structure may have led some schools to believe they are on a flat rate standard. A second possible explanation is that the change to measured rates may have had no significant impact on the organization's telephone bills and therefore was unnoticed. Third, it is possible that the particular person interviewed simply lacked the necessary information. Fourth, the billing procedures (e.g., for some city or county organizations) may be such that a particular agency is unaware of its individual telephone bill, i.e., an agency whose bills might be paid by the parent department. Those who were unaware of the measured rate structure were asked to respond hypothetically to those questions relating to measured rates.

The organizations were asked how measured rates have affected them. More than one response was accepted from each interview, but a number of organizations either did not know or made no response to this question. A total of 75 responses representing 68 organizations were recorded; Table 4-1 contains the results. Twenty-seven or 39.71% of the responding organizations reported that there had been no change in the operation of their agency as a result of measured rates. Eighteen or 26.47% reported that their costs had risen. The most frequent responses occurred in the library stratum (5 of 11 or 45%) and the hospital stratum (4 of 5 or 80%).

Eighteen or 26.47% of those responding reported that their organization had changed or would change their method of operation. These 18 represented all strata but the state stratum. The most frequently mentioned change referred to reduction in the use of the telephone. This included simply being "more careful" about using the telephone, limiting the use of the telephone, designating certain lines for outgoing calls, and actual monitoring of telephone use. Some organizations reported they were less apt to install new lines or to move equipment because of the higher costs. One organization reported that measured rates enabled them to recognize more easily when and where additional lines were needed. It is interesting to note that some organizations had noticed a change in incoming calls, e.g., persons requesting to hold, rather than call back, and thus tying up lines more. There were more specific responses from the charities and libraries. Some charities mentioned they were using fewer volunteers in the office and others reported they were making no more calls from the office for residential fund drives. The library responses are discussed in the following paragraph, since they were expanded upon in response to another question. Twelve organizations or 17.65% reported a change in employee benefits. Specifically this meant either personal calls were no longer permitted, personal calls were limited, or a charge was made for personal calls.

Table 4-1

To Your Knowledge, How Have Measured Telephone
Rates Affected Your Organization?

(Question 20)

| <u>Response Given</u> | <u>All</u> | <u>Charities</u> | <u>Hospitals</u> | <u>Libraries</u> | <u>Local Govt.</u> | <u>Schools</u> | <u>State Govt.</u> | <u>Univer- sities</u> |
|--------------------------------|------------|------------------|------------------|------------------|------------------------|----------------|------------------------|---------------------------|
| Costs changed | 18 | 3 | 4 | 5 | 3 | 1 | 1 | 1 |
| New methods of operation | 18 | 4 | 1 | 3 | 8 | 1 | 0 | 1 |
| Employee bene- fits reduced | 12 | 3 | 2 | 2 | 1 | 1 | 3 | 0 |
| No change | 27 | 7 | 0 | 0 | 6 | 5 | 8 | 1 |

Additional specific information as to the impact on the organiza-
tions is found in response to Question 22, "Has the change to measured
rates affected your organization's ability to serve the public?"

Eighteen organizations either did not respond or did not know. Of the
84 that did respond, only 14 or 16.66% reported their ability to serve
was affected, while 69 or 82.14% reported their ability to serve the
public was not affected by the change to measured rates. The distri-
bution of responses by strata is given in Table 4-2.

Table 4-2

Has the Change from Flat to Measured Rates
Affected Your Organization's Ability to Serve the Public?

(Question 22)

| | <u>All</u> | <u>Charities</u> | <u>Hospitals</u> | <u>Libraries</u> | <u>Local Govt.</u> | <u>Schools</u> | <u>State Govt.</u> | <u>Univer- sities</u> |
|-------|------------|------------------|------------------|------------------|------------------------|----------------|------------------------|---------------------------|
| Yes | 14 | 2 | 0 | 3 | 0 | 8 | 0 | 1 |
| No | 69 | 17 | 5 | 6 | 20 | 4 | 14 | 3 |
| NA/DK | 18 | 1 | 0 | 2 | 4 | 9 | 1 | 1 |

Four strata contained organizations that felt their ability to serve the public was affected by the change to measured rates--the charity, library, school, and university strata. The libraries had made some very specific adjustments as a result of measured rates, and in their opinion these adjustments reduced their ability to serve the public. Some libraries mentioned that they no longer call patrons about overdue material. Other reported changes included (1) no longer making calls on behalf of patrons to the branch libraries, (2) the research librarian no longer returns calls when there is a search needed for material (the patron calls back), (3) one library mentioned that the increased costs mean money is taken from other reserves.

The charities believe that their effectiveness was reduced; the reasons stated were: the need to reduce calls to those that are necessary, a cutback on services and volunteer usage, and/or a reduction in using the phone for residential fund raising drives. The schools (many of which felt they were answering hypothetically) had several different responses. In general, their responses were based on the belief that the money for increased telephone costs would have to come from other programs (e.g. instructional) and that use of the telephone was very necessary. The importance of the telephone--in most responses by schools--related to the need to call working parents and the need for verbal contact with illiterate parents. One response --from a career training center--related that the telephone was a vital part of the training program, and its usage could not be restricted. The one university reporting a belief that its ability to serve was reduced, could not cite any specific effect.

The organizations were asked whether measured rates allowed them to have more control, less control, or about the same control over their phone bill as flat rates allow. Responses to this question are contained in Table 4-3. Of the 73 organizations responding to this question, 39 or 53.4% felt they had about the same degree of control. Sixteen or 21.9% believed they have more control--through limiting personal calls,

monitoring phone usage, and/or eliminating unnecessary calls. However, 18 or 24.6% of those responding believed they had less control over their phone bill. This was primarily due to the fact that they felt they could not control the telephone usage. Their perceived inability to control telephone usage was due either to (1) the size of the organization; (2) the fact that most calls were generated by clients of the organization; (3) the fact that speed of communication was often vital and, thus, alternative modes of communication could not be used; or (4) most calls being made were necessary and, thus, their number could not be reduced.

Table 4-3

Do You Feel That Measured Rates Allow You to Have More Control, Less Control or About the Same Control Over Your Phone Bill as Flat Rates Allow?

(Question 21)

| <u>Response Given</u> | <u>All</u> | <u>Charities</u> | <u>Hospitals</u> | <u>Libraries</u> | <u>Local Govt.</u> | <u>Schools</u> | <u>State Govt.</u> | <u>Universities</u> |
|------------------------|------------|------------------|------------------|------------------|--------------------|----------------|--------------------|---------------------|
| More Control | 16 | 2 | 1 | 0 | 5 | 3 | 5 | 0 |
| Less Control | 18 | 3 | 2 | 3 | 6 | 3 | 1 | 0 |
| About the Same Control | 39 | 13 | 2 | 3 | 8 | 3 | 7 | 3 |
| NA/DK | 28 | 2 | 0 | 5 | 5 | 12 | 2 | 2 |

The final question that is of interest because of the recent rate structure change in Columbus, asks whether, as a result of changing to measured rate service, alternative modes of communication were now used more, less, or about the same amount. The results are detailed by stratum in Table 4-4. Eighty-six organizations responded to the question, with 72 or 83.7% of those reporting that their usage of alternative forms of communication was about the same now as it had been with flat rates. Fourteen or 16.2% reported they now use other forms of communication more than they did with a flat rate standard. The two alternatives most frequently mentioned were mail (public carrier) and interdepartmental or interoffice mail. In

addition, some schools reported use of notes to parents, and one agency (local government stratum) mentioned increased use of two-way radio.

Table 4-4

As a Result of the Change to Measured Rates, Does Your Organization Now Use Communication Services Other Than the Telephone More or About the Same As It Did Before the Change?

(Question 23)

| <u>Response Given</u> | <u>All</u> | <u>Charities</u> | <u>Hospitals</u> | <u>Libraries</u> | <u>Local Govt.</u> | <u>Schools</u> | <u>State Govt.</u> | <u>Universities</u> |
|-----------------------|------------|------------------|------------------|------------------|--------------------|----------------|--------------------|---------------------|
| More | 14 | 2 | 0 | 5 | 3 | 3 | 0 | 1 |
| Less | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| About the Same | 72 | 16 | 5 | 4 | 18 | 10 | 15 | 4 |
| NA/DK | 15 | 2 | 0 | 2 | 3 | 8 | 0 | 0 |

A. Summary and Conclusions

The results of the survey of public/social service organizations in Columbus give clear evidence of the importance of the telephone service for these agencies. However, it is not at all certain that the change to measured rates has had any significant impact on the organizations. Eighty-two percent of those responding reported no effect on their ability to serve the public. Twenty-seven of the organizations that responded reported no change in the method of operations of their agencies. However, there were 48 responses (which represents less than 48 organizations) indicating some change in the method of operations and 16.66% of those responding felt their ability to serve the public was affected by the change to measured rates. While these latter responses are a minority, they do need to be evaluated to determine whether there is a significant negative impact from the use of measured rates.

The fact that the method of operation has changed for a particular agency does not, itself, necessarily imply a negative impact from

measured rates. Each change needs to be examined to determine whether it does, in fact, negatively affect the service provided by the organization. The following paragraphs discuss those major changes that were reported in response to Questions 20, 22, 23.

A frequently mentioned change was that personal calls are now limited, not permitted, or charged for. While this may be an inconvenience to the employee, the opportunity to make personal calls should not be considered relevant to the public services provided by the organizations. In fact, some might contend that a reduction in personal calls could improve the delivery of services. In addition, charging for personal calls is simply a matter of attaching costs to benefits, i.e., those who receive the benefits pay the costs associated with them. If the ability to make personal calls is deemed necessary to the morale and effectiveness of the employee, then the employer may make the decision to provide this benefit in the same way that decisions are made about other fringe benefits.

Many organizations reported a reduction in their use of the telephone. Again, this change, itself, does not necessarily imply an adverse impact on the organizations. It is clear that many groups are now more conscious of the telephone and the manner in which it is used. This can only be regarded as a positive result. To the extent that unnecessary calls are eliminated, the organization has moved to a better utilization of its resources.

The libraries felt that their effectiveness is reduced because they are making fewer calls to and for patrons (calls about overdue material, calls to branch libraries, etc.). It is correct to say that they have reduced the convenience previously offered their patrons, but it is difficult to conclude that their ability to serve the public has diminished. It could be more correct to interpret this as a more efficient allocation of the cost of the service; i.e., the patron now pays for the calls relating to his/her own service.

A few charities reported that they have reduced their use of volunteers and one charity reduced the use of the office phone to organize residential fund drives. Without more detailed information, this response is difficult to evaluate in terms of its impact on the services provided by the charity. The major question here (unanswered by the survey results) is what is being substituted. For example, are the fund drive calls being made from the homes of the employees? Was the work of the volunteers who are no longer used in the office vital to the delivery of service and, if so, is this work being done by someone else or not being done? Also, before a judgment is made regarding the significance of this response, one would want to know whether the charity, in making one of the changes mentioned above, has done an accurate analysis of the changes in cost versus the changes in benefits.

A few organizations reported that they were less likely to install new lines or to move equipment. Again, this response represents an increased awareness of the value of resources used--a positive result. Presumably, the new lines, etc., were not viewed as vital, and thus there is more efficiency in the use of funds. The decision to install or not to install new telephone equipment should not be viewed any differently from the decision to purchase new office equipment, etc. These decisions should be made on a cost/benefit basis and, obviously, equipment vital to the performance of the agency will have very high benefits.

Several organizations reported an increased use of mail (public carrier) and/or interoffice mail. This is a somewhat interesting response, in that it is not at all certain that these alternatives cost less than a 9¢ telephone call. Full accounting of the paper, typist's time, depreciation on the typewriter, etc., plus postage cost for public carrier mail might reveal that the telephone call can be less costly in some cases.

Eighteen organizations reported that their costs had risen as a result of the change to measured rates. Whether increased telephone costs have a significant negative impact depends on many factors. Any cost can increase, and during these times of high inflation rates, many certainly will. The impact of a given cost increase depends primarily on two factors. Is the revenue rising sufficiently to meet the increased cost? What percentage of the budget does the increase in costs represent?

Those groups funded all or in part through an income tax (e.g., state government, local government, state universities, or agencies funded by the federal government) have some elasticity in their revenue base; i.e., their revenues are more likely to rise as costs rise (especially if it is a progressive income tax). The schools (dependent primarily on property taxes) and the libraries (dependent primarily on intangible personal property taxes) have less elasticity; and those charities that are dependent on contributions have a somewhat unpredictable revenue growth pattern (though many of the charities surveyed are funded by a variety of sources). To the extent that revenue growth matches the growth in costs, a cost increase cannot necessarily be considered detrimental.

In addition to examining the cost increase relative to revenue growth, consideration should be given to the magnitude of the cost increase. It should be remembered that the nature of numbers is such that a relatively large percentage change may represent a rather small absolute number. For example, one library (not included in the survey sample) reported monthly average cost before measured rates as \$26.10 and monthly average cost after measured service as \$45.75, a 75.29%³ increase. The percentage increase is quite large, the dollar amount is \$19.65. If the cost increase represents a rather small percentage

³"Contents 25" Public Library of Columbus & Franklin County, Staff Newsletter, April-May 1979.

of the organization's total budget, there is a very real possibility that the higher cost can be met by increased efficiency in some phase of the group's operation.

Higher costs will have a negative impact only in those cases where the increased cost cannot be met by (1) higher revenue, (2) greater efficiency, or (3) passing the cost on to the client, patron or customer.

In summary, the change to measured rate service does not appear to have had any significant impact on most of the agencies surveyed. The use of measured rates has led in many cases to a greater awareness of telephone usage, more efficient telephone usage, and an improved allocation of the costs of telephone usage. It has also increased the costs for some organizations.

The survey results do not pinpoint any examples of significant adverse effects from the use of measured rates. However, the results do suggest a description of the parameters of a situation in which such a negative impact would occur. The following describes such a possibility. For measured rates to have a significant negative impact, an organization would need to be dependent on the telephone for providing service to the public (e.g., schools and others dealing with illiterate persons, counseling groups or medical services dealing on a one-to-one basis with the public). In addition, the organization would have to be in a position such that its revenues were not growing in proportion to the growth in costs (and the costs could not be passed onto the clients); or cost savings (through increased efficiency) were not possible elsewhere in the organization. In this situation, the higher cost for the telephone (whose usage could not be restricted) could only be met by taking funds from some other phase of the program, and this would have a negative impact on the provision of these social services. The extent to which measured rates would have a significant negative impact, depends on the likelihood that these conditions would all be met.

CHAPTER 5

CASE STUDIES--CINCINNATI AND CLEVELAND

The case studies sought information on the purposes of an organization, the purposes for making local telephone calls, and the organizations' standards or measures of quality. The organizations selected for the case studies were also included in the telephone interview studies that sought the same type of information. However, while the telephone survey interviewed individuals in separate, organizationally subordinate units (such as branches of a library), the case study method used a nominal group technique (see Appendix E for a description of a common nominal group technique) with group members being program directors as well as some subordinate unit personnel. Even though some of the same type of information was gathered in the case study as in the telephone survey, there were some significant differences. For example, both approaches asked for reasons for making local telephone calls. In the questionnaire approach, each individual was requested to list two such reasons, while in the case studies as many as 50 reasons were listed by a group and then ranked by several criteria. There was group synergism working in the case studies that would be absent in individual telephone interviews.

This chapter is divided into several sections. Section A contains a discussion of the process of selecting the organizations for participation in the case studies. That is followed by a brief description of how each case study was conducted, a section containing an analysis and interpretation of the results is given, and finally the results of the interviews with senior administrative staff is reported.

A. Selecting the Organization

Each stratum was considered in turn to determine if a case study of one of the organizations in the stratum would provide a significant contribution to the study.

The initial plan was to conduct four case studies in each city. These studies were to consider matched pairs of organizations.

The public school stratum was selected for study in the initial planning phase and the office of the Superintendent of Schools in the two cities was contacted. The Cleveland school system was dealing with a bussing problem and potential teacher strikes this fall and, therefore, requested not to participate. The Cincinnati school system was also dealing with a potential strike situation as well as the possibility of closing down in November. For these reasons the school stratum was eliminated and the study cut back to three organizations in each city.

After these initial planning steps, three strata remained for case study purposes. The randomly arranged population lists of these remaining strata for one of the cities was used to make the final selection of the specific organizations to be studied. These lists were used to eliminate an organization for any one of the following reasons:

- (1) No obvious companion organization in the other city.
- (2) Organization not large enough for the case study method.
- (3) Organization provides services so well defined and important that their procedures are likely to have been unaffected by telephone rates (such as Police Department, Fire Department, National Guard).

The process continued until an organization was not eliminated.

In this manner, three organizations in Cincinnati and three like organizations in Cleveland were selected for the case study. All organizations were approached for their voluntary cooperation. All agreed to participate with the proviso that specific results would not be purposely tied to any specific organization or individual in the final report.

B. Method

The method for conducting the case study consisted of a modified form of the nominal group technique together with a separate interview of a senior administrator.

The formation of the group was at the pleasure of the top administrators of the organizations. Specifically it was requested that the group consist of program planners, directors, or implementors and representatives from subordinate organizational units. It was also requested that the group consist of from 8 to 10 persons.

During the first silent generation, each group member was asked to make a list of responses to the first group task that was to:

"Identify programs (or tasks, jobs, projects, activities, services, etc.) that require or make use of outgoing telephone calls."

After a list of responses, henceforth called "activities," was generated by the group during the round robin and consolidating phase, the members were asked to select eight items from the list according to each of three criteria. They were then asked to rank order each individual eight-item list according to the three criteria. This produced three separate rank-ordered listings ranked by the following criteria:

- (1) [IMPORTANCE] Importance of the activity in accomplishing the overall purpose of the organization.
- (2) [FREQUENCY] Frequency of telephone usage required by activity.
- (3) [EFFECT] Percent of change achievable in the amount of telephone usage if the activity is redesigned to cut down on telephone usage.

In the second silent generation the group members were asked to address the following:

"Define quality (or indicators, measures of quality) of services provided to the users of the organization. If quality is partially dependent upon speed of services or response time, then list indicators or measures of productivity, efficiency, etc."

It was emphasized that no actual measurements of quality, productivity or efficiency would be made part of the study.

Again, the group's list of items, henceforth called "quality measures" or simply "quality," was generated during round robin, consolidated and rank ordered. This time there were two separate rankings according to the following criteria:

- (1) [IMPORTANCE] Importance of the quality measure as an indication of how well the organization is accomplishing its purposes.
- (2) [EFFECT] Amount of deterioration in quality resulting from efforts to reduce telephone usage.

Based upon the effect rankings of the two lists, a matrix was prepared with the rows labeled with several of the highest ranked activities and the columns labeled with several of the highest ranked qualities. The group members were then asked to mark all intersections of rows and columns for which they believe there is a relationship between the row label (activity) and the column label (quality). All other intersections were left blank. It is assumed that anything having

an adverse or beneficial effect on an activity would have a similar effect upon the corresponding quality measure. Correspondence is not intended to mean that the quality measure is a direct measure of quality for that activity, but only that there is some connection, however loose, between the two.

The rankings of individuals within a group were tested statistically to determine if they were in substantial agreement. This intragroup test is done by testing the null hypothesis that the statistic known as coefficient of concordance is zero. If the null hypothesis is not accepted then one is justified in summing the individual ranking to determine a group's composite ranking of the items. These tests have no interpretation except to lend validity to the results. The group's composite rankings are tested on an intergroup, intercriterion, and intercity basis in order to identify differences that may be attributable to telephone rate differences. These results are presented in the next section.

C. Analysis and Interpretation

One must recognize that any experimental design that collects data in Cincinnati and Cleveland and compares the two has the inherent weakness that the effects of differences in telephone rate structure are compounded with effects of differences in the cities themselves. The case studies have the added weaknesses of also compounding with the effects of differences in the organizations themselves and the effects of differences in the composition of the groups. An attempt was made to minimize both of these effects by selecting organizations of relatively equal function and size in the two cities and by requesting six program managers, and/or implementors and two representatives of subordinate units to be the group members in each organization. As it turned out, the research team was pleased with the consistency of group membership except in Organization 3, Cleveland, where only four members were provided. However, those four members were a close match with the members in Case 3, Cincinnati, but the limited number reduced the breadth of representativeness and caused some problems in the ranking procedures.

The main element of data gathered in each organization is a rank ordered list, ranked by specified criteria. The following coding scheme will be used to refer to these elements: organization number, city location, list description, criteria. For example, 2SAE would refer to the list in the second (2) organization in the city in the south part of the state (S meaning Cincinnati); the list being an activity (A) list ranked by effect (E). The organizations are numbered in each city so that if they match in function and size, they will have the same number. Table 5-1 gives all code definitions:

Table 5-1
Codes

| <u>Organization No.</u> | <u>City</u> | <u>List Description</u> | <u>Criteria</u> |
|-------------------------|----------------|-------------------------|-----------------|
| 1 - Not identified | S - Cincinnati | A - Activity | I - Importance |
| 2 - " " | N - Cleveland | Q - Quality | F - Frequency |
| 3 - " " | | | E - Effect |

Table 5-2 lists the codes that summarize all lists developed during the case study. The left and right columns illustrate the matching pairs.

Table 5-2
Summary of Lists

| | |
|-------|------|
| 1SAI | 1NAI |
| 1SAF | 1NAF |
| 1SAE | 1NAE |
| 1SQI | 1NQI |
| 1SQE | 1NQE |
| <hr/> | |
| 2SAI | 2NAI |
| 2SAF | 2NAF |
| 2SAE | 2NAE |
| 2SQI | 2NQI |
| 2SQE | 2NQE |
| <hr/> | |
| 3SAI | 3NAI |
| 3SAF | 3NAF |
| 3SAE | 3NAE |
| 3SQI | 3NQI |
| 3SQE | 3NQE |

Two approaches were taken to analyze the results. The first consisted of nonparametric rank correlations and concordance tests. The concordance tests were performed on each rank-ordered list to determine if there was sufficient agreement among members of the group to justify the establishment of a composite group ranking. The symbol used to represent a concordance coefficient is "w" that may assume values from 0 to 1. A value of 0 would be interpreted as no community of agreement between rankers, and a value of 1 would imply exact agreement of all rankers in the group. The test for sufficient agreement consisted of a 10% significance test of the null hypothesis, $H_0:w=0$. If the hypothesis is "rejected," then one is justified in establishing, from the individual rankings, a composite "group ranking." If the hypothesis cannot be rejected (henceforth referred to as "accepted") then one does not have the evidence to conclude that a composite ranking would have any relationship to some "true ranking." In fact, there would not be sufficient evidence that there is a "true ranking." The 10% significance implies that there is only a .10 probability of rejecting a null hypothesis that is actually true.

It should be pointed out that even in those cases where H_0 is accepted, our procedure will be to form a group ranking anyway and proceed to the next stage of analysis. Such a ranking may be considered as one established by a voting procedure with or without agreement among the members. Of course, the result is nonetheless a ranking, but all results from subsequent analysis would be interpreted in weaker terms than those obtained from rankings established with agreement within the group.

The second stage of statistical analysis consists of computing rank correlations between group rankings for pairs of ranking criteria. For example, the rank correlation coefficient would be established between, say INAI and INAF. If the correlation coefficient (r) has the value 1 (meaning perfect positive correlation), then one would conclude that those activities on the list that are the most important are also the

ones that require the highest frequency of telephone use. If the correlation has a value of -1 (meaning perfect opposite correlation), then one would conclude that those activities on the list that are most important are also the ones that require the lowest frequency of telephone use. A value of zero would be interpreted to mean that there is no correlation between importance of activity and frequency of telephone usage. The usual statistical test will test the null hypothesis $H_0:r=0$ against the alternative $H_1:r\neq 0$. Significance levels will be 10%.

The second method of analysis will consist of an examination of the list contents in an effort to recognize patterns or observe differences between the listed items in the two cities. In most cases statistical tests cannot be made since each organization generated and ranked its own lists that therefore are not directly comparable. However, of interest may be the presence or absence of specific items. Also of interest will be the general makeup of the lists.

Table 5-3 gives an accounting of the number of items on each list after silent generation, round robin, and consolidation phases of the nominal group technique. Also given is the coefficient of concordance computed from the individual rankings of members of the group and the result of a 10% significance test. Column groupings separate cities and row groupings separate organizations. Most rejects could have also been rejected at the 5% level of significance and those listed as marginal had chi square values in the immediate neighborhood of the 10% level. Most accepts could not have been rejected at even a 20% level of significance. The three accepts and one marginal listed in the 3N cases are probably due to the fact that that group had only four members with widely divergent jobs. The remaining cases where the null is accepted makes it apparent that the groups had the most difficulty in agreeing in their rankings of quality measures, and/or in ranking in accordance with effect of a call reduction program. This is not surprising, since of all the tasks accomplished by the group, among the most ill-defined and judgmental in nature are those relating to quality of service and ranking by effect.

Table 5-3
List Lengths, Coefficients of Concordance,
and Results of 10% Significance Test

| Cincinnati | | | | Cleveland | | | |
|------------|-----------|---------------|-----------|-----------|-----------|---------------|-----------|
| List | No. Items | w Coefficient | $H_0:w=0$ | List | No. Items | w Coefficient | $H_0:w=0$ |
| 1SAI | 21 | .2796 | Reject | 1NAI | 27 | .3937 | Reject |
| 1SAF | 21 | .2718 | Reject | 1NAF | 27 | .3184 | Reject |
| 1SAE | 21 | .3064 | Reject | 1NAE | 27 | .2062 | Reject |
| 1SQI | 19 | .2649 | Reject | 1NQI | 30 | .2153 | Reject |
| 1SQE | 19 | .2319 | Reject | 1NQE | 30 | .1236 | Accept |
| 2SAI | 28 | .2338 | Reject | 2NAI | 20 | .2702 | Reject |
| 2SAF | 28 | .2033 | Reject | 2NAF | 20 | .2461 | Reject |
| 2SAE | 28 | .1500 | Accept | 2NAE | 20 | .2577 | Reject |
| 2SQI | 17 | .2296 | Reject | 2NQI | 15 | .2699 | Reject |
| 2SQE | 17 | .1781 | Accept | 2NQE | 15 | .4208 | Reject |
| 3SAI | 28 | .2874 | Reject | 3NAI | 26 | .2629 | Accept |
| 3SAF | 28 | .2038 | Reject | 3NAF | 26 | .1932 | Accept |
| 3SAE | 28 | .2218 | Reject | 3NAE | 26 | .0772 | Accept |
| 3SQI | 21 | .1591 | Accept | 3NQI | 15 | .3891 | Marginal |
| 3SQE | 21 | .2045 | Marginal | 3NQE | 15 | .4853 | Reject |

Table 5-4 gives the correlation coefficients between different rankings of identical lists within each city. The coefficient is not given when the hypothesis $H_0:p=0$ cannot be rejected at the 10% level. Except for importance and frequency ranking pairs, there was very little correlation between rankings. It would seem from the results that those activities that are most important to the organization also tend

Table 5-4
Paired Correlations
Between Different Rankings of
Identical Lists

| Case | List Type | Ranking Criteria | Correlation Deficients | |
|------|-----------|------------------|------------------------|-----------------|
| | | | Cincinnati | Cleveland |
| 1 | Activity | I vs. F | Not Significant | .694 |
| | | I vs. E | Not Significant | -.533 |
| | | F vs. E | Not Significant | -.408 |
| | Quality | I vs. E | Not Significant | Not Significant |
| 2 | Activity | I vs. F | .520 | .520 |
| | | I vs. E | Not Significant | Not Significant |
| | | F vs. E | Not Significant | Not Significant |
| | Quality | I vs. E | Not Significant | Not Significant |
| 3 | Activity | I vs. F | .624 | .420 |
| | | I vs. E | Not Significant | -.635 |
| | | F vs. E | Not Significant | Not Significant |
| | Quality | I vs. E | Not Significant | Not Significant |

to be the same as those that require the highest frequency of telephone usage. In the two Cleveland cases where the correlation between importance and effect of a call reduction program were significant, both correlations are negative. This would imply that the most important activities tend not to be the ones that would be affected in a call reduction program. In general, the lack of significant correlations in the Cincinnati study may be an indication of greater uncertainty about the effects of telephone usage reduction upon day-to-day activities.

The similarity of Case 2 results for the two cities is interesting in that both were state agencies that perform standardized functions as directed centrally from Columbus. One other similarity between all cases in both cities is the fact of no correlation between importance of quality measures and the effect upon them of a call reduction program. If, as indicated, these correlations are not different from zero, then the quality measures that would be affected most by call reductions are independent of their importance. This means that any effort to reduce local telephone calls may adversely affect the quality of service regardless of how important that quality was.

Each group member indicated, in matrix form, those quality measures that they associate with activities. Their attention was directed only to those several measures and activities that had received the highest rankings by the effect criteria. Each indication was given a score of one and added for all members of the group. Several attempts were made to find correlations between rows and columns using implied rankings resulting from quality-activity relationships indicated in the matrices. No such correlations were found. In fact, in several cases the estimated correlation was exactly zero. However, inspection of the matrices in Table 5-5 does show a relatively high density indicating that even those activities that could and would be changed to reduce telephone usage are strongly related to the quality measures that would deteriorate under such usage changes. The highlighted rows in Table 5-6 correspond to personal calls and the columns to quality measures that showed high correspondence with personal calls. In all cases, the personal call rows are less dense than the rest of the matrix and in all but the Cincinnati Case 3 the personal call row is the least dense row in each matrix. The organization in the Cincinnati Case 3 included, with personal calls, those made by employees as well as those made by participants in the programs that they administered. The Cincinnati Case 1 and Cleveland Case 2 were the only ones to have the related ideas

Table 5-6
Quality-Activity Matrices

Case 1

Cincinnati

| | | | | | | | | |
|----------------|-----------------|---|---|---|---|---|---|---|
| | Employee Morale | | | | | | | |
| | 3 | 6 | 2 | 2 | 8 | 2 | 7 | 2 |
| Personal Calls | 1 | 0 | 1 | 0 | 0 | 8 | 2 | 2 |
| | 1 | 7 | 7 | 0 | 1 | 2 | 4 | 4 |
| | 7 | 4 | 5 | 1 | 0 | 4 | 6 | 1 |
| | 4 | 7 | 6 | 3 | 1 | 5 | 5 | 7 |
| | 2 | 6 | 1 | 2 | 4 | 0 | 4 | 8 |

Density = .43

Cleveland

| | | | | |
|---|---|---|---|---|
| 0 | 1 | 3 | 2 | 2 |
| 0 | 3 | 1 | 2 | 4 |
| 5 | 6 | 3 | 4 | 3 |
| 3 | 1 | 2 | 0 | 0 |
| 3 | 0 | 3 | 2 | 0 |
| 0 | 4 | 1 | 2 | 4 |
| 0 | 2 | 1 | 5 | 3 |
| 4 | 7 | 4 | 6 | 5 |

Density = .36

Case 2

Cincinnati

| | | | | | | |
|----------------|---|---|---|---|---|---|
| Personal Calls | 0 | 0 | 0 | 1 | 1 | 0 |
| | 3 | 3 | 4 | 7 | 4 | 5 |
| | 5 | 5 | 6 | 4 | 3 | 6 |
| | 2 | 1 | 1 | 3 | 1 | 1 |
| | 3 | 2 | 6 | 6 | 2 | 3 |
| | 7 | 6 | 6 | 7 | 4 | 6 |

Density = .46

Cleveland

| | | | | |
|----------------|------------------|---|---|---|
| | Job Satisfaction | | | |
| | 2 | 5 | 3 | 5 |
| | 3 | 4 | 4 | 4 |
| Personal Calls | 6 | 1 | 3 | 2 |
| | 4 | 5 | 5 | 6 |
| | 4 | 5 | 5 | 5 |

Density = .68

Case 3

Cincinnati

| | | | | |
|----------------|----------------|---|---|---|
| | Public Image | | | |
| | Parent Support | | | |
| Personal Calls | 0 | 5 | 1 | 5 |
| | 2 | 4 | 3 | 3 |
| | 2 | 1 | 3 | 7 |
| | 1 | 2 | 4 | 3 |
| | 7 | 4 | 3 | 7 |

Density = .43

Cleveland

| | | | | | |
|----------------|---|---|---|---|---|
| 1 | 0 | 3 | 0 | 1 | |
| 0 | 0 | 2 | 0 | 0 | |
| 2 | 2 | 2 | 2 | 2 | |
| 1 | 0 | 2 | 0 | 1 | |
| 4 | 3 | 3 | 3 | 2 | |
| Personal Calls | 0 | 0 | 1 | 0 | 0 |

Density = .31

of morale and job satisfaction on their quality list. Their feeling was that a satisfied employee was an important ingredient for them to provide good quality service. In each case these showed the strongest possible relationship to personal calls. The Cleveland Case 1 group did not have personal calls on any of their lists as it was not generated during the silent generation phase of the nominal group technique. A separate discussion with a top administrator of that organization revealed that they have a policy against making personal calls because of concern for loss in employee productive time and because personal calls would tie up a line, preventing some users of their service from being able to get through. No mention was made that measured rates were a factor in making that policy.

We now proceed with the second method of analysis, an examination of the individual lists to detect similarities and differences that may be attributable to measured rates. This will be organized on a case-by-case basis.

Case 1. The activity lists for the two cities were remarkably similar with one striking difference. Both organizations had an extensive program whereby users of their services could call in to obtain information. In Cincinnati, it was often the case that such an incoming call would generate an outgoing call in order to relay an answer back. In Cleveland, this was not the case as administration had established specific guidelines about how long it should take to answer a question before other arrangements to do so had to be made. If the time was short enough, the persons calling in would hold until they were given an answer. This has the effect of providing immediate response for a great many queries, but it also ties up telephone lines, thus making contact difficult. While the trade-offs between these two differing procedures is quite evident, it is not possible to determine which provides better quality service. Both programs in these two cities are heavily used so apparently the local populace receives satisfaction from them.

In the case of this organization, there are a number of subordinate organizations and a central administration, all of which exchange records and information concerning their activities and concerning users of their services. In Cincinnati, several activities were mentioned that had to do with verification of their records and requesting instruction about the disposition of information. In Cleveland, such activities were not mentioned although a highly important activity category in Cleveland was general management of subordinate units. Both cities listed personnel management as the second most important activity that generated outgoing telephone calls while acquisition of materials was listed first in Cleveland and sixth in Cincinnati. Both cities listed a number of special programs aimed at benefiting particular segments of the local population. Although some of these programs were similar, each city did have several unique programs. Collectively, these programs ranked fourth in frequency of telephone use in both cities.

As noted before, personal calls were mentioned in Cincinnati but not in Cleveland, and Cincinnati was experimenting with a new procedure for one of their standard functions that seemed to require a great deal of calling. It was ranked first in frequency of telephone use but was low in the importance ranking. It was also listed first as a program that would receive the largest change in a call reduction program. Cleveland had no similar procedure and would not consider it because of the cost of telephoning.

The quality lists in the two cities did not differ in general content. The Cleveland list tended to contain specific and measurable quantities that could also have been productivity measures. The Cincinnati list included more general items that would themselves be difficult to measure, such as public image, morale, absence of complaints.

It is interesting to note that the most mentioned activity in the telephone interview for the strata containing the Case 1 organization was the same item listed first in both cities. The second

most mentioned activity in the telephone interview was contact between subordinate organizations and the central organization. This category corresponds to several highly ranked but more specific items listed in the cases such as general management of subordinate organization, personnel management, information/data exchange.

It would appear from the accumulation of all of this information that, other than in minor details discovered in the cases, there is relatively little difference in what these organizations do and how they do it with respect to telephone usage. Except as noted, the differences that do exist are inconsequential in their effect upon the overall quality of the services being provided. At least this study has turned up no data to the contrary.

Case 2. There was no perceptible difference in the activity lists in the two cities. The Cincinnati list was longer and more detailed but all items would fit well under the more categorical list developed in Cleveland. Furthermore, the same items appeared at the top of the importance ranking and the frequency of calls ranking. Personal calls were listed in both cities and were ranked slightly higher on the frequency list in Cleveland than in Cincinnati. Both cities put personal calls as the most affected activity in the event of a call reduction program. As mentioned earlier, these organizations are state agencies, and in their case do not provide any services directly to the public. Instead, they relay policies from Columbus to the local agencies that do provide a direct service. They then help in the clarification and administration of policy and perform certain quality control checks. They do contact the public to resolve difficulties and investigate certain issues. Their activities and procedures are centrally determined in Columbus and are relatively standard. The cost of local telephone service does not seem to have been an important consideration in the design of their procedures.

If the cost of local service became a significant enough factor to cause a call reduction program to be implemented, both cities indicated that response time, timeliness and accuracy of reports, and

meeting deadlines were among the indicators of quality that would suffer. Additionally Cleveland listed job satisfaction and public image as the quality factor and indicators that would be most affected by such a program.

Again, it is interesting to note that within the state strata for the telephone survey, the most commonly mentioned reason to make calls was to contact clients, customers, patrons, and employees. The second most common response was contacting other governmental agencies. These results were not different between the two cities and agree with the highest rated activities listed in the case studies in that the more detailed activities developed in the case studies would fit logically in either of the two categories given above.

Case 3. The services provided by these two organizations are directly used by the public. Both organizations had a number of special programs aimed at specific segments of the population such as the elderly, handicapped, children, and disadvantaged. Most of these services are organized and involved groups thus involving a great deal of planning, scheduling, arrangements, user contact. This sometimes required the arrangement of transportation especially for the elderly, handicapped, and others. Also, both programs made use of a large number of volunteers thus increasing the need for telephone contacts on a regular basis. The list of activities generated by these two organizations had no perceptible differences. Three of the top five activities in the Cincinnati frequency ranking consisted of special programs and event assignments and scheduling. Volunteer contact was sixth while general organizational communication was first. Also first in Cleveland was general organizational communication, but arrangement and scheduling were farther down the list. Oddly enough, complaint investigation was second in Cleveland. Both ranked response to program inquiries toward the top. It should be pointed out that this Cleveland case was the one that had only four members for the nominal group technique

all with different jobs. This did not seem to affect the quality of the lists generated during the round robin phase as it was just as long and wide ranging as the one generated in Cincinnati. However, the rank orders obtained from the Cleveland group may be suspect.

Although, again there was no perceptible difference in what these two organizations do nor in their use of the telephone to do it, there is a significant difference in procedure. Both organizations have subordinate units serving different parts of their respective cities and in Cincinnati many programs are planned, arranged (including volunteer and participant contact), scheduled, and executed by these subordinate units. In Cleveland, all of these activities except the execution are done centrally. There is almost no need to make outgoing calls in the subordinate units in Cleveland except to contact the central administration (a centrex call for some units).

Both organizations mentioned the same sorts of things or measures of quality and were in general agreement about the effect of a call reduction program on these measures.

In the telephone questionnaire, the stratum that these cases came from listed only two purposes for using the telephone with relatively high frequency (no difference between the cities). Those responses were classified in the categories contact clients, customers, patrons, employees, and information (exchanged, acquired, sought). These two categories could certainly have described the more detailed results at the top of both cities' lists.

D. Results of the Interviews with Senior Administrative Staff

This section of the chapter requires some qualifications. The interviews with upper level administrators are not intended to be statistically significant samples of our population. In fact, the entire chapter should be viewed in the same light.

As mentioned above, we selected several "like" organizations in Cincinnati and Cleveland, in each organization we used the nominal group technique that was discussed above. In addition, we interviewed an upper level administrator asking many of the same questions used in our telephone survey. The most significant result from the interviews related to the "thought process." In every organization under flat rates, the upper level administrator stated that he would reevaluate programs that used the telephone for local calls if the rate structure changed to measured rates. The reevaluation would consider using bulk mail or other means instead of local telephone calls. However, in most cases, many felt that programs would not change. The key variable for our purposes is cost. Organizations switching from flat to measured service would, probably for the first time, view local telephone service as a resource with a cost.

Another significant finding (that again relates to cost) with respect to quality of service relates to response time. Most of the organizations under flat rates believed that the only reduction in quality of service provided by the organization would be in delays. These delays would be due to using alternative means of communication. However, the key element in the quality of service effect is still the reevaluation of programs. Programs that require a quick response time probably would still use the telephone. In the measured rate area, the lack of quick response time due to measured service was not evident. In addition, most organizations did not feel that going from measured service rate structure to a flat rate structure would affect the quality of service. Further, these organizations would not immediately add services due to a change in structure. Probably the most significant finding when we analyze all responses by organization is that the rate structure of local telephone service is not a major consideration, although switching to a measured rate structure does upgrade the consideration given telephone services as a resource.

CHAPTER 6

COMPARISON OF USE OF TELEPHONE SERVICE UNDER A FLAT RATE STRUCTURE (CINCINNATI) AND A MEASURED RATE STRUCTURE (CLEVELAND)--THE MAIN STUDY

A. Introduction

The initial constraints of the project indicated that 800 interviews would be the most appropriate. We determined that 800 interviews were optimal given the length of the interviews conducted in the Columbus pilot study, the total time frame of the project, and the total dollars available for the project. Using the statistical method described in Chapter 3, we developed a program to yield the optimal size of the sample given the size of the population and the desired confidence interval. The analysis indicated that the 800 interviews would be required; 346 interviews in Cincinnati and 454 in Cleveland. The population size of the individual strata dictated the results. It was felt that the results of the sample division were also appropriate on demographic grounds, that is, more samples in the large metropolitan area. Table 6-1 is a summary of the sample size that was attempted in each area.

Table 6-1
The Sample Attempted

| <u>Strata</u> | <u>Cincinnati</u> | | <u>Cleveland</u> | |
|------------------|------------------------|--------------------|------------------------|--------------------|
| | <u>Population Size</u> | <u>Sample Size</u> | <u>Population Size</u> | <u>Sample Size</u> |
| Local Government | 72 | 64 | 103 | 86 |
| State Government | 38 | 33 | 46 | 39 |
| University | 10 | 10 | 13 | 12 |
| Hospital | 21 | 20 | 37 | 33 |
| School | 202 | 97 | 248 | 106 |
| Library | 41 | 36 | 77 | 57 |
| Charity | 161 | 86 | 400 | 121 |
| <hr/> Totals | <hr/> 545 | <hr/> 346 | <hr/> 924 | <hr/> 454 |

The following is a summation of the sample size after the interview process. The sample sizes are different than Table 6-1 because some organizations refused to cooperate or simply made themselves unavailable.

Table 6-2
The Actual Sample

| <u>Strata</u> | <u>Cincinnati</u> | | <u>Cleveland</u> | |
|------------------|------------------------|--------------------|------------------------|--------------------|
| | <u>Population Size</u> | <u>Sample Size</u> | <u>Population Size</u> | <u>Sample Size</u> |
| Local Government | 72 | 44 | 103 | 30 |
| State Government | 38 | 19 | 46 | 14 |
| University | 10 | 6 | 13 | 5 |
| Hospital | 21 | 12 | 37 | 29 |
| School | 202 | 74 | 248 | 84 |
| Library | 41 | 31 | 77 | 34 |
| Charity | 161 | 71 | 400 | 98 |
| <hr/> Totals | <hr/> 545 | <hr/> 257 | <hr/> 924 | <hr/> 294 |

Clearly, Cincinnati had a better response rate -- 342 interviews were attempted and 257 were completed while in Cleveland 458 responses were attempted and 294 completed. Table 6-3 compares the attempted sample to the actual sample achieved.

Table 6-3
Comparison of Attempted
Sample to Actual Sample

| <u>Strata</u> | <u>Cincinnati</u> | | <u>Cleveland</u> | |
|------------------|-------------------|------------------|------------------|------------------|
| | <u>Attempted</u> | <u>Completed</u> | <u>Attempted</u> | <u>Completed</u> |
| Local Government | 64 | 44 | 86 | 30 |
| State Government | 33 | 19 | 39 | 14 |
| University | 10 | 6 | 12 | 5 |
| Hospital | 20 | 12 | 33 | 29 |
| School | 97 | 74 | 106 | 84 |
| Library | 36 | 31 | 57 | 34 |
| Charity | 86 | 71 | 121 | 98 |
| <u>Totals</u> | <u>346</u> | <u>257</u> | <u>454</u> | <u>294</u> |

As one can see, there is no distinct pattern, other than 74% of the organizations interviewed in Cincinnati responded and 64% of the organizations in Cleveland responded. In general, the organizations in Cincinnati were more cooperative than those in Cleveland in the interview phase. However, we do not view the problem as significantly affecting the results of this study. The total population for the study was 1,469. A total of 551 samples was completed. Therefore, our sample represents 38% of the total population, a significant percent. In addition, we should note that some organizations interviewed served or represented more than one organization. That means that the sample represents more than 38% of the population.

The following sections, B and C, on organizational characteristics and size of the population affected by the organizations are presented in order to demonstrate that the two cities are comparable. Sections C through G demonstrate that there are few differences in the way the telephone is used to provide the services of the organization. The final sections H and I show that a change in rate structure will probably not affect the quality of service provided by social service type organizations.

B. Organizational Characteristics

In studying the survey results, it becomes apparent that a variation exists among strata. In comparing some of these responses, it is useful to have in mind a description of the type of organization responding to the questions. The following sections contain descriptions of the various strata based on responses to questions regarding size, employment, telephone usage, and purpose of the organization.

Profile of Local Government Strata

The local government strata includes both city and county government agencies, with 30 organizations surveyed in Cleveland and 44 in Cincinnati. The agencies represented a broad spectrum of local government services with only those involved in legal and court proceedings and law enforcement appearing with any frequency (7 Cleveland, 5 Cincinnati).¹ Other types of agencies included city and neighborhood redevelopment, medical and health care, service for handicapped, general public services, employment service or training, mass transit and transportation.

Some of the agencies were highly specialized in their service to the public, with five of them (2 Cleveland, 3 Cincinnati) serving less than 5 percent of the local population. At the other extreme, 9 in Cleveland and 11 in Cincinnati serve 75 percent or more of the local population.²

The most frequently cited reasons for placing local outgoing calls were: (1) contact with clients, customers, patrons, employees; (2) seeking, acquiring, or exchanging information; and (3) general business calls and purchasing orders.³

The local government agencies had a significant number (45%) with annual budgets over \$1 million. Distribution of this strata by budget size can be seen in the following table.

¹Compiled from responses to Question 2a, which can be found in Appendix F.

²Compiled from responses to Question 31.

³Compiled from responses to Question 2.

Table 6-4
Local Government
Estimated Annual Budget*

| | Under \$25,000 | \$25,000- \$100,000 | \$100,000- \$500,000 | \$500,000- \$1 million | Over \$1 million |
|------------|-------------------|------------------------|-------------------------|---------------------------|---------------------|
| Cleveland | 0 | 2 | 6 | 5 | 9 |
| Cincinnati | 1 | 3 | 11 | 5 | 18 |

*Source: Responses to Question 29.

The typical local government agency in each city operates with less than 500 full-time employees and less than 50 part-time employees. Also, typically, 50 percent or less are "professionals" and 50 percent or less are "clerical." Details of the employment characteristics are found in the following tables. It should be mentioned that three of the local government agencies also use volunteers.

Table 6-5
Local Government
Number of Full-Time Employees*

| | Less than 100 | 100- 500 | 500- 1000 | Over 1000 |
|------------|------------------|-------------|--------------|--------------|
| Cleveland | 13 | 13 | 1 | 2 |
| Cincinnati | 32 | 9 | 2 | 1 |

*Source: Responses to Question 24.

Table 6-6
Local Government
Number of Part-Time Employees*

| | None | Less than 50 | 50- 100 | 100- 250 | 500- 1000 | Seasoned or Variable |
|------------|------|-----------------|------------|-------------|--------------|-------------------------|
| Cleveland | 12 | 9 | 3 | 1 | 0 | 3 |
| Cincinnati | 14 | 19 | 1 | 1 | 2 | 3 |

*Source: Responses to Question 25.

Table 6-7
Local Government
Classification of Employees*

| | <u>Percent Professional</u> | | | |
|------------|--|---------------|---------------|----------------|
| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
| Cleveland | 12 | 9 | 3 | 5 |
| Cincinnati | 16 | 14 | 6 | 8 |
| | <u>Percent Clerical</u> | | | |
| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
| Cleveland | 8 | 4 | 2 | 4 |
| Cincinnati | 26 | 10 | 4 | 4 |
| | <u>Percent Neither Clerical Nor Professional</u> | | | |
| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
| Cleveland | 16 | 4 | 5 | 2 |
| Cincinnati | 25 | 5 | 6 | 7 |

*Source: Responses to Questions 26, 27, 28.

Profile of State Government Strata

The state government strata contains 14 agencies in Cleveland and 19 in Cincinnati. A variety of agencies is represented. They include various special service agencies, public service agencies, tax and financial agencies, and transportation agencies. In addition, the type with greatest frequency were correctional institutions (4 in Cleveland and 5 in Cincinnati).⁴ In terms of the percent of local population served, the agencies range from those who reported they served none of the local population to those who reported they served 100% of the local population.

⁴Compiled from responses to Question 2a.

When asked for significant reasons for placing local outgoing calls, the state agencies typically reported⁵ (1) contact with clients, customers, patrons, employees; (2) contact with other government agencies; (3) seeking, acquiring, or exchanging information; and (4) general business calls, including purchasing orders, etc.

The agencies were asked to estimate their annual budget. Approximately half of the state agencies did not know or did not respond. The following tables give the budget size for those state agencies who did respond.

Table 6-8
State Government
Estimated Annual Budget*

| | Under \$25,000 | \$25,000- \$100,000 | \$100,000- \$500,000 | \$500,000- \$1 million | Over \$1 million |
|------------|-------------------|------------------------|-------------------------|---------------------------|---------------------|
| Cleveland | 1 | 0 | 1 | 1 | 4 |
| Cincinnati | 1 | 2 | 3 | 0 | 3 |

*Source: Responses to Question 29.

As was the case with the local government strata, the state government agencies are typically relatively small in terms of full-time employees --less than 100 in most cases--though the Cleveland sample did contain two agencies with between 501 and 1,000 full-time employees. Also, the agencies typically employed less than 50 part-time employees, and no state agency reported the use of volunteers. The following tables detail the employment characteristics.

⁵ Compiled from responses to Question 2.

Table 6-9
State Government
Number of Full-Time Employees*

| | Less than 10 | 10- 50 | 51- 100 | 101- 250 | 251- 500 | 501- 1,000 |
|------------|-----------------|-----------|------------|-------------|-------------|---------------|
| Cleveland | 6 | 2 | 0 | 2 | 2 | 2 |
| Cincinnati | 5 | 10 | 2 | 1 | 1 | 0 |

*Source: Responses to Question 24.

Table 6-10
State Government
Number of Part-Time Employees*

| | None | 1- 9 | 10- 50 | 51- 100 | 101- 250 | 501- 1,000 | Seasonal or Variable |
|------------|------|---------|-----------|------------|-------------|---------------|-------------------------|
| Cleveland | 4 | 4 | 2 | 1 | 1 | 1 | 0 |
| Cincinnati | 13 | 1 | 0 | 2 | 1 | 1 | 1 |

*Source: Responses to Question 25.

Table 6-11
State Government
Classification of Employees*

| | <u>Percent Professional</u> | | | |
|------------|-----------------------------|---------------|---------------|----------------|
| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
| Cleveland | 7 | 2 | 4 | 1 |
| Cincinnati | 5 | 6 | 0 | 8 |

| | <u>Percent Clerical</u> | | | |
|------------|-------------------------|---------------|---------------|----------------|
| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
| Cleveland | 9 | 4 | 1 | 0 |
| Cincinnati | 16 | 2 | 1 | 0 |

Percent Neither Clerical Nor Professional

| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
|------------|--------------|---------------|---------------|----------------|
| Cleveland | 8 | 2 | 1 | 3 |
| Cincinnati | 11 | 0 | 4 | 4 |

*Source: Responses to Questions 26, 27, 28.

Profile of University Strata

The University strata had five members in Cleveland and six in Cincinnati. They were asked to estimate the enrollment, and the results are shown below.

Table 6-12
Universities
Estimated Enrollment*

| | <u>Less than 1000</u> | <u>1000- 4999</u> | <u>5000- 9999</u> | <u>10,000- 19,999</u> | <u>35,000- 49,999</u> |
|------------|---------------------------|-----------------------|-----------------------|---------------------------|---------------------------|
| Cleveland | 0 | 2 | 1 | 1 | 0 |
| Cincinnati | 3 | 2 | 0 | 0 | 1 |

*Source: Responses to Question 34.

Cincinnati has both the smallest and the largest universities in terms of enrollment. A different measure of size is the estimated annual budget. Four universities in each city reported budgets in excess of \$1 million.⁶

One university in Cincinnati reported that it provided educational services requiring extensive use of the telephone. These were social services, library services, and computer-terminal hookups. This university further reported that the computer service is provided only by them.⁷

⁶Compiled from responses to question 29.

⁷Compiled from responses to questions 35, 35a, 35b.

In Cleveland, two universities reported that they provided educational services requiring extensive telephone use. These are consumer services, information and advice; record keeping, and computer-terminal hookups. The university providing the consumer services reported that this service was provided only by them.⁸

In response to a different question, the universities indicated that, for most of them, the primary reasons for placing local outgoing calls were: (1) to contact clients, patrons, employees, and (2) purchasing orders, supplies, resources.⁹

In terms of full-time employees, the universities ranged from two with full-time employment in the range of 10-50 up to three universities with full-time employment of more than 1,000. (See Table 6-13.) There was a similar distribution of universities with respect to part-time employees. (See Table 6-14.) The employment size distribution between the two cities was roughly comparable, though there were some differences. As might be expected, the universities typically estimated a relatively high percentage of professional employees, and a relatively low percentage of clerical employees. (See Table 6-15.)

Table 6-13
Universities
Number of Full-Time Employees*

| | 10-50 | 51-100 | 101-250 | 501-1000 | More than 1000 |
|------------|-------|--------|---------|----------|----------------|
| Cleveland | 1 | 1 | 0 | 1 | 2 |
| Cincinnati | 1 | 2 | 1 | 1 | 1 |

*Source: Responses to Question 24.

⁸Ibid.

⁹Compiled from responses to question 2.

Table 6-14
Universities
Number of Part-Time Employees*

| | 10-50 | 51-100 | 101-250 | 501-1,000 | More than 1,000 | Seasonal or Variable |
|------------|-------|--------|---------|-----------|-----------------|----------------------|
| Cleveland | 0 | 1 | 1 | 1 | 1 | 1 |
| Cincinnati | 3 | 1 | 1 | 0 | 1 | 0 |

*Source: Responses to Question 25.

Table 6-15
Universities
Classification of Employees*

| | <u>Percent Professional</u> | | | |
|------------|-----------------------------|---------------|---------------|----------------|
| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
| Cleveland | 0 | 2 | 3 | 0 |
| Cincinnati | 1 | 1 | 3 | 1 |

| | <u>Percent Clerical</u> | | | |
|------------|-------------------------|---------------|---------------|----------------|
| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
| Cleveland | 4 | 1 | 0 | 0 |
| Cincinnati | 5 | 1 | 0 | 0 |

| | <u>Percent Neither Clerical Nor Professional</u> | | | |
|------------|--|---------------|---------------|----------------|
| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
| Cleveland | 3 | 1 | 1 | 0 |
| Cincinnati | 6 | 0 | 0 | 0 |

*Source: Responses to Questions 26, 27, 28.

Profile of Hospital Strata

Twenty-nine hospitals in Cleveland and 12 in Cincinnati were interviewed. In terms of size (as measured by number of patients or families treated annually), the strata in each city were roughly comparable, and the strata did include hospitals of all sizes. Each city contained one hospital that was quite large i.e., treating between 200,000 and 500,000 patients annually. In addition, each city had relatively small hospitals of less than 5,000 patients annually (4 in Cleveland, 2 in Cincinnati). The remaining hospitals represented size ranges between the two mentioned.¹⁰

Twelve Cleveland hospitals and eight in Cincinnati reported they provided services requiring extensive use of the telephone. However, no one service was reported with any great frequency. The highest frequency reported was emergency room service cited by four hospitals in Cleveland as requiring extensive telephone use. The highest frequency in Cincinnati was two hospitals that cited regular hospital routine (as did two hospitals in Cleveland). Other uses cited by one or two hospitals in each city included outpatient service, home health care programs, visiting nurse service, physical therapy, etc.¹¹

When asked for two significant reasons for placing outgoing calls (Question 2), the hospitals typically cited either contact with clients, patrons, customers, employees, or general business calls, including purchase orders, calls relating to billing, accounts, payroll, collections. Only seven hospitals (six in Cleveland, one in Cincinnati) mentioned client (patient) use.

The hospitals were also asked for information regarding budget and employment. Of those responding to the budget question (Question 29), all hospitals in Cincinnati and 75 percent of those in Cleveland reported budgets of greater than \$1 million.

¹⁰Compiled from responses to question 33.

¹¹Compiled from responses to questions 32 and 32a.

There is greater variation in hospitals in terms of employment size, though the size distribution per city is roughly comparable. The hospitals ranged from those that have between 10 and 50 full-time employees (3 hospitals) to those with more than 1,000 full-time employees (10 hospitals). There appears to be some difference between the cities with respect to types of employees, i.e., almost 80 percent of the Cleveland hospitals report that 50 percent or less of their employees are professional, whereas 80% of Cincinnati hospitals reported that more than 50 percent of their employees could be classed as professional. The following tables detail these employment characteristics.

Table 6-16
Hospitals
Number of Full-Time Employees*

| | 10- 50 | 51- 100 | 101- 250 | 251- 500 | 501- 1000 | Over 1000 |
|------------|-----------|------------|-------------|-------------|--------------|--------------|
| Cleveland | 2 | 3 | 4 | 4 | 6 | 6 |
| Cincinnati | 1 | 0 | 1 | 2 | 3 | 4 |

*Source: Responses to Question 24.

Table 6-17
Hospitals
Number of Part-Time Employees*

| | 1- 9 | 10- 50 | 51- 100 | 101- 250 | 251- 500 | 501- 1000 | Other** |
|------------|---------|-----------|------------|-------------|-------------|--------------|---------|
| Cleveland | 2 | 8 | 1 | 3 | 2 | 2 | 4 |
| Cincinnati | 1 | 3 | 0 | 2 | 1 | 0 | 0 |

*Source: Responses to Question 25.

**Volunteers and variable part-time.

Table 6-18
Hospitals
Classification of Employees*

| | <u>Percent Professional</u> | | | |
|------------|-----------------------------|---------------|---------------|----------------|
| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
| Cleveland | 4 | 15 | 5 | 1 |
| Cincinnati | 0 | 2 | 8 | 0 |

| | <u>Percent Clerical</u> | | | |
|------------|-------------------------|---------------|---------------|----------------|
| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
| Cleveland | 16 | 8 | 1 | 0 |
| Cincinnati | 9 | 1 | 0 | 0 |

| | <u>Percent Neither Clerical Nor Professional</u> | | | |
|------------|--|---------------|---------------|----------------|
| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
| Cleveland | 15 | 5 | 4 | 1 |
| Cincinnati | 9 | 1 | 0 | 0 |

*Source: Responses to Questions 26, 27, 28.

Profile of Schools

The school strata has 84 members from Cleveland and 74 from Cincinnati. In terms of enrollment, more than 80 percent in each city have between 100 and 999 students.

Table 6-19
Schools
Estimated Enrollment*

| | <u>Less than 100</u> | <u>100- 499</u> | <u>500- 999</u> | <u>1,000- 1,999</u> | <u>2,000- 3,499</u> | <u>3,500- 4,999</u> | <u>10,000- 19,999</u> | <u>75,000- 99,999</u> |
|------------|--------------------------|---------------------|---------------------|-------------------------|-------------------------|-------------------------|---------------------------|---------------------------|
| Cleveland | 3 | 36 | 37 | 3 | 2 | 1 | 1 | 1 |
| Cincinnati | 4 | 34 | 26 | 6 | 2 | 1 | 0 | 0 |

*Source: Responses to Question 34.

While enrollments are roughly similar between the cities, there appears to be a difference in the role the telephone plays. When asked if they provided any educational services requiring extensive use of the telephone, almost twice as many responded yes in Cincinnati as in Cleveland.

Table 6-20

Schools
Do You Provide Educational Service Requiring
Extensive Use of the Telephone?*

| | <u>Yes</u> | <u>No</u> |
|------------|------------|-----------|
| Cleveland | 17 | 64 |
| Cincinnati | 33 | 40 |

*Source: Responses to Question 35.

This difference may be largely explained by the fact that 20 schools in Cincinnati use telephone service for computer-terminal hookups and only 2 do in Cleveland. Among other services mentioned were: (1) tutorial services (five in Cleveland, five in Cincinnati); (2) psychological services (four in Cleveland, one in Cincinnati); (3) job placement (one in Cleveland, four in Cincinnati) (compiled from responses to Question 35a).

A separate question was asked about the most significant reasons for placing outgoing calls, up to two responses were accepted from each organization. In both cities, the primary reason schools placed outgoing calls was to contact parents. The following table summarizes the three most frequently cited reasons in each city.

Table 6-21

Schools
Reasons for Outgoing Calls*

| | <u>Contact Parents</u> | <u>Contact other schools, Central administration, Computer hookups</u> | <u>Supplies, Resources, Purchasing Orders</u> |
|------------|----------------------------|--|---|
| Cleveland | 60 | 31 | 12 |
| Cincinnati | 53 | 24 | 12 |

*Source: Responses to Question 2.

Further description of the members of the school strata is found in their answers to questions regarding budget and employment. Budget data are contained in the following table.

Table 6-22

Schools
Estimated Annual Budget*

| | Under \$25,000 | \$25,000- \$100,000 | \$100,000- \$500,000 | \$500,000- \$1 million | Over \$1 million |
|------------|-------------------|------------------------|-------------------------|---------------------------|---------------------|
| Cleveland | 2 | 10 | 11 | 5 | 4 |
| Cincinnati | 8 | 7 | 27 | 6 | 6 |

*Source: Responses to Question 29.

Half the schools in Cincinnati reported a budget between \$100,000 and \$500,000 while most schools in Cleveland reported a budget of either \$25,000-\$100,000 or \$100,000-\$500,000.

The typical school in each city might be described as having between 10 and 50 full-time employees and less than 10 part-time employees. Typically, more than 50 percent are professional and twenty-five percent or less are clerical. Employment characteristics are contained in the following tables.

Table 6-23

Schools
Number of Full-Time Employees*

| | Less than 10 | 10-50 | 51-100 | 101-250 |
|------------|--------------|-------|--------|---------|
| Cleveland | 4 | 58 | 18 | 3 |
| Cincinnati | 2 | 52 | 14 | 6 |

*Source: Responses to Question 24.

Table 6-24
Schools
Number of Part-Time Employees*

| | <u>None</u> | <u>1-9</u> | <u>10-50</u> | <u>51-100</u> | <u>101-250</u> | <u>Other**</u> |
|------------|-------------|------------|--------------|---------------|----------------|----------------|
| Cleveland | 12 | 45 | 24 | 0 | 1 | 1 |
| Cincinnati | 9 | 49 | 14 | 1 | 0 | 1 |

*Source: Responses to Question 25.
**Volunteers or variable part-time.

Table 6-25
Schools
Classification of Employees*

| | <u>Percent Professional</u> | | | |
|------------|-----------------------------|---------------|---------------|----------------|
| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
| Cleveland | 3 | 5 | 25 | 50 |
| Cincinnati | 1 | 11 | 20 | 41 |

| | <u>Percent Clerical</u> | | | |
|------------|-------------------------|---------------|---------------|----------------|
| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
| Cleveland | 78 | 3 | 2 | 0 |
| Cincinnati | 72 | 1 | 0 | 0 |

| | <u>Percent Neither Clerical Nor Professional</u> | | | |
|------------|--|---------------|---------------|----------------|
| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
| Cleveland | 71 | 10 | 1 | 0 |
| Cincinnati | 51 | 19 | 3 | 0 |

*Source: Responses to Questions 26, 27, 28.

Profile of Libraries

The library stratum has 34 members in Cleveland and 31 in Cincinnati. It appears to represent all sizes of libraries (as measured by the number

of books circulated annually). The size classification with greatest frequency in Cincinnati is 150,000-499,999 (10 libraries), while the 20,000-49,999 range represents the greatest frequency for Cleveland.

Table 6-26
Libraries
Number of Books Circulated Annually*

| | 1000- 9,999 | 10,000- 19,999 | 20,000- 49,999 | 50,000- 74,999 | 75,000- 149,999 | 150,000- 299,999 | 500,000- 999,999 | Other |
|------------|----------------|-------------------|-------------------|-------------------|--------------------|---------------------|---------------------|-------|
| Cleveland | 0 | 6 | 11 | 5 | 5 | 6 | 1 | 0 |
| Cincinnati | 1 | 1 | 6 | 4 | 8 | 10 | 0 | 1 |

*Source: Responses to Question 36.

Ten libraries in Cleveland and 13 in Cincinnati reported that they provided services requiring extensive use of the telephone. Typically, these services are securing and locating books for patrons, interloan services, notifying patrons, contacting the public, agencies, and other libraries.¹²

A separate question (Number 2) asked the librarians to identify two of the most significant reasons for placing local outgoing calls. The most frequently cited reason was reserving and holding books and notifying patrons regarding these books. The second most frequent response was contact with other libraries or branches.

The libraries were also asked for information regarding budgets and employment. While two libraries in Cleveland reported an annual budget in excess of \$1 million, the typical library in each city appears to operate on a budget of under \$100,000.

¹²Compiled from responses to questions 37 and 37a.

Table 6-27
Libraries
Estimated Annual Budget*

| | <u>Under \$25,000</u> | <u>\$25,000- \$100,000</u> | <u>\$100,000- \$500,000</u> | <u>\$500,000- \$1 million</u> | <u>Over \$1 million</u> |
|------------|---------------------------|--------------------------------|---------------------------------|-----------------------------------|-----------------------------|
| Cleveland | 4 | 12 | 8 | 0 | 2 |
| Cincinnati | 4 | 13 | 9 | 0 | 0 |

*Source: Responses to Question 29.

One might describe the typical library in each city as having fewer than 10 full-time employees and between 1 and 9 part-time employees. Also, typically, less than 50 percent of the employees might be described as professionals. Details of employment characteristics can be seen in the following tables.

Table 6-28
Libraries
Number of Full-Time Employees*

| | <u>Less than 10</u> | <u>10-50</u> | <u>51-100</u> |
|------------|---------------------|--------------|---------------|
| Cleveland | 31 | 2 | 1 |
| Cincinnati | 25 | 6 | 0 |

*Source: Responses to Question 24.

Table 6-29
Libraries
Number of Part-Time Employees*

| | <u>None</u> | <u>1-9</u> | <u>10-50</u> | <u>51-100</u> |
|------------|-------------|------------|--------------|---------------|
| Cleveland | 0 | 24 | 10 | 0 |
| Cincinnati | 2 | 29 | 0 | 0 |

*Source: Responses to Question 25.

Table 6-30
 Libraries
Classification of Employees*

| | <u>Percent Professional</u> | | | |
|------------|-----------------------------|---------------|---------------|----------------|
| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
| Cleveland | 17 | 11 | 5 | 0 |
| Cincinnati | 20 | 11 | 0 | 0 |

| | <u>Percent Clerical</u> | | | |
|------------|-------------------------|---------------|---------------|----------------|
| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
| Cleveland | 13 | 18 | 2 | 0 |
| Cincinnati | 9 | 14 | 7 | 0 |

| | <u>Percent Neither Clerical Nor Professional</u> | | | |
|------------|--|---------------|---------------|----------------|
| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
| Cleveland | 11 | 13 | 7 | 0 |
| Cincinnati | 12 | 11 | 3 | 1 |

*Source: Responses to Questions 26, 27, 28.

Profile of Charities

Ninety-eight charities in Cleveland and 71 in Cincinnati were interviewed. These charities represent a great variety of services. Classifying by types, the most numerous in each city are those involved in general social services and welfare services. The next largest group are those providing service to a specialized group, e.g. organizations and services for the elderly, women, handicapped, retarded, and the diagnosis and treatment of abnormal behavior in children. The third largest group contains organizations involved in health care, including residential treatment centers, prevention of birth defects, health care for the elderly, pregnancy clinics, mental health, health care for the retarded. The following table gives a breakdown of the number and types of charitable organizations interviewed.

Table 6-31
Charities
Types of Charities*

| | Health Care | Service for Special Groups | Referrals, Infor- mation, Coordina- tion | Commu- nity Service | Counsel- ing Service | Social Service, Welfare | Youth Agency, Center | Edu- cation, Schools, Training | Other** |
|------------|----------------|-------------------------------------|--|---------------------------|----------------------------|-------------------------------|----------------------------|---|---------|
| Cleveland | 14 | 16 | 8 | 9 | 2 | 23 | 13 | 7 | 6 |
| Cincinnati | 9 | 11 | 6 | 5 | 4 | 19 | 7 | 8 | 2 |

*Source: Responses to Question 2a.

**Religious programs, fund raising, legal services, etc.

Fifteen of the charities (5 in Cleveland, 10 in Cincinnati) are 100 percent tax supported. Another 44 (25 in Cleveland, 19 in Cincinnati) reported they are supported by a combination of charitable, private organizations, individuals, and government. Funding sources reported by other charities included Community Chest, private funds, United Appeal, United Way, foundations, client contributions, non-profit organizations and contributions from individuals with the number of individuals contributing ranging from less than 50 to more than 100,000.¹³

Many charities either could not or would not estimate the size of annual contributions. Of those who did make an estimate, nearly half reported their annual contributions to be less than \$50,000. Only three organizations in each city reported contributions of over \$1 million annually.¹⁴

More than half of the charities responding in each city reported that they provided a service requiring extensive use of the telephone (questions 40, 40a). A great many different services were mentioned, e.g., emergency services, surveys, residential care, accounting services, organizing and securing volunteers. Most types of programs had a low frequency of response. Those with the greatest frequency were counseling (9 in Cleveland, 9 in

¹³Compiled from responses to question 38.

¹⁴Compiled from responses to question 39.

Cincinnati); information (7 in Cleveland, 10 in Cincinnati); social services (9 in Cleveland, 5 in Cincinnati); and client contact (6 in Cleveland, 7 in Cincinnati).

When asked to simply describe the two most significant reasons for placing local outgoing calls, the charities' most frequent response was contacting clients, patrons, customers, employees (41 in Cleveland, 31 in Cincinnati). Other less frequently mentioned responses included: (1) contact with other organizations (17 in Cleveland, 17 in Cincinnati); (2) information exchanged or acquired (17 in Cleveland, 14 in Cincinnati); (3) arranging or coordinating meetings, programs, services (12 in Cleveland, 8 in Cincinnati); and (4) dealing with volunteers (9 in Cleveland, 11 in Cincinnati). One interesting contrast arose in the frequency of response to general business calls. Fourteen charities in Cleveland cited this as a significant reason for outgoing calls, and only two charities in Cincinnati cited this reason.¹⁵

Further details about the charities is found by looking at their responses to budget and employment questions. Each budget size is well represented in both cities, though the response with greatest frequency in each city is the budget range of \$100,000-\$500,000. The following table contains this information.

Table 6-32
Charities
Estimated Annual Budget*

| | Under \$25,000 | \$25,000- \$100,000 | \$100,000- \$500,000 | \$500,000- \$1 million | Over \$1 million |
|------------|-------------------|------------------------|-------------------------|---------------------------|---------------------|
| Cleveland | 12 | 20 | 28 | 12 | 11 |
| Cincinnati | 8 | 14 | 30 | 5 | 7 |

*Source: Responses to Question 29.

¹⁵Compiled from responses to Question 2.

There appears to be no "typical" charity in terms of employment characteristics. This is to be expected, given the variety of types of charities. There are no marked differences between the cities, but within a city, all possible combinations of full and part-time, professional, clerical appear to be represented. Details are found in the following tables.

Table 6-33
Charities
Number of Full-Time Employees*

| | <u>Less than 10</u> | <u>10-50</u> | <u>51-100</u> | <u>101-250</u> | <u>251-500</u> | <u>None-All Volunteers</u> |
|------------|---------------------|--------------|---------------|----------------|----------------|----------------------------|
| Cleveland | 51 | 26 | 16 | 2 | 2 | 0 |
| Cincinnati | 35 | 24 | 6 | 3 | 1 | 2 |

*Source: Responses to Question 24.

Table 6-34
Charities
Number of Part-Time Employees*

| | <u>None</u> | <u>1-9</u> | <u>10-50</u> | <u>51-100</u> | <u>101-250</u> | <u>251-500</u> | <u>Other**</u> |
|------------|-------------|------------|--------------|---------------|----------------|----------------|----------------|
| Cleveland | 21 | 46 | 21 | 2 | 0 | 0 | 6 |
| Cincinnati | 15 | 40 | 12 | 0 | 0 | 0 | 3 |

*Source: Responses to Question 25.

**Volunteers or variable part-time.

Table 6-35
Charities
Classification of Employees*

| | <u>Percent Professional</u> | | | |
|------------|-----------------------------|---------------|---------------|----------------|
| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
| Cleveland | 28 | 28 | 11 | 29 |
| Cincinnati | 11 | 21 | 17 | 21 |

| | <u>Percent Clerical</u> | | | |
|------------|-------------------------|---------------|---------------|----------------|
| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
| Cleveland | 72 | 14 | 4 | 3 |
| Cincinnati | 48 | 18 | 2 | 1 |

| | <u>Percent Neither Clerical Nor Professional</u> | | | |
|------------|--|---------------|---------------|----------------|
| | <u>0-25%</u> | <u>26-50%</u> | <u>51-75%</u> | <u>76-100%</u> |
| Cleveland | 58 | 16 | 9 | 7 |
| Cincinnati | 52 | 9 | 6 | 1 |

*Source: Responses to Questions 26, 27, 28.

C. Size of Population Affected by Organizations

The size of the populations affected by the various organizations is important in analyzing the impact of measured rate service. The purpose of this section is to discuss the various populations served by the organizations surveyed in Cleveland and Cincinnati.

Government agencies or health related government agencies were asked about the percentage of the local population that actually makes use of the services provided by their organization. For both Cleveland and Cincinnati local governments, a plurality (30.43% and 38.33% respectively) answered

the figure was 0-20%. For state governments, a plurality and majority (45.45% and 54.55% respectively), answered 0-20% in both Cleveland and Cincinnati respectively.¹⁶

With respect to hospitals, clinics, or health-related government agencies only, we asked about how many patients (including inpatient and outpatients), were treated annually. For Cleveland, 73.33% treated greater than or equal to 5,000 patients in the hospital strata. For Cincinnati, this figure was 73%.¹⁷

Schools or universities only were asked approximately how many students were enrolled during the past academic year. With respect to the school strata, 90.48% in Cleveland had less than 1,000 students enrolled. For Cincinnati, this figure was 87.67%. With respect to the university strata, 100% of those surveyed in Cleveland had greater than or equal to 1,000 students. In Cincinnati, the figure was 50%.¹⁸

The libraries were asked their approximate annual circulation. Fifty percent replied annual circulation was greater than (or equal to) 50,000. In Cincinnati, 70.97% replied they had an annual circulation of greater than (or equal to) 50,000 books.¹⁹

Finally, we asked charities to approximate the number of people contributing to their respective organizations, and to estimate their total contributions. The majority in both Cleveland and Cincinnati, 55.84% and 61.82% respectively, replied that contributions came from other funds, for example the United Fund. In Cleveland and Cincinnati the majority, 62.71% and 73.33% respectively, stated that their total contributions were less than \$200,000.²⁰

¹⁶See Appendix F, Question No. 31 for a data summary of the results.

¹⁷Ibid., Question No. 33.

¹⁸Ibid., Question No. 34.

¹⁹Ibid., Question No. 36.

²⁰Ibid., Question Nos. 38 and 39.

D. Size, Cost and Management of Telephone Operations

The size, cost, and management of telephone operations are important considerations in the assessment of the impact of a measured rate pricing structure. The purpose of this section is to discuss these variables in light of our chosen strata in Cleveland and Cincinnati. Costs of telephone operations may necessitate size limitations with respect to telephone sets and telephone lines. Costs may also necessitate management policies and operational procedures.

We begin our discussion with the size of telephone operations. Of particular interest to us is the number of telephone sets and lines servicing each organization. In both Cleveland and Cincinnati, a similar plurality for all strata combined was observed with 1-5 telephone sets servicing the organization. In Cleveland, that plurality was 42.61%. For Cincinnati, that figure was 42.52%. While this similarity is striking, there are some notable differences within the individual strata, particularly with respect to the local and state government strata. In Cleveland, 30% of local government and none of state government had over 100 telephone sets.²¹

With respect to the telephone lines, we observed again for all strata combined, similar percentages between cities. The plurality of telephone lines for both cities was 1 line or greater than 10 lines. For Cleveland, this combined plurality was 48.45%. For Cincinnati, this figure was 42.52%. However, differences existed between the two cities in many of the strata.²²

As previously noted, management policies and operational procedures may be necessitated by costs of telephone service considerations. We now

²¹ See Appendix F, Question No. 4 for a data summary of the results.

²² Ibid., Question No. 5.

turn toward a discussion of such policies and procedures. Each of the organizations surveyed was asked whether they kept records on telephone usage. For all strata combined, 40.69% in Cleveland and 44.53% in Cincinnati kept records.²³

Personal phone calls were mentioned by 41.77% and 37.22% of all strata combined for Cleveland and Cincinnati, respectively, as one of the foci of policies governing the use of telephones. General policies were mentioned as another method of controlling telephone usage by the various organizations surveyed.²⁴ At least 50% of these policies were made by chief executives in each strata and in each city, with the exception of libraries in both cities and universities in Cincinnati.²⁵

Of interest to the study was whether various changes in telephone operations occurred, and why they occurred. Such changes might imply the importance of telephone service with respect to cost and/or operational considerations.

We asked each organization whether their telephone usage was different from one year ago. For all strata combined, the percentages of the responses for both cities showed striking similarities. An overwhelming majority said "no" in both cities. For Cleveland, this figure was 74.40%. For Cincinnati, this figure was 82.47%. However, wide differences existed in some of the strata, particularly state government, universities, and libraries. For state government, 57.14% in Cleveland, and 60.00% in Cincinnati used the telephone differently from the way it did. In Cleveland, 60.00% of the universities used the telephone differently while for Cincinnati this figure was zero. With

²³ Ibid., Question No. 10.

²⁴ Ibid., Question No. 11.

²⁵ Ibid., Question No. 12.

respect to libraries, 32.35% and 9.68% used the telephone differently in Cleveland and Cincinnati respectively.²⁶

The reasons for these changes included an increase in the volume of calls for all strata combined. This percentage was 30.91% in Cleveland and 30.36% in Cincinnati. Other major reasons given included in increase in business (28.18% and 17.86% in Cleveland and Cincinnati, respectively), and policy changes (14.55% and 16.07% in Cleveland and Cincinnati, respectively).²⁷

Further, we asked each organization whether it used the telephone differently now from the way it did five years ago. Again, for all strata combined, similarities existed. In Cleveland, 38.30% replied that they did use the telephone differently from the way it did five years ago. In Cincinnati, this figure was 33.90%. This time, however, wide differences did not include state government as was the previous case. Instead, we see hospitals showing a substantial increase in affirmative replies. With respect to this strata, 55.56% replied they use the phone differently from the way it did five years ago in Cleveland. For Cincinnati, this figure was 33.33%.²⁸

Major reasons cited for these changes included increases in the volume of calls, new communications systems in service, increases in business, and policy changes.²⁹

Management policies and operational procedures necessitated by cost considerations, may include specific budgets for telephone service. This is our next subject of discussion.

²⁶ Ibid., Question No. 17.

²⁷ Ibid., Question No. 17a.

²⁸ Ibid., Question No. 18.

²⁹ Ibid., Question No. 18a.

We asked each organization whether it had a specific budget for telephone service. Again, for all strata combined, the similarities between Cleveland and Cincinnati are noteworthy. Specific budgets for telephone service existed in 63.75% of the organizations in Cleveland and 64.98% of the organizations in Cincinnati. However, wide differences existed in several of the strata, specifically with state government, hospitals, schools, and libraries. In Cleveland, for these four strata respectively, 75.00%, 78.57%, 37.93%, and 35.71% replied they had specific budgets. For Cincinnati, these figures were 53.33%, 91.67%, 56.25%, and 7.69%.³⁰

For those organizations that replied yes in the preceding paragraph, the importance of telephone costs in the operation of the respective organizations can be implied by the flexibility of the telephone budget. For all strata combined, 80.28% and 79.85% of the organizations in Cleveland and Cincinnati, respectively, replied that their telephone budgets were flexible. An overwhelming majority in each strata in both cities with the exceptions of hospitals in Cincinnati (in this case 50.00% said the budget was flexible), said that the budget was flexible.³¹

Whether to their knowledge the budget had ever been exceeded, was the subject of another question. In this case, the two cities were again quite similar in their responses for all strata combined. According to 52.73% and 55.56% in Cleveland and Cincinnati, respectively, the budget had been exceeded.³²

Of those organizations that exceeded their budgets, wide dispersion occurred among different strata in both cities as to how many times budgets were exceeded.³³

³⁰ Ibid., Question No. 30.

³¹ Ibid., Question No. 30a.

³² Ibid., Question No. 30b.

³³ Ibid., Question No. 30c.

Finally, related to telephone budgets, is the type of billing for telephone services. That is to say, whether telephone calls are broken down by the type of service or equipment provided. Such billing may imply scrutiny by the respective organizations of their costs of telephone services. This may further imply the importance of telephone services in organization operations and/or costs. For all strata combined, 70.34% and 63.81% in Cleveland and Cincinnati respectively, had telephone bills broken down by the type of service or equipment provided. Further, the majority of organizations in all strata in both cities had telephone bills broken down in such a manner with the exception of schools and libraries in Cincinnati and libraries in Cleveland. The percentages for these strata and cities were 45.00% and 0.00% (because of a sample size of 0 libraries for this question in Cincinnati), and 50.00% respectively.³⁴

E. Calling Characteristics of Organizations

Number of Calls

The most frequently cited "number of calls" per month (by organizations in Cleveland) was 1,000-1,999 and over 6,000, with 39 organizations placing themselves in each category. In Cincinnati, the category 1,000-1,999 was also the most frequently cited (37 organizations) with the category 300-399 placing second with 27 organizations. The dispersal among aggregated categories is given in the following table.

Table 6-36
Number of Calls Per Month*

| | Less than 600/mo. | 600- 2,999/mo. | 3,000- 5,999/mo. | 6,000 and over/ mo. |
|------------|----------------------|-------------------|---------------------|------------------------|
| Cleveland | 73 (28.63%) | 124 (48.63%) | 19 (7.45%) | 39 (15.29%) |
| Cincinnati | 53 (25.00%) | 108 (50.94%) | 33 (15.57%) | 18 (8.49%) |

*Source: Responses to Question 6.

³⁴Ibid., Question No. 30d.

The small user category is dominated by schools, libraries, and charities, as illustrated below.

Table 6-37
Organizations Making Fewer Than 600 Calls/Month*

| | <u>Local</u> | <u>State</u> | <u>Univ.</u> | <u>Hosp.</u> | <u>School</u> | <u>Library</u> | <u>Charity</u> |
|------------|--------------|--------------|--------------|--------------|---------------|----------------|----------------|
| Cleveland | 0 | 2 | 0 | 0 | 19 | 17 | 32 |
| Cincinnati | 1 | 3 | 0 | 0 | 17 | 17 | 13 |

*Source: Responses to Question 6.

The dispersion among strata for very large users is given in Table 6-38. These responses may help explain the disparity between Cleveland and Cincinnati that appears in Table 1; i.e., the hospital strata has the most numerous very large users, and the total Cleveland hospital strata are more than twice the size of the total Cincinnati hospital strata (29 in Cleveland, 12 in Cincinnati).

Table 6-38
Organizations Making 6000 or More Calls/Month*

| | <u>Local</u> | <u>State</u> | <u>Univ.</u> | <u>Hosp.</u> | <u>School</u> | <u>Library</u> | <u>Charity</u> |
|------------|--------------|--------------|--------------|--------------|---------------|----------------|----------------|
| Cleveland | 7 | 3 | 1 | 17 | 3 | 1 | 7 |
| Cincinnati | 3 | 2 | 2 | 3 | 4 | 0 | 4 |

*Sources: Responses to Question 6.

Type of Calls

Incoming calls appear to be of importance to these organizations. Approximately one-third of those responding in each city (34.90% in Cleveland, 33.91% in Cincinnati) reported that incoming phone calls represented 50% of

the organization's phone calls (Question 7). More than half of those responding in each city indicated that incoming calls represent 50-75% of the organization's telephone calls. Table 6-39 gives further information about the importance of incoming calls.

Table 6-39
What Percentage of Phone Calls Are Incoming*

| | <u>Less than 25%</u> | <u>25-49%</u> | <u>50-74%</u> | <u>75-100%</u> | <u>Tot. Resp.</u> |
|------------|--------------------------|---------------|---------------|----------------|-------------------|
| Cleveland | 6 (2.35%) | 34 (13.33%) | 149 (58.43%) | 66 (25.88%) | 255 (100%) |
| Cincinnati | 4 (1.74%) | 26 (11.30%) | 134 (58.26%) | 66 (28.70%) | 230 (100%) |

*Source: Responses to Question 7.

It is somewhat interesting to note that three organizations (two in Cleveland, and one in Cincinnati) reported that 100% of their calls are incoming. Those responses representing the greatest frequency among all strata were in the category 50-75% (inclusive) of all calls are incoming. A detailed distribution of the strata responses is found in the following table.

Table 6-40
What Percent of Calls Are Incoming?*

| | <u>Local</u> | <u>State</u> | <u>Univ.</u> | <u>Hosp.</u> | <u>School</u> | <u>Library</u> | <u>Charity</u> |
|---------------------------|--------------|--------------|--------------|--------------|---------------|----------------|----------------|
| <u>Less than 50%</u> | | | | | | | |
| Cleveland | 4 | 1 | 0 | 4 | 8 | 5 | 18 |
| Cincinnati | 1 | 4 | 0 | 0 | 4 | 5 | 16 |
| <u>50-75% (inclusive)</u> | | | | | | | |
| Cleveland | 20 | 9 | 3 | 12 | 65 | 22 | 52 |
| Cincinnati | 31 | 12 | 4 | 6 | 56 | 16 | 47 |
| <u>Greater than 75%</u> | | | | | | | |
| Cleveland | 3 | 2 | 0 | 3 | 8 | 3 | 13 |
| Cincinnati | 7 | 1 | 0 | 0 | 14 | 8 | 4 |

*Source: Responses to Question 7.

Personal calls represent a relatively small portion of calls for most of the organizations surveyed. More than half (52.09% in Cleveland, 64.19% in Cincinnati) reported that personal calls account for 5% or less of total calls. The following table gives more details of this response, and Table 6-42 gives a distribution of response by strata.

Table 6-41
What Percentage of Calls are Represented by Personal Calls?*

| | <u>0-5%</u> | <u>6-10%</u> | <u>15-25%</u> | <u>30-99%</u> |
|------------|-------------|--------------|---------------|---------------|
| Cleveland | 137 (52.09) | 68 (25.86) | 40 (15.21) | 18 (6.84) |
| Cincinnati | 147 (64.19) | 38 (16.59) | 32 (13.97) | 12 (5.24) |

*Source: Responses to Question 9.

Table 6-42
Percentage of Personal Calls*
 (by strata)

| | <u>Local</u> | <u>State</u> | <u>Univ.</u> | <u>Hosp.</u> | <u>School</u> | <u>Library</u> | <u>Charity</u> |
|------------|-------------------|--------------|--------------|--------------|---------------|----------------|----------------|
| | <u>5% or Less</u> | | | | | | |
| Cleveland | 8 | 8 | 0 | 6 | 45 | 17 | 53 |
| Cincinnati | 26 | 13 | 1 | 3 | 38 | 24 | 42 |
| | <u>6-10%</u> | | | | | | |
| Cleveland | 12 | 1 | 3 | 6 | 21 | 6 | 19 |
| Cincinnati | 5 | 1 | 2 | 1 | 16 | 5 | 8 |
| | <u>15-25%</u> | | | | | | |
| Cleveland | 3 | 4 | 1 | 5 | 11 | 7 | 9 |
| Cincinnati | 4 | 2 | 1 | 1 | 11 | 0 | 13 |
| | <u>30-99%</u> | | | | | | |
| Cleveland | 3 | 0 | 0 | 5 | 5 | 2 | 3 |
| Cincinnati | 2 | 0 | 1 | 1 | 3 | 1 | 4 |

*Source: Responses to Question 9.

Changes in Telephone Usage

The organizations were asked whether they use the telephone differently now than the way they did one year ago. Also, they were asked whether the telephone is used differently now than five years ago. Seventy-five or 25.60 percent of those responding in Cleveland reported they use it differently now than one year ago. Forty-four or 17.53% of the respondents in Cincinnati reported a change in usage in the past year. Of those who reported a change in usage today over usage a year ago, 68 percent in Cleveland and 68.18 percent of respondents in Cincinnati were in three strata--schools, libraries, and charities.³⁵

When asked whether there had been changes in usage over the past five years, 72 (38.30 percent of respondents) in Cleveland and 60 (33.90 percent) in Cincinnati reported there had been changes. Again, approximately two-thirds of the responses (66.67 in Cleveland and 63.33 in Cincinnati) were from one of three strata - schools, libraries, and charities.³⁶ Tables 6-43 and 6-44 detail these responses. Increase in the volume of calls accounted for 30 percent of the responses in both cities as to how telephone usage has changed in the past year. Nineteen percent of respondents in Cleveland and fourteen percent in Cincinnati reported changes due to new communication systems. It is interesting to note that 28% in Cleveland reported changes due to increase in business, while only 17 percent in Cincinnati reported this. Most of this difference is explained by differences in response in three strata --hospitals, libraries, and charities.³⁷

Approximately two-thirds of the changes over the past five years in each city occurred for one of the same three reasons i.e., increase in volume of calls, new communication systems in service or increase in business. One contrast between cities involves policy changes. In Cleveland, 19.38% reported policy changes while in Cincinnati only 12.79% reported policy changes.

³⁵Compiled from responses to question 17.

³⁶Compiled from responses to question 18.

³⁷Compiled from responses to question 17a.

Table 6-43

Does Your Organization Use the Telephone
Differently Now Than It Did, Say, a Year Ago? *

| Strata of City | YES | | NO | |
|----------------------|-----------|------------|-----------|------------|
| | Frequency | Percentage | Frequency | Percentage |
| Local Government | | | | |
| Cleveland | 1 | 3.33% | 29 | 96.67% |
| Cincinnati | 4 | 9.30% | 39 | 90.70% |
| State Government | | | | |
| Cleveland | 8 | 57.14% | 6 | 42.86% |
| Cincinnati | 6 | 31.58% | 13 | 68.42% |
| Universities | | | | |
| Cleveland | 3 | 60.00% | 2 | 40.00% |
| Cincinnati | 0 | 0.00% | 6 | 100.00% |
| Hospitals | | | | |
| Cleveland | 12 | 41.38% | 17 | 58.62% |
| Cincinnati | 4 | 33.33% | 8 | 66.67% |
| Schools | | | | |
| Cleveland | 11 | 13.25% | 72 | 86.75% |
| Cincinnati | 7 | 9.59% | 66 | 90.41% |
| Libraries | | | | |
| Cleveland | 11 | 32.35% | 23 | 67.65% |
| Cincinnati | 3 | 9.68% | 28 | 90.32% |
| Charities | | | | |
| Cleveland | 29 | 29.59% | 69 | 70.41% |
| Cincinnati | 20 | 29.85% | 47 | 70.15% |
| All Strata | | | | |
| Cleveland | 75 | 25.60% | 218 | 74.40% |
| Cincinnati | 44 | 17.53% | 207 | 82.47% |

*Source: Responses to question 17.

Table 6-44

Does Your Organization Use the Telephone Differently
Now Than It Did, Say, Five Years Ago? *

| Strata of City | YES | | NO | |
|-------------------------|-----------|------------|-----------|------------|
| | Frequency | Percentage | Frequency | Percentage |
| Local Government | | | | |
| Cleveland | 10 | 40.00% | 15 | 60.00% |
| Cincinnati | 11 | 32.35% | 23 | 67.65% |
| State Government | | | | |
| Cleveland | 3 | 50.00% | 3 | 50.00% |
| Cincinnati | 7 | 53.85% | 6 | 46.15% |
| Universities | | | | |
| Cleveland | 1 | 50.00% | 1 | 50.00% |
| Cincinnati | 2 | 33.33% | 4 | 66.67% |
| Hospitals | | | | |
| Cleveland | 10 | 55.56% | 8 | 44.44% |
| Cincinnati | 2 | 33.33% | 4 | 66.67% |
| Schools | | | | |
| Cleveland | 14 | 22.95% | 47 | 77.05% |
| Cincinnati | 19 | 34.55% | 36 | 65.45% |
| Libraries | | | | |
| Cleveland | 14 | 70.00% | 6 | 30.00% |
| Cincinnati | 7 | 29.17% | 17 | 70.83% |
| Charities | | | | |
| Cleveland | 20 | 35.71% | 36 | 64.29% |
| Cincinnati | 12 | 30.77% | 27 | 69.23% |
| All Strata | | | | |
| Cleveland | 72 | 38.30% | 116 | 61.70% |
| Cincinnati | 60 | 33.90% | 117 | 66.10% |

*Source: Responses to question 18.

A second contrast---which may or may not have some relationship to the use of measured rates---is that 5.10 percent in Cleveland reported that economic incentives indicated increased use of the telephone, while 11.63% in Cincinnati indicated this response. Because of budgetary factors, overall economic conditions or other elements could have influenced this response, the use of flat rate service in Cincinnati can only be viewed as one of many possible explanations.³⁸

F. Other Modes of Communication

Operational and cost considerations may require the use of other modes of communication by an organization. In this section, we briefly discuss those other modes and their usage.

Modes of communication other than the telephone included electronic, mail, personal, media, in-house message delivery, none, and other. For each stratum in both cities, with the exception of hospitals in both, either a plurality or majority said that other than the telephone they used mail as a mode of communication. With respect to the hospital strata, other than the telephone, the majority in each city used electronic means as a mode of communication.

It is interesting to note, that in those situations where either the telephone or another mode of communication is equally appropriate, the majority in each stratum in both cities used the telephone.³⁹

G. Importance of Telephone Service

There were numerous reasons given for placing outgoing calls by the organizations interviewed. The major reasons given for using the telephone

³⁸Compiled from responses to question 18a.

³⁹See Appendix F, Question Nos. 13 and 14 for the data.

service for outgoing calls were to:

1. Contact other organizations;
2. Contact clients, customers, patrons or employees;
3. Obtain supplies or resources;
4. Obtain or exchange information;
5. Contact parents;
6. Library services such as reserving books or holding books;
7. General business calls.⁴⁰

In general, the response was as expected - outgoing telephone calls relate to just about anything. The reasons range from business to personal calls, with the vast majority being related to the function or business of the organization. Most of the organizations that we are dealing with here provide the community with mostly personal services.

The main function of most of the organizations that were analyzed was to provide some type of personal service to the individual. As one might suspect, telephone service played a necessary role in the provision of the service. About 88.5 percent of the organizations interviewed view the telephone service, specifically for outgoing calls, as a necessary factor in accomplishing the main function of the organization.⁴¹ Table 6-45 contains the results. We should note that in Cincinnati, 85 percent of the organizations view outgoing telephone calls as necessary to the accomplishment of the main function of the organization, and in Cleveland 91.5% believe the telephone service is necessary. From a statistical standpoint, there is no difference in the two cities.

The importance of the telephone is also demonstrated by the fact that 83% of all organizations⁴² stated that significant delays in service or benefits provided to the public would result if the telephone could not be used. However, it is also interesting to note that 17% stated that minor delays or no delays in service would result if the telephone could not be used. Table 6-46 presents the results.

⁴⁰ A list of all reasons can be found in Appendix F, Question No. 2.

⁴¹ Ibid.

⁴² See Question No. 16.

Table 6-45

Are Outgoing Calls Necessary to Accomplish
The Main Function of Your Organization? *

| City | YES | | NO | |
|-------------------------|-----------|------------|-----------|------------|
| | Frequency | Percentage | Frequency | Percentage |
| Local Government | | | | |
| Cleveland | 29 | 96.67% | 1 | 3.33% |
| Cincinnati | 37 | 86.05% | 6 | 13.95% |
| State Government | | | | |
| Cleveland | 13 | 100.00% | 0 | 0.00% |
| Cincinnati | 17 | 89.47% | 2 | 10.53% |
| Universities | | | | |
| Cleveland | 5 | 100.00% | 0 | 0.00% |
| Cincinnati | 5 | 83.33% | 1 | 16.67% |
| Hospitals | | | | |
| Cleveland | 27 | 93.10% | 2 | 6.90% |
| Cincinnati | 11 | 91.67% | 1 | 8.33% |
| Schools | | | | |
| Cleveland | 74 | 88.10% | 10 | 11.90% |
| Cincinnati | 55 | 75.34% | 18 | 24.66% |
| Libraries | | | | |
| Cleveland | 29 | 85.29% | 5 | 14.71% |
| Cincinnati | 25 | 80.65% | 6 | 19.35% |
| Charities | | | | |
| Cleveland | 91 | 92.86% | 7 | 7.14% |
| Cincinnati | 67 | 94.37% | 4 | 5.63% |
| All Strata | | | | |
| Cleveland | 268 | 91.47% | 25 | 8.53% |
| Cincinnati | 217 | 85.10% | 38 | 14.90% |

*Source: Responses to question 3.

Table 6-46

If the Telephone Could Not Be Used Would There Be
Significant Delays, Only Minor Delays, or No Delays
in the Service or Benefits Provided by Your Organization? *

| Strata By City | Significant Delays | | Only Minor Delays | | No Delays | |
|----------------------|-----------------------|--------|----------------------|--------|--------------|--------|
| | Freq. | % | Freq. | % | Freq. | % |
| Local Government | | | | | | |
| Cleveland | 26 | 86.67% | 1 | 3.33% | 3 | 10.00% |
| Cincinnati | 37 | 84.09% | 5 | 11.36% | 2 | 4.55% |
| State Government | | | | | | |
| Cleveland | 0 | 0.00% | 12 | 85.71% | 2 | 14.29% |
| Cincinnati | 0 | 0.00% | 16 | 84.21% | 3 | 15.79% |
| Universities | | | | | | |
| Cleveland | 4 | 80.00% | 0 | 0.00% | 1 | 20.00% |
| Cincinnati | 5 | 83.33% | 1 | 16.67% | 0 | 0.00% |
| Hospitals | | | | | | |
| Cleveland | 21 | 72.41% | 7 | 24.14% | 1 | 3.45% |
| Cincinnati | 7 | 58.33% | 4 | 33.33% | 1 | 8.33% |
| Schools | | | | | | |
| Cleveland | 72 | 85.71% | 11 | 13.10% | 1 | 1.19% |
| Cincinnati | 56 | 76.71% | 15 | 20.55% | 2 | 2.74% |
| Libraries | | | | | | |
| Cleveland | 29 | 87.88% | 3 | 9.09% | 1 | 3.03% |
| Cincinnati | 23 | 74.19% | 7 | 22.58% | 1 | 3.23% |
| Charities | | | | | | |
| Cleveland | 85 | 87.63% | 10 | 10.31% | 2 | 2.06% |
| Cincinnati | 63 | 88.73% | 8 | 11.27% | 0 | 0.00% |
| All Strata | | | | | | |
| Cleveland | 249 | 85.27% | 34 | 11.64% | 9 | 3.08% |
| Cincinnati | 207 | 80.86% | 43 | 16.80% | 6 | 2.34% |

*Source: Responses to Question 16.

Clearly, most organizations cannot effectively serve the public without telephone service. However, with respect to rate structure and its effect on the organization, a key variable to determine is whether the organization's contact with the public is mostly in terms of outgoing telephone calls since incoming telephone calls are not charged against the organization. Over 50% of the organization's calls in both areas, Cincinnati and Cleveland, are incoming telephone calls and not billed to the organization.⁴³ The results are presented in Table 6-47.

We also sought to determine the degree of importance of the telephone service and the quality of service provided by an organization by determining whether a price increase would result in a decline in the quality of service provided by an organization. The results for this question are mixed. In Cleveland 67% said no and 33% said yes, quality of service would decline if the price of a call increased. In Cincinnati, 56% said no and 44% said yes.

The data indicate that in the flat rate area, Cincinnati, the organizations feel that any increase in the price of telephone calls would result in some decline in the quality of service for about one-half the organizations. Whereas, in the measured rate area that already pays a price per call, only one-third of the organizations believe that quality of service would decline. Also, we note that two-thirds of the universities in the Cincinnati area and 90% of the libraries in the Cincinnati area said yes, quality of service could decline if the price of a call increased. The results are presented in Table 6-48.

About half the organizations interviewed stated that their organization provided the community with services that required extensive use of the telephone. Table 6-49 presents the results for all organizations. The service provided by these organizations that require extensive use of the telephone ranges from very general service to specific programs. Appendix F contains a complete list of the responses.⁴⁴ We also asked whether any of

⁴³See previous section on type of calls which used Question 7 data for further documentation that most calls are incoming.

⁴⁴See Question Nos. 32a, 35a, 37a, and 40a in Appendix F for list of responses.

Table 6-47

Do Most of the Contacts Your Organization Has With
the Public Take the Form of Incoming Phone Calls?*

| Strata of City | YES | | NO | |
|-------------------------|-----------|------------|-----------|------------|
| | Frequency | Percentage | Frequency | Percentage |
| Local Government | | | | |
| Cleveland | 18 | 66.67% | 9 | 33.33% |
| Cincinnati | 34 | 79.07% | 9 | 20.93% |
| State Government | | | | |
| Cleveland | 11 | 78.57% | 3 | 21.43% |
| Cincinnati | 10 | 52.63% | 9 | 47.37% |
| Universities | | | | |
| Cleveland | 2 | 66.67% | 1 | 33.33% |
| Cincinnati | 5 | 83.33% | 1 | 16.67% |
| Hospitals | | | | |
| Cleveland | 18 | 66.67% | 9 | 33.33% |
| Cincinnati | 7 | 58.33% | 5 | 41.67% |
| Schools | | | | |
| Cleveland | 44 | 55.70% | 35 | 44.30% |
| Cincinnati | 41 | 55.41% | 31 | 44.59% |
| Libraries | | | | |
| Cleveland | 11 | 32.35% | 23 | 67.65% |
| Cincinnati | 8 | 25.81% | 23 | 74.19% |
| Charities | | | | |
| Cleveland | 48 | 51.61% | 45 | 48.39% |
| Cincinnati | 35 | 52.24% | 32 | 47.76% |
| All Strata | | | | |
| Cleveland | 152 | 54.87% | 125 | 45.13% |
| Cincinnati | 140 | 55.56% | 112 | 44.44% |

*Source: Responses to Question 15.

Table 6-48

Would the Quality of Service Your Organization Provides Decline if the Price of a Telephone Call Increased?*

| Strata of City | YES | | NO | |
|-------------------------|-----------|------------|-----------|------------|
| | Frequency | Percentage | Frequency | Percentage |
| Local Government | | | | |
| Cleveland | 7 | 24.14% | 22 | 75.86% |
| Cincinnati | 10 | 23.81% | 32 | 76.19% |
| State Government | | | | |
| Cleveland | 3 | 23.08% | 10 | 76.92% |
| Cincinnati | 5 | 29.41% | 12 | 70.59% |
| Universities | | | | |
| Cleveland | 0 | 0.00% | 5 | 100.00% |
| Cincinnati | 4 | 66.67% | 2 | 33.33% |
| Hospitals | | | | |
| Cleveland | 1 | 3.70% | 26 | 96.30% |
| Cincinnati | 2 | 20.00% | 8 | 80.00% |
| Schools | | | | |
| Cleveland | 20 | 27.78% | 52 | 72.22% |
| Cincinnati | 22 | 32.35% | 46 | 67.65% |
| Libraries | | | | |
| Cleveland | 14 | 42.48% | 48 | 52.75% |
| Cincinnati | 26 | 89.66% | 3 | 10.34% |
| Charities | | | | |
| Cleveland | 43 | 47.25% | 48 | 52.75% |
| Cincinnati | 36 | 55.38% | 29 | 44.62% |
| All Strata | | | | |
| Cleveland | 88 | 33.08% | 178 | 66.92% |
| Cincinnati | 105 | 44.30% | 132 | 55.70% |

*Source: Responses to Question 8.

Table 6-49

Does Your Organization Provide Any Services to the Community
That Require Extensive Use of Local Telephone Services?*

| | YES | NO |
|------------------|------------|------------|
| Local Government | | |
| Cleveland | 2 | 0 |
| Cincinnati | 1 | 3 |
| State Government | | |
| Cleveland | 0 | 1 |
| Cincinnati | 0 | 0 |
| Universities | | |
| Cleveland | 2 | 3 |
| Cincinnati | 1 | 5 |
| Hospitals | | |
| Cleveland | 12 | 16 |
| Cincinnati | 8 | 4 |
| Schools | | |
| Cleveland | 17 | 64 |
| Cincinnati | 33 | 40 |
| Libraries | | |
| Cleveland | 10 | 24 |
| Cincinnati | 13 | 17 |
| Charities | | |
| Cleveland | 56 | 39 |
| Cincinnati | 40 | 26 |
| All Strata | | |
| Cleveland | 99 | 147 |
| Cincinnati | 96 | 95 |
| | <u>195</u> | <u>242</u> |

*The table is a composite of responses to Questions 32, 35, 37 and 40.

the services requiring extensive use of the telephone were unique to the organization. The types of programs or services provided ranged over a wide variety of areas, from the very general type service to the specific.⁴⁵

H. Impact of Measured Rate Service (Cleveland)

Seven questions were designed to give insight into the impact of measured rates. Since Cleveland has been on measured rate service for years, and Cincinnati is on a flat rate standard, the description of responses to these questions is confined to organizations in Cleveland.

The organizations were asked if, and in what way, they had been affected by measured rate service. Of the 187 organizations that responded, 123 (66.77 percent) said no.⁴⁶ There were 66 responses (64 organizations) describing the way in which measured rates had affected the organization. Thirty-three (22.22 percent of responses) indicated that either costs are rising or costs are now a concern. Two reported that costs have decreased. Eleven responses (10 of which were for schools, libraries, and charities) indicated that service has decreased, either as a result of curtailing services or the need to divert funds from the organization's primary purpose to use for operating costs. Seven responses indicated a change in policy. These changes involved limiting the use of the telephone by students, teachers, employees, and patrons; and directing student and personal calls to a pay phone.⁴⁷

The organizations were also asked (Question Nos. 20 and 20a) if a change from measured rates to flat rates would affect the way the organization served the public. Only 36, or 19.57 percent, responded yes. When asked to describe the effect, 15 responded they would be less cautious in using the phone.

⁴⁵See Appendix F, Question Nos. 32b, 35b, 37b, and 40b for a list of responses.

⁴⁶See Appendix F, Question No. 21 for a list of responses.

⁴⁷Compiled from responses to Question No. 21.

Only 4 reported service to the public would increase with a flat rate standard, and 5 reported that policy would change. These potential policy changes took the form of limiting or monitoring calls if costs increased, and one response viewed the prospect of a change to flat rates as being more of a burden.⁴⁸ All responses, by strata, to this question are found in Table 6-50.

The organizations were also asked to describe the impact of a change from measured rates to higher flat rates (Questions 23 and 23a). Forty-six (25.99%) reported that such a change would affect the way the organization served the public. This response is slightly larger than the number who said that a change to flat rates (without specifying the size of the change) would affect their organization. The response by strata is contained in Table 6-51. When asked to describe the impact of higher flat rates, the most frequently mentioned effect (21, or 43.73% of responses) related to decreased phone usage. This included cutting back on usage, reducing the number of phone lines, and reducing personal usage. Some of these responses indicate the organizations lack full understanding of flat rate standard. However, the overall response of reduced usage indicates sensitivity to the fact that telephone service is a resource to be used wisely. The second most frequent response (10 or 20.83% of all responses) indicated a budget impact. This included the belief of greater savings with a flat rate, and again the need to divert funds from primary purposes to operating costs.⁴⁹

Another question related to whether the organizations felt that measured rates gave them more, less, or about the same control over their telephone bill. Nearly two-thirds of those responding (113, or 63.48%) felt the degree of control was about the same as it would be with flat rates. Only 18 (10.11%) felt they had less control while 47 (26.40%) said they had greater control. These results are detailed by strata in Table 6-52. Those who felt they had either more or less control were asked to explain why they felt this way. More than one response could be given, and a total of 70 responses were recorded. The most frequent responses (33) related to the fact that under measured rates,

⁴⁸ A complete list of responses can be found in Appendix F, Question 20a.

⁴⁹ A complete list of responses can be found in Appendix F, Question 23a.

Table 6-50

Would a Change from Measured Rates to Flat Rates Change
the Way Your Organization Serves the Public?*

| Strata of City | YES | | NO | |
|----------------------|-----------|------------|-----------|------------|
| | Frequency | Percentage | Frequency | Percentage |
| Local Government | | | | |
| Cleveland | 1 | 5.88% | 16 | 94.12% |
| State Government | | | | |
| Cleveland | 1 | 16.67% | 5 | 83.33% |
| Universities | | | | |
| Cleveland | 0 | 0.00% | 5 | 100.00% |
| Hospitals | | | | |
| Cleveland | 2 | 8.70% | 21 | 91.30% |
| Schools | | | | |
| Cleveland | 11 | 23.40% | 36 | 76.60% |
| Libraries | | | | |
| Cleveland | 6 | 37.50% | 10 | 62.50% |
| Charities | | | | |
| Cleveland | 15 | 21.43% | 55 | 78.57% |
| All Strata | | | | |
| Cleveland | 36 | 19.57% | 148 | 80.43% |

*Compiled from Question 20, Cleveland response only.

Table 6-51

Would a Change to Higher Flat Rates Change the Way
Your Organization Serves the Public?*

| Strata of City | YES | | NO | |
|----------------------|-----------|------------|-----------|------------|
| | Frequency | Percentage | Frequency | Percentage |
| Local Government | | | | |
| Cleveland | 2 | 14.29% | 12 | 85.71% |
| Cincinnati | 0 | | 0 | |
| State Government | | | | |
| Cleveland | 1 | 12.50% | 7 | 87.50% |
| Cincinnati | 0 | 0.00% | 1 | 100.00% |
| Universities | | | | |
| Cleveland | 1 | 20.00% | 4 | 80.00% |
| Cincinnati | 0 | 0.00% | 1 | 100.00% |
| Hospitals | | | | |
| Cleveland | 1 | 4.55% | 21 | 95.45% |
| Cincinnati | 0 | | 0 | |
| Schools | | | | |
| Cleveland | 12 | 24.00% | 38 | 76.00% |
| Cincinnati | 0 | 0.00% | 2 | 100.00% |
| Libraries | | | | |
| Cleveland | 5 | 38.46% | 8 | 61.54% |
| Cincinnati | 0 | | 0 | |
| Charities | | | | |
| Cleveland | 24 | 36.92% | 41 | 63.08% |
| Cincinnati | 0 | 0.00% | 1 | 100.00% |
| All Strata | | | | |
| Cleveland | 46 | 25.99% | 131 | 74.01% |
| Cincinnati | 0 | 0.00% | 6 | 100.00% |

*Compiled from Question 23, Cleveland responses only.

Table 6-52

Some People Have Told Us That They Believe Telephone Users Can Have More Control Over the Amount of Their Telephone Bills with Measured Rates for Local Calls. They Say That the Measured Rate Allows Them to Monitor and Control Local Calls As They Do Long Distance Calls. How About You? Do You Feel That Measured Rates Allow Your Organization to Have More Control, Less Control, or About the Same Control Over Your Phone Bill as Flat Rates?*

| | <u>More Control</u> | | <u>Less Control</u> | | <u>About the Same Control</u> | |
|-------------------------------|---------------------|--------|---------------------|--------|-------------------------------|--------|
| | Freq. | % | Freq. | % | Freq. | % |
| Local Government Cleveland | 9 | 60.00% | 0 | 0.00% | 6 | 40.00% |
| State Government Cleveland | 1 | 14.29% | 1 | 14.29% | 5 | 71.43% |
| Universities Cleveland | 2 | 40.00% | 1 | 20.00% | 2 | 40.00% |
| Hospitals Cleveland | 6 | 28.57% | 1 | 4.76% | 14 | 66.67% |
| Schools Cleveland | 13 | 28.89% | 2 | 4.44% | 30 | 66.66% |
| Libraries Cleveland | 2 | 15.38% | 1 | 7.69% | 10 | 76.92% |
| Charities Cleveland | 14 | 19.44% | 12 | 16.67% | 46 | 63.89% |
| All Strata Cleveland | 47 | 26.40% | 18 | 10.11% | 113 | 63.48% |

*Compiled from Question 22, Cleveland responses only.

the number of calls is known, i.e., more complete records, the ability to restrict the number of calls, and the ability to curtail unnecessary calls.⁵⁰

In summary, there appears to be little evidence that measured rate service has had any significant negative impact on public/social service type organizations in Cleveland. This may be because there was, in fact, no significant negative impact, or because over the years, the organizations have adjusted their behavior to the measured rates and therefore no longer notice an impact. While about two-thirds (123) reported no impact from measured rates, 64 had felt an impact from measured rates. Thirty-three of these responses related to rising costs and 11 reflected a curtailment of services. However, these responses conflict somewhat with those results obtained when the organizations were asked how they would react to flat rates. Only 36 reported that flat rates would affect their organizations, with 15 responses that the phone would be used with less caution. The one impact of measured rates that is seen throughout this series of questions is that the organizations are increasingly aware of the need to treat the telephone as a resource whose use should not be used unwisely.

I. The Hypothetical Impact of Measured Rates on the Operation of an Organization (Cincinnati)

In order to get a better idea on the impact of switching to measured service rates from flat rates, the organizations in Cincinnati were asked a series of hypothetical questions. These questions sought responses from Cincinnati organizations that tested reactions to various prices for measured service in relation to flat rate. For example, Question 19a asked, "Assume that the current flat rate was replaced by a measured rate where your bill remained the same, if your phones were used about the same as they are now. Would this change your method of operation?" Sixty-two percent of the organizations said no and 38% said yes their operations would change. Table 6-53 summarizes the results of Question 19a. If an organization said yes we then

⁵⁰Compiled from responses to Question Nos. 22 and 22a.

Table 6-53

Assume That the Current Flat Rate Was Replaced by a Measured Rate Where Your Bill Remained the Same If Your Phones Were Used About the Same As They Are Now. Would This Change Your Method of Operation?*

| Strata of City | YES | | NO | |
|----------------------|-----------|------------|-----------|------------|
| | Frequency | Percentage | Frequency | Percentage |
| Local Government | 7 | 20.59% | 27 | 79.41% |
| State Government | 8 | 50.00% | 8 | 50.00% |
| Universities | 3 | 75.00% | 1 | 25.00% |
| Hospitals | 2 | 28.57% | 5 | 71.43% |
| Schools | 29 | 46.03% | 34 | 53.97% |
| Libraries | 10 | 66.67% | 5 | 33.33% |
| Charities | 16 | 27.12% | 43 | 72.88% |
| All Strata | 75 | 37.88% | 123 | 62.12% |

*Compiled using Question No. 19a, Cincinnati responses only.

asked the organization to tell us how their operation would change. The most common answer was that outgoing calls would be reduced. This answer indicates that the question could have been misunderstood since we stated that total charges remained the same and usage remained the same. Alternatively, the response could indicate that rather than the total bill being the controlling factor, the change from a flat rate structure to a measured rate structure in itself induced a change in behavior. Another response by organizations was that the change in rate structure would initiate organizational policies with respect to telephone use. This is a clear indication that a change in rate structure could elevate the consideration given to the telephone as a resource.

In addition, we sought responses from organizations switching from flat rates to measured rates where their telephone bill went up or down. Question 19c asked, "Assume that the current flat rate was replaced by a measured rate where your bill increased 20% if your usage remained the same. Would this change your method of operation?" To help clarify the question, the interviewers were instructed to tell the respondents that "by reducing usage the bill could be reduced." The majority of organizations (65 percent) stated they would change their operation; 35 percent said no. The results for all strata are presented in Table 6-54.

Again, we questioned those organizations that said yes to determine how their method of operation would change. The majority again stated that outgoing telephone calls would be reduced and/or services would be cut. However, people also felt that because of the price increase a switch to other modes of communication would be considered. Again, we can conclude from this question that organizations would be giving more consideration to the telephone as a valuable resource.

We then asked the organizations in Cincinnati through question 19e what changes would result from a 20% decrease in their telephone bill. The majority response was that no changes would be made. Ninety percent said no and 10 percent said yes (See Table 6-55). The yes respondents were again asked what changes would be made, and the primary response was the out-

Table 6-54

Assume That the Current Flat Rate Was Replaced by a Measured Rate Where Your Bill Increased by 20% if Your Usage Remained the Same. Would This Change Your Method of Operation?*

| Strata of City | YES | | NO | |
|----------------------|-----------|------------|-----------|------------|
| | Frequency | Percentage | Frequency | Percentage |
| Local Government | 19 | 45.24% | 23 | 54.76% |
| State Government | 10 | 62.50% | 6 | 37.50% |
| Universities | 4 | 80.00% | 1 | 20.00% |
| Hospitals | 10 | 90.91% | 1 | 9.09% |
| Schools | 42 | 66.67% | 21 | 33.33% |
| Libraries | 15 | 83.33% | 3 | 16.67% |
| Charities | 39 | 65.00% | 21 | 35.00% |
| All Strata | 139 | 64.65% | 76 | 35.35% |

*Compiled using Question No. 19c, responses for Cincinnati only.

Table 6-55

Again Assume That the Current Flat Rate Was Replaced by a Measured Rate, but Your Bill Decreased by 20% and Your Usage Remained the Same. Would This Change Your Method of Operation?*

| Strata of City | YES | | NO | |
|----------------------|-----------|------------|-----------|------------|
| | Frequency | Percentage | Frequency | Percentage |
| Local Government | 1 | 2.44% | 40 | 97.56% |
| State Government | 4 | 25.00% | 12 | 75.00% |
| Universities | 1 | 20.00% | 4 | 80.00% |
| Hospitals | 0 | 0.00% | 10 | 100.00% |
| Schools | 6 | 9.09% | 60 | 90.91% |
| Libraries | 2 | 10.53% | 17 | 89.47% |
| Charities | 7 | 11.48% | 54 | 88.52% |
| All Strata | 21 | 9.63% | 197 | 90.37% |

*This question was compiled using the responses in Cincinnati only to Question No. 19e.

going calls would be increased. Specifically, organizations stated that the increase in outgoing calls would be in the form of outgoing toll calls. In other words, a decrease in the price of local telephone service could induce increased usage of long distance service. One can view this as allocating the total telephone budget differently from period to period.

One possible conclusion that could be drawn from the above responses is that organizations in Cincinnati are sensitive to a change to measured service. However, an alternative conclusion is that they could be more sensitive to price increases. It is also fairly clear that if one instituted a change from flat rate to measured rates, almost no operational changes would result if the rate design decreased the average telephone bill.

The operational changes indicate that the organizations interviewed would give more consideration to telephone service as a valuable resource. It could also mean that it is possible, through a change from flat rates to measured rates, to increase efficiency of local telephone systems, not only through technology, but through increased awareness and responsiveness of users.

CHAPTER 7
RESTRATIFICATION OF SAMPLE --
A FURTHER ANALYSIS OF THE MAIN STUDY DATA

A. Restratification Based on Yes
Responses to Question 3--
Are Outgoing Calls Necessary?

In order to gain a better understanding of the impact of measured service on quality of service, we cross-tabulated several questions. Question 3, "Are outgoing calls necessary to accomplish the main function of your organization?" was cross-tabulated with all other questions. We examined the yes responses to question 3 to determine whether the respondents were consistent in their answers and to determine how telephone service was related to the quality of service of these organizations. Although no single resource such as the telephone can be directly related to the quality of service because there are too many other factors affecting quality, the data does indicate that in both cities the telephone is used extensively to provide the services of an organization. However, the data also indicate no significant difference between the two cities in the use of the telephone in providing these services.

One of the interesting findings is that when we examine the responses of the organizations who answered yes to question 3 (outgoing calls are necessary to accomplish the main function of the organization) in both cities, the majority of telephone service use is not outgoing calls but incoming. In most organizations, well over 50% of telephone usage is

incoming in nature. Of those organizations that said yes to Question 3, 54% in Cleveland and 57% in Cincinnati stated that most contact with the public was in the form of incoming calls.

From the standpoint of this analysis we are only interested in less than 50% of an organization's total telephone use, or the outgoing telephone use. We, therefore, examined the yes responses to Question 3 with respect to Question 8, "Would the quality of service your organization provides decline if the price of a telephone call increased?" This comparison indicates that there could be a difference between the two cities. In Cincinnati, the flat rate area, of those who said yes to Question 3, about 50% said no and 50% said yes, the quality would decline. Whereas in Cleveland, the measured rate area, 66% said no and 34% said yes. The difference is significant between the two cities and is an indication that Cleveland, the measured rate area, is not as sensitive to a price increase as Cincinnati. A possible explanation of the difference in how the organizations view telephone service is that the flat rate area may only view an increase in terms of total telephone billing whereas organizations in the measured rate area have always viewed telephone calls in terms of a cost per call. We should note that if we remove the Cincinnati library results from the aggregate data, the responses of the two cities are very similar.

To gain further understanding, we also compared the yes responses to Question 3 with Question 16, "If the telephone could not be used, would there be significant delays, only minor delays, or no delays in the service or benefits provided by your organization?" The distribution of the responses is presented in the following table.

Table 7-1

Question 3 with Question 16

| | <u>Significant Delays</u> | <u>Minor Delays</u> | <u>No Delays</u> |
|------------|---------------------------|---------------------|------------------|
| Cleveland | 89% | 9% | 2% |
| Cincinnati | 85% | 14% | 1% |

These results show no significant difference in the two cities. Clearly, telephone service is a major factor in providing service in either area.

Further indication of the importance of telephone service and the "likeness" of the two cities with respect to use was indicated when we cross-tabulated Question 3 with Question 14, "In those situations where either the telephone or another mode is equally appropriate, which is used most often?" Roughly 75% of the organizations who said "yes" to Question 3 responded by stating that the telephone would be used. This gives further evidence that the telephone is an important factor in providing social service and also indicates that the two cities have the same usage habits.

The results presented above apply to the total strata. There are some deviations from the aggregate strata data and city data that should be noted. For example, data from the cross-tabulation of Question 3 with Question 8 show that 96% of the libraries in Cincinnati stated that quality of service would decline if price increased, as compared with about 50% all strata in Cincinnati and 34% all strata in Cleveland. There are also some minor deviations with respect to contact with the public. The state stratum for both areas' incoming calls are their major contact with the public, whereas libraries in both areas reported incoming calls were a much lower percentage of the contacts with the public (28%-31%). The differences are obvious: Libraries deal directly with the public via book circulation, whereas the state organizations are, for the most part, more removed from direct public contact.

B. Restratification Based on "yes" Responses
to Question 8--the Relationship Between
Quality of Service and Price

The following table is the population who answered yes to Question 8 which asked: "Would the quality of service your organization provides decline if the price of a telephone call increased?" with the questions that asked whether there were health services, educational services,

library services, or charitable services provided to the community that require extensive use of local telephone services.¹

Table 7-2

Questions of Extensive Use

| | <u>Yes</u> | <u>No</u> |
|------------|------------|-----------|
| Cleveland | 46% | 54% |
| Cincinnati | 38% | 62% |

The responses suggest only minimum difference between the two cities. We can interpret the responses as indicating that of those organizations that felt that quality of service would decline, more than 50% of the organizations do not provide services that use the local telephone service extensively. A further examination of the strata indicates that of the 50% who do provide services that require extensive use of the local telephone service, about 50% of these organizations are charities in both areas. Therefore, only 25% of the sample, if we exclude charities, felt that quality of service would decline if price increased and also provide services that require extensive use of the telephone.

One last additional observation: with respect to individual strata data, the data suggest that there could be a difference in the services provided by organizations between the two areas that relate to quality of service provided by an organization and local telephone usage for those organizations. Although it is impossible to determine the validity of the difference, the hospital, school, and library strata displayed a difference between the two cities. In each of the stratum the organizations in Cincinnati stated that they provided more services than Cleveland that require extensive use of the telephone. Again we should point out that the number of observations answering both questions is quite small relative to the population, therefore no conclusion can

¹These questions include Question numbers 32, 35, 37, and 40.

be drawn. We only mention the observation so as to point out where work could be done.

In addition, we also compared those organizations that said yes to Question 8 with Question 15, "Do most of the contacts your organization has with the public take the form of incoming phone calls?" and Question 16, "If the telephone could not be used, would there be significant delays, only minor delays, or no delays in the service or benefits provided by your organization?"

The purpose in comparing Question 8's yes response with Question 15 was to determine the significance of outgoing calls in organizations that stated that quality would go down as price increased. Our initial hypothesis was that if quality and price were related, then outgoing telephone calls could be a major factor in either city. The results are presented below.

Table 7-3

Question 15

| Question 8 "Yes" | <u>Yes</u> | <u>No</u> |
|---------------------|------------|-----------|
| Cleveland | 53% | 47% |
| Cincinnati | 57% | 43% |

The responses suggest that there are slightly more incoming calls from the public than outgoing, although the mixture is roughly 50-50 for both cities. Further, there is no significant difference between strata or cities.

The purpose in comparing the yes responses in Question 8 with Question 16 was to determine whether the organization that stated the quality would suffer if price increase correlated with the organization's response to whether there would be delays in service if the telephone could not be used. The results of the comparison are presented below:

Table 7-4
Question 16

| Question 8 "Yes" | Significant Delays | Minor Delays | No Delays |
|---------------------|--------------------|--------------|-----------|
| Cleveland | 91% | 9% | 0% |
| Cincinnati | 81% | 14% | 5% |

Organizations in both areas state that delays in service without telephone service are a key factor that correlates with Question 8. However, once again there is no significant difference in the areas. In addition, the individual strata is not significantly different from the aggregate data. We should note that this question is phrased to examine the extreme case of telephone use and the results were as expected.

C. Restratification by Budget Data

In an attempt to see whether budget size was, in any way, related to the responses given, the organizations were regrouped according to their estimated annual budgets. The new groups were: (1) low budget -- less than \$100,000; (2) medium budget--\$100,000 to \$500,000; and (3) high budget--over \$500,000. Table 7-5 gives the number of organizations in each budget group for each city.

With respect to significant reasons for making calls, there appeared to be few major differences between cities or among budget groups. The only observed difference of any magnitude was for schools. Schools of medium and low budget size most frequently cited "contacting parents" as a significant reason, and the Cincinnati medium budget frequency was much greater than the Cleveland medium budget frequency. Table 7-6 presents the results.

Table 7-5
BUDGETS*

| | <u>Low Budget</u> | <u>Medium Budget</u> | <u>High Budget</u> |
|------------------|-----------------------|--------------------------|------------------------|
| Local Government | | | |
| Cleveland | 2 | 6 | 14 |
| Cincinnati | 4 | 11 | 23 |
| State Government | | | |
| Cleveland | 1 | 1 | 5 |
| Cincinnati | 3 | 3 | 3 |
| University | | | |
| Cleveland | 0 | 1 | 4 |
| Cincinnati | 0 | 0 | 5 |
| Hospital | | | |
| Cleveland | 1 | 1 | 18 |
| Cincinnati | 0 | 0 | 5 |
| School | | | |
| Cleveland | 12 | 11 | 9 |
| Cincinnati | 15 | 27 | 12 |
| Library | | | |
| Cleveland | 16 | 8 | 2 |
| Cincinnati | 17 | 9 | 0 |
| Charity | | | |
| Cleveland | 32 | 28 | 23 |
| Cincinnati | 22 | 30 | 12 |
| All Strata | | | |
| Cleveland | 64 (32.99) | 56 (28.87) | 75 (38.66) |
| Cincinnati | 61 (30.35) | 80 (39.80) | 60 |

* Since some organizations did not report budget data, totals in the table are less than the total number of interviews.

Table 7-6

Schools Citing Contact with Parents as a Significant Reason for Outgoing Calls

| | <u>Low Budget</u> | <u>Medium Budget</u> | <u>High Budget</u> |
|------------|-------------------|----------------------|--------------------|
| Cleveland | 10 | 5 | 6 |
| Cincinnati | 12 | 19 | 7 |

There is no readily apparent explanation for this. It may simply relate to the type of school involved with each budget size (e.g., elementary vs. high school, vocational training vs. college prep., etc.) or it may relate to school policies within the cities.

Responses to the question, "Are outgoing calls necessary to the main function of the organization," showed no major differences among the budget groups, either between cities or within strata.

As might be expected, the low budget organizations had lower numbers of telephone sets and lines, while the high budget groups tended to have relatively large numbers of telephone sets and more telephone lines.

When asked whether quality of service would decline if the price of a telephone call increased, those who answered yes were roughly equally divided among budget groupings. However, within the low budget grouping there was a difference between cities. In Cincinnati, 58.62% of low budget organizations said quality would be affected by an increase in the price of a telephone call, as compared to 44.83% in Cleveland. The sample size for low-budget organizations answering this question was the same in each city (58), so the difference in the percentage answering yes may assume some importance. However, of those low budget groups in Cincinnati who answered yes, 70% were libraries and charities, and thus, part of the difference may be explained by organizational, administrative, or funding differences between the cities.

There were some interesting (perhaps unexpected) responses to the question "Are there policies governing the use of the telephone in your organization?" While many different responses were given, two of those appearing with great frequency were looked at relative to the budget question. Those two responses were (1) no policies; and (2) personal calls prohibited.

The low-budget and medium-budget organizations were more likely to respond no policies. In particular, the low-budget and medium-budget charities gave this response more often than high-budget charities, as can be seen in the following table.

Table 7-7

Budget Classification of Organizations
Reporting No Policies

| | <u>All Strata</u> | <u>Charities</u> |
|---------------|-------------------|------------------|
| Low Budget | | |
| Cleveland | 17 | 10 |
| Cincinnati | 17 | 10 |
| Medium Budget | | |
| Cleveland | 20 | 11 |
| Cincinnati | 25 | 11 |
| High Budget | | |
| Cleveland | 11 | 4 |
| Cincinnati | 4 | 1 |

High-budget organizations were more likely than low-budget agencies to respond that personal calls were prohibited. (See following table.)

Table 7-8

Budget Classification of Organizations
Prohibiting Personal Calls

| | <u>Low Budget</u> | <u>Medium Budget</u> | <u>High Budget</u> |
|------------|-----------------------|--------------------------|------------------------|
| Cleveland | 8 | 5 | 19 |
| Cincinnati | 5 | 8 | 12 |

A key question relative to the impact of measured rates was, "If the current flat rate was replaced by a measured rate where your bill increased 20 percent (with the same usage), would this change your method of operations?" There were 114 Cincinnati organizations who had provided budget data, and who also answered yes to this question. The respondents were fairly evenly divided among the budget groups, with a slightly higher frequency for high budget groups. (See following table.) So budget size does not appear to have any significant effect on this response.

Table 7-9
Cincinnati Organizations Who Said Their Method of Operation Would Change If Measured Rates Resulted in a 20 Percent Higher Bill

| <u>Low Budget</u> | <u>Medium Budget</u> | <u>High Budget</u> |
|-------------------|----------------------|--------------------|
| 30 (61.22%)* | 47 (64.38%) | 37 (71.15%) |

Specific to Cleveland, organizations were asked about the impact of a change to flat rates. Low-budget and medium-budget organizations were more inclined to respond that the way they serve the public would change with a flat rate--both if the bill were unchanged, and if the bill were increased. The following table contains these responses.

Table 7-10
Impact of a Change to Flat Rates (Cleveland)

| | <u>Low Budget</u> | <u>Medium Budget</u> | <u>High Budget</u> |
|--|-------------------|----------------------|--------------------|
| Methods would change with flat rate (bill unchanged) | 11 (26.83%)* | 10 (28.57%) | 7 (12.50%) |
| Methods would change with flat rate (bill increased) | 12 (33.33%) | 13 (39.39%) | 10 (17.54%) |

* Percentages refer to the percent of that budget group which responded yes.

There was no substantial difference among budget groups in Cleveland in terms of their perceived degree of control over telephone bill with measured rates.

Table 7-11
Perceived Degree of Control with
Measured Rates (Cleveland)

| | <u>Low Budget</u> | <u>Medium Budget</u> | <u>High Budget</u> |
|------------------------|-----------------------|--------------------------|------------------------|
| More Control | 8 (20.51%)* | 9 (24.32%) | 15 (27.27%) |
| Less Control | 4 (10.26%) | 6 (16.22%) | 6 (10.91%) |
| About the Same Control | 26 (66.67%) | 22 (59.46%) | 34 (61.82%) |
| Have No Control | 1 (2.56%) | 0 | 0 |

* Percentages represent percent of that budget group that gave that particular response.

While there are some differences in responses among the budget groups, there are few substantial differences; and there appears to be no consistent pattern of differences. It is possible, of course, that more refined delineations of budget size might have yielded some relationship between responses and budget sizes. However, based on the data used, it would seem there is no significant and consistent relationship between budget size and the organizations' responses regarding their telephone usage.

D. Restratification by Number of Employees

Another restratification based on size was done relative to the number of employees. The organizations were divided into two groups: (1) small--those with less than 50 full-time employees and less than 100 part-time employees; (2) large--those with more than 50 full-time

employees or less than 50 full-time employees and more than 100 part-time employees. The distribution of organizations within cities is shown in the following table.

Table 7-12

Number of Organizations
by Employment Size

| | <u>Small</u> | <u>Large</u> |
|------------|--------------|--------------|
| Cleveland | 186 | 96 |
| Cincinnati | 180 | 73 |

The survey responses were then cross-tabulated with the size classifications to estimate whether there were any significant differences between cities, with the element of employment size isolated. Some significant differences were found in the responses to the question "Do you have a telephone policy?"

Table 7-13

Percentage of Organizations
Without a Telephone Policy

| | <u>Small</u> | <u>Large</u> | <u>Difference</u> |
|-------------------------|---------------|--------------|-------------------|
| Cleveland | 28% | 16% | significant |
| Cincinnati | 28% | 7% | significant |
| Difference in Column | insignificant | significant | |

In this case, for both cities the larger organizations are significantly more likely to have a telephone policy. Between cities there is no difference between small organizations, but the large organizations in Cincinnati have a significantly higher percent with a telephone policy than the larger organizations of Cleveland. This is quite opposite from what one would expect if measured rates do have any effect upon telephone procedures. Of those organizations that had telephone policies, each was asked to list up to three different policies. Out of all policies mentioned, the following accounting shows the percent falling into each of four categories:

Table 7-14

Type of Telephone Policies

| | <u>Policies About Personal Calls</u> | <u>Policies About Long Distance Calls</u> | <u>Policies About Non-employee Calls</u> | <u>All Other</u> |
|------------------------|--|---|--|----------------------|
| Small Organizations | | | | |
| Cleveland | 50% | 23% | 7% | 20% |
| Cincinnati | 42% | 28% | 8% | 22% |
| Large Organizations | | | | |
| Cleveland | 47% | 25% | 5% | 23% |
| Cincinnati | 47% | 25% | 7% | 21% |

In this instance, one cannot discern any difference within cities between organization sizes or within organization sizes and between cities. It appears from the results of this question that measured rates do not motivate policies against personal calls but that other factors do, such as concern for personal calls taking away from worker production time.

Another question, which yielded some significant differences based on employment size, asked "What percentage of local calls are personal?"

Table 7-15

Proportion of Responses Regarding the
Percentage of Personal Calls

| | <u>0-5%</u> | <u>6-10%</u> | <u>greater than 10%</u> |
|------------------------|-------------|--------------|-------------------------|
| All Organizations | | | |
| Cleveland | 52% | 26% | 22% |
| Cincinnati | 70% | 18% | 21% |
| Small Organizations | | | |
| Cleveland | 58% | 23% | 19% |
| Cincinnati | 67% | 16% | 17% |
| Large Organizations | | | |
| Cleveland | 40% | 31% | 29% |
| Cincinnati | 53% | 19% | 28% |

There appears to be little difference when comparing cities in the greater than 10% of personal call category. Therefore, one may concentrate on analysis in the 0-5% category. Any differences there will be reflected in differences with opposite direction but equal magnitude in the 6-10% category. In general, one may expect that organizations would prefer to restrict the use of their telephones for personal calls. In Cleveland the incentives for doing this are

1. cost of outgoing calls;
2. telephone lines tied up;
3. workers' time not spent on organization work.

In Cincinnati, only incentives 2 and 3 would promote restriction on personal calls. On the other hand, organizations in either city may utilize telephone privileges as an organizational reward or as a morale booster. In any case, the survey shows the counter-intuitive result that Cincinnati does better than Cleveland at controlling personal calls as the difference between 70% and 52% in the 0-5% column of the table is significant. However, the following table should shed some more light on the situation:

Table 7-16

Percentage Answering That 5 Percent
or Less of Calls are Personal

| | <u>Small Organization</u> | <u>Large Organization</u> | <u>Difference in Row</u> |
|-------------------------|-------------------------------|-------------------------------|------------------------------|
| Cleveland | 58% | 40% | significant |
| Cincinnati | 67% | 53% | significant |
| Difference in Column | marginal | insignificant | |

As one might expect, in both cities, small organizations do significantly better at controlling personal calls than large organizations. We also see that stratifying on organization size decreases the difference between the two cities. The difference between small organizations is

marginal, and the difference in large organizations is insignificant. Another important result is that while there is no difference between Cleveland small organizations and Cincinnati large organizations, there is a very large and significant difference between the Cincinnati small and Cleveland large organizations. This difference alone is responsible for the apparent difference in the two cities.

In general, we see that the counter intuitive result is not as strong when organization size is taken into account. Therefore, given any number of plausible explanations for the results, one would conclude that telephone rate structure has had no effect on reducing the calls made for personal reasons in the Cleveland area.

For those answering that personal calls are less than or equal to 10%, a citywide estimate of the average percent of calls that are personal can be estimated from the data. The result is 5.02% for Cleveland and 4.25% for Cincinnati. The average for all respondents was 10.10% in Cleveland and 8.86% in Cincinnati. These differences do not appear significant and are in the opposite direction from what would be necessary to support a hypothesis that measured rates have the effect of decreasing personal calls.

In response to the question, "Will quality of service decline if the price of a telephone call increased?" 33% answered yes in Cleveland and 44% answered yes in Cincinnati. The difference of 11% is statistically significant. However, when size of the organization is taken into account, the difference between the cities becomes less pronounced. At the same time we see that the difference in responses between organization sizes within each city is very pronounced and is statistically significant. The following table shows percent of yes responses for various paired comparisons and the result of significance tests. The general indication is that organizations in Cleveland would be affected less than those in Cincinnati. It is interesting to note, however, that small organizations in Cleveland feel they would be affected more than

Table 7-17

Percent Responding That Quality of Service
Would Decline if the Price of a
Telephone Call Increased

| | <u>Small Organizations</u> | <u>Large Organizations</u> | <u>Difference in Row</u> |
|-------------------------|--------------------------------|--------------------------------|------------------------------|
| Cleveland | 40% | 19% | significant |
| Cincinnati | 49% | 32% | significant |
| Difference in Column | marginal | significant | |

large organizations in Cincinnati. One might conclude from all of this that many organizations in Cleveland feel that they have designed their communication procedures to minimize outgoing telephone calls and that increased cost would not cause changes (since calls are already minimized, nothing could be done), they would simply absorb the increased cost (large organizations are apparently better able to do that than small organizations). In Cincinnati, significantly fewer organizations have minimized outgoing telephone calls (since they have no incentive to do so), and they tend to perceive changes in telephoning procedures as a cause of decline in the quality of services that they provide.

When asked "Are outgoing calls necessary to accomplish your main function?", most organizations responded yes. (See following table.)

Table 7-18

Percentage Responding that Outgoing
Calls are Necessary

| | <u>Small Organizations</u> | <u>Large Organizations</u> | <u>Difference in Row</u> |
|-------------------------|--------------------------------|--------------------------------|------------------------------|
| Cleveland | 94% | 91% | insignificant |
| Cincinnati | 84% | 86% | insignificant |
| Difference in Column | significant | insignificant | |

We see that organization size is unrelated to dependence upon the telephone, but there appears to be somewhat more dependence in small organizations in Cleveland than small organizations in Cincinnati.

The employment size had some impact on response to the question "If the telephone could not be used would there be significant delays, only minor delays, or no delays in the service provided by your organization?".

A significantly higher proportion of the small organizations in Cleveland felt that no telephone service would cause significant delays in service than the proportion in Cincinnati of the small organization. There was no difference in the large organizations. It should be noted that the percent of small organizations indicating minor delays reversed for the two cities so as to almost exactly cancel the difference in "significant delay" responses. Therefore, in both cities, better than 98% of the small organizations felt there would be some sort of delay.

The organizations were asked to report the number of telephone sets and lines that they have. As one might expect, the number of handsets and lines is correlated to the organizations size with over 90% of the small organizations having 25 or fewer hand sets and 88% having fewer than 7 lines. Of the large organizations 89% have 11 or more handsets and about 83% have 5 or more lines. The difference in any of these figures between the two cities is not significant.

Similarly, as one might expect, the number of local outgoing calls is related to organization size. However, it also appears that it is not related to city.

Table 7-19
 Percentage making Less than 900 Calls
 per Month

| | <u>Small Organizations</u> | <u>Large Organizations</u> | <u>Difference in Row</u> |
|-------------------------|--------------------------------|--------------------------------|------------------------------|
| Cleveland | 59% | 16% | significant |
| Cincinnati | 55% | 13% | significant |
| Difference in Column | insignificant | insignificant | |

The relation to organization size is even more evident when we see that 96% of both cities small organization made less than 4000 calls per month while 44% of Cleveland large organizations said they made more than 6000 calls per month. The answer was given by 32% of the Cincinnati large organizations. That difference between Cincinnati and Cleveland is not significant.

After considerable analysis of the percent of calls said to be incoming (this consisted of grouping and regrouping the data in an effort to discover any patterns that may be present) there appeared to be no significant differences, either between cities or between organization sizes.

More than half of the organizations reported they have a specific budget for telephone service. The distribution by employment size is seen with the following table.

Table 7-20
 Percentage of Organizations with a
 Specific Budget for Telephone Service

| | <u>Small Organizations</u> | <u>Large Organizations</u> | <u>Difference in Row</u> |
|-------------------------|--------------------------------|--------------------------------|------------------------------|
| Cleveland | 58% | 75% | significant |
| Cincinnati | 62% | 73% | marginal |
| Difference in Column | insignificant | insignificant | |

The large organizations in both cities are slightly more likely to have a specific budget for telephone use than small organizations. The difference in Cleveland is more significant than the difference in Cincinnati. Since budgeting is a formal mechanism to control a system, these results are intuitive in that one would expect larger organizations to make use of formal control procedures. When asked if these budgets were flexible, a yes response was almost uniformly 80% in both cities and organizations sizes. When asked if these budgets had been exceeded, a slightly higher percent of both organization sizes in Cincinnati answered "yes" than their counterparts in Cleveland. However, these differences were not significant and averaged about 50-55% over the two cities. It is most likely that these telephone budgets would include long distance calls, and from these results, it must be conjectured that they are responsible for the great majority of incidents of budgets being exceeded.

E. Restratification by Percent Professional

In this section are the results of analysis after stratifying the questionnaire responses according to the percent of full-time staff that were considered professional. Two strata were defined: (1) less than 50% of full-time employees are professional, designated by the symbol P_0 and (2) greater than or equal to 50% of full-time employees are professional, designated by the symbol P_1 . Table 7-21 gives the percent of those organizations interviewed in each of the original strata that fall into the new strata. One may note the large percentage of schools that were classified as P_1 and the large percentage of libraries classified as P_0 . Since both of these are relatively large strata, any differences between P_1 and P_0 within a city (and there were very few) tended to be due to differences between schools and libraries. Also the differences between cities within P_1 tended to be due to differences between the two cities' school systems, and differences within P_0 tended to be due to differences between the two cities' library systems.

Table 7-21
 Percent of Full Time Employees that
 are Classified Professional

| Strata | Less Than 50% of All Employees Classified as Professional = P ₀ | Greater Than or Equal to All Employees Classified as Professional = P ₁ |
|-------------------|---|---|
| Local | | |
| Cleveland | 66% | 33% |
| Cincinnati | 55% | 45% |
| State | | |
| Cleveland | 57% | 43% |
| Cincinnati | 53% | 47% |
| University | | |
| Cleveland | 40% | 60% |
| Cincinnati | 33% | 66% |
| Hospital | | |
| Cleveland | 44% | 56% |
| Cincinnati | 20% | 80% |
| School | | |
| Cleveland | 8% | 92% |
| Cincinnati | 8% | 92% |
| Library | | |
| Cleveland | 82% | 18% |
| Cincinnati | 90% | 10% |
| Charity | | |
| Cleveland | 44% | 56% |
| Cincinnati | 29% | 71% |
| All | | |
| Cleveland | 41% | 59% |
| Cincinnati | 36% | 64% |

The responses to the question about the main reason for telephoning in their organizations did not appear to be different between organizations classified P_1 and those classified P_0 except for one specific response. That response was "reserving, holding books; notifying patrons re: availability of reserved/held books" and is clearly a library response, therefore, the difference is between libraries and other type organizations and not due to percent of professional staff. The difference between the cities in each strata (P_0 , P_1) was insignificant in all cases.

When asked about the percent of calls that are incoming, there may be a slight difference when all responses are classified into less than or equal to 50% calls incoming and greater than 50% calls incoming categories. Table 7-22 shows the results of such an analysis where only the less than or equal to 50% category is tabulated.

Table 7-22
Percent of Organizations with \leq 50% Calls Incoming

| | P_0 | P_1 | Difference in Rows |
|--------------------------|---------------|----------|-----------------------|
| Cleveland | 41% | 57% | marginal |
| Cincinnati | 48% | 47% | insignificant |
| Difference in Columns | insignificant | marginal | |

All the significance tests in this section were based on an estimate of the population size of strata P_0 and P_1 since the actual size is unknown with a sensitivity analysis around various population sizes used to reduce uncertainty. For the two marginal cases above, sensitivity analysis produced results from not significant to significant hence the "marginal" conclusion. In any case, any actual difference seems to indicate that Cleveland P_1 organizations have a slightly higher percent who have arranged their business so that most of their local calls are incoming.

The "yes" responses to the question of whether quality of their organization's service would decline if the price of telephone calls increased are tabulated in Table 7-23.

This result, that more organizations in Cincinnati feel a price increase would affect the quality of service provided, has occurred in several other analyses.

Table 7-23
Percent of Organizations Answering Yes

| | P ₀ | P ₁ | Difference in Row |
|-------------------------|----------------|----------------|----------------------|
| Cleveland | 37% | 31% | insignificant |
| Cincinnati | 49% | 41% | insignificant |
| Difference in Column | marginal | significant | |

One also sees, as before, that the percent of organizations in Cincinnati that control personal calls to less than 5% of all calls is higher than in Cleveland. Table 7-24 shows this result.

Table 7-24
Percent of Organizations Indicating $\leq 5\%$ of
Calls are Personal

| | P ₀ | P ₁ | Difference in Row |
|-------------------------|----------------|----------------|----------------------|
| Cleveland | 53% | 51% | insignificant |
| Cincinnati | 67% | 63% | insignificant |
| Difference in Column | marginal | significant | |

Table 7-25 gives the "yes" responses to the question, "Does your organization keep records on phone usage?"

Table 7-25
Percent of Organizations Answering Yes

| | P_0 | P_1 | Difference in Row |
|-------------------------|---------------|---------------|----------------------|
| Cleveland | 50% | 35% | significant |
| Cincinnati | 54% | 39% | significant |
| Difference in Column | insignificant | insignificant | |

One organization in each city in the P_0 strata, that was representative of a large portion of the entire P_0 strata was studied in the case studies. It was found in the case studies that the success of many programs, that involve telephone contact, is measured by the level of telephone usage. Based on these results one may hypothesize two motives for maintaining records of telephone usage:

1. As a means of controlling usage to control costs.
2. As a means of measuring organizational output.

Except with respect to long distance calls, organizations in Cincinnati would not have motivation #1. Therefore, since the table above shows no difference between cities the most plausible conclusion is that the main reason, even in Cleveland, for keeping usage records is to assist in meeting organizational goals rather than to control telephone costs.

Another question concerning control of telephone usage asks organizations to list up to three policies they have governing the use of the telephone. Table 7-26 is a tabulation of those who mentioned at least one policy governing personal calls.

Table 7-26
Percent of Organizations Having at Least
One Policy Concerning Personal Calls

| | P ₀ | P ₁ | Difference in Row |
|-------------------------|----------------|----------------|----------------------|
| Cleveland | 33% | 38% | insignificant |
| Cincinnati | 32% | 29% | insignificant |
| Difference in Column | insignificant | significant | |

Here we see a higher percent of Cleveland P₁ organizations with policies limiting personal calls. Another response category was for policies governing long distance calls. In this case, there were no perceptible differences between P₀ and P₁ or between cities.

In both cities telephone policy is much more likely to be made at a low administrative level when the organizations have more than 50% professional staff than when they have less than 50% professional staff. However, practically all of that result can be attributed to the school stratum.

Some difference was found in response to the two questions about whether changes had been made in the use of the telephone in the last year or in the last 5 years. An accounting of no responses to both questions is given in Table 7-27.

Table 7-27
Percent of Organizations Saying
No Change in One Year or in Five Years

| | P ₀ | P ₁ | Difference in Row |
|-------------------------|----------------|----------------|----------------------|
| Cleveland | 42% | 48% | insignificant |
| Cincinnati | 61% | 49% | insignificant |
| Difference in Column | significant | insignificant | |

Much of the difference between the cities in the P_0 strata may be traced to the "library" stratum where all but 17% Cleveland libraries had made changes in the last five years while 60% in the Cincinnati area had not. Since most of the library stratum falls in the P_0 category, it tends to dominate the results.

No other questions were found to show significant differences either between P_0 and P_1 within cities or between cities within P_0 or P_1 .

F. Restratification by Number of Lines

The possibility exists that the size of an organization might influence the responses given. There are many possible measures of size, but since this project is concerned with telephone usage, the number of telephone lines that an organization has was selected as one indicator of size. Thus, the organizations were restratified on the basis of number of telephone lines. This restratification was then cross-tabulated with the survey responses to see if any consistent significant relationship existed.

The organizations were placed into four categories based on their responses to Question 5. Those categories were: (1) organizations with one line; (2) small organizations with 2-3 lines; (3) medium organizations with 4 to 10 lines; and (4) large organizations with more than 10 lines. The distribution among strata and between cities for those organizations who reported the number of telephone lines is given in Table 7-28.

There was some variation among the size groupings with respect to the major reasons for placing local outgoing calls (Question 2). However, given the way the size groupings were distributed among the strata, and given the variety of types of organizations, this would be expected.

With respect to the question, "Are outgoing calls necessary to accomplish the main function of the organization?", there was no substantial difference among groupings or between cities.

Table 7-28
Distribution of Organizations by
Number of Lines*

| | <u>One</u> | <u>Small (2-3)</u> | <u>Medium (4-10)</u> | <u>Large (Over 10)</u> |
|------------------|------------|------------------------|--------------------------|----------------------------|
| Local Government | | | | |
| Cleveland | 1 | 0 | 5 | 21 |
| Cincinnati | 0 | 5 | 13 | 24 |
| State Government | | | | |
| Cleveland | 2 | 2 | 2 | 6 |
| Cincinnati | 2 | 5 | 8 | 5 |
| Universities | | | | |
| Cleveland | 0 | 0 | 2 | 3 |
| Cincinnati | 0 | 1 | 0 | 5 |
| Hospitals | | | | |
| Cleveland | 0 | 0 | 5 | 23 |
| Cincinnati | 0 | 0 | 1 | 11 |
| Schools | | | | |
| Cleveland | 44 | 14 | 12 | 2 |
| Cincinnati | 9 | 49 | 24 | 3 |
| Libraries | | | | |
| Cleveland | 14 | 9 | 3 | 1 |
| Cincinnati | 26 | 11 | 1 | 0 |
| Charities | | | | |
| Cleveland | 10 | 10 | 48 | 13 |
| Cincinnati | 10 | 43 | 22 | 13 |
| All Strata | | | | |
| Cleveland | 71 | 35 | 77 | 69 |
| Cincinnati | 47 | 114 | 69 | 61 |

*Source: Compiled from the cross-tabulations based on number of lines and responses to other questions.

A key question (Number 8) asked if the quality of service provided by the organization would decline if the price of a telephone call increased. Those in the "large" grouping (more than 10 lines) were less inclined to say yes. One sharply different response is seen between cities with respect to organizations with one line. Sixty-eight percent of these organizations in Cincinnati responded yes, as opposed to only 33% in Cleveland (details can be seen in Table 7-29). Much of this difference can be traced to the library sector, where 95.83% of those libraries responding in Cincinnati said yes while only 41.67% of those libraries responding in Cleveland said yes.

Table 7-29
 Would the Quality of Service Decline If the
 Price of a Telephone Call Increase?
 (Stratified by Number of Lines)

| | <u>Yes</u> | <u>No</u> |
|-----------------|-------------|-------------|
| One Line | | |
| Cleveland | 20 (33.33%) | 40 (66.67%) |
| Cincinnati | 30 (68.18%) | 14 (31.82%) |
| Small | | |
| Cleveland | 13 (39.39%) | 20 (60.61%) |
| Cincinnati | 42 (41.58%) | 59 (58.42%) |
| Medium | | |
| Cleveland | 28 (40.00%) | 42 (60.00%) |
| Cincinnati | 27 (42.19%) | 37 (57.81%) |
| Large | | |
| Cleveland | 15 (22.39%) | 52 (77.61%) |
| Cincinnati | 16 (28.57%) | 40 (71.43%) |

It might be expected that organizations with many lines might be less sensitive to a price increase, if one assumes that many lines indicate a larger overall budget and thus greater ability to absorb a (relatively small) price increase for telephone calls. There is no readily apparent explanation for the difference between the two cities relative to organizations with one line. However, this response in the library sector is consistent with other responses from libraries in Cincinnati.

Question 16 asked, "If the telephone could not be used, would there be significant delays, only minor delays, or no delays in the service or benefits your organization provides?" Between 81 and 87 percent of all but one size grouping responded there would be significant delays in the delivery of services. The one exception was a Cincinnati organization with one line, of whom only 67.39% reported significant delays (details are found in Table 7-30). However, while this difference is substantial, it may have little or no significance, since Cleveland has almost five times as many schools with one line, as does Cincinnati - and a vast majority of schools tend to report "significant delays."

Table 7-30

If the Telephone Could Not Be Used, Would There Be Significant Delays, Only Minor Delays, or No Delays in the Delivery of Service?

| | <u>Significant Delays</u> | <u>Minor Delays</u> | <u>No Delays</u> |
|-----------------|-------------------------------|-------------------------|----------------------|
| One Line | | | |
| Cleveland | 61 (85.92%) | 7 (9.86%) | 3 (4.23%) |
| Cincinnati | 31 (67.39%) | 13 (28.26%) | 2 (4.35%) |
| Small | | | |
| Cleveland | 29 (87.88%) | 4 (12.12%) | 0 (0.00%) |
| Cincinnati | 98 (85.09%) | 16 (14.04%) | 1 (0.88%) |
| Medium | | | |
| Cleveland | 63 (81.82%) | 12 (15.58%) | 2 (2.60%) |
| Cincinnati | 58 (84.06%) | 9 (13.04%) | 2 (2.90%) |
| Large | | | |
| Cleveland | 58 (84.06%) | 8 (11.59%) | 3 (4.35%) |
| Cincinnati | 51 (83.61%) | 8 (13.11%) | 2 (3.28%) |

Of major importance to the objectives of the project were responses to Questions 19a and 19c. These asked: (1) Would a change from flat rates to measured rates, where the bill stayed the same for the same telephone usage, affect the methods of operation? and (2) Would a change from flat rates to measured rates where the telephone bill

increased 20% for the same usage, affect the methods of operation? Only the Cincinnati responses were looked at, and with respect to the first question, there was a decreasing tendency to say yes as the size became larger. As might be expected, yes responses to the questions regarding higher telephone bills did not show the same tendency to decrease with increasing size. Tables 7-31 and 7-32 give the distribution of responses.

Table 7-31

Would a Change to Measured Rates with the Telephone Bill Remaining the Same Cause a Change in Your Method of Operation?
(Cincinnati Responses Only)

| | <u>Yes</u> | <u>No</u> |
|--------|-------------|-------------|
| One | 13 (48.15%) | 14 (51.85%) |
| Small | 27 (38.57%) | 43 (61.43%) |
| Medium | 21 (35.59%) | 38 (64.41%) |
| Large | 15 (33.33%) | 30 (66.67%) |

Table 7-32

Would a Change to Measured Rates with a 20 Percent Increase in the Telephone Bill Cause a Change in Your Method of Operation?
(Cincinnati Responses Only)

| | <u>Yes</u> | <u>No</u> |
|--------|-------------|-------------|
| One | 20 (64.52%) | 11 (35.48%) |
| Small | 45 (62.50%) | 27 (37.50%) |
| Medium | 38 (63.33%) | 22 (36.67%) |
| Large | 39 (69.64%) | 17 (30.36%) |

Somewhat more differences among size groups begin to appear with respect to those questions directed to Cleveland organizations: (1) "Would a change to flat rates change the way your organization serves the public?", (2) "Would a change from measured rates to higher flat rates

affect the way your organization serves the public?", and (3) "Do you feel measured rates give you more, less, or the same control over your telephone bill?"

The smaller (in terms of number of lines) the organization, the more likely it was to report that a change to flat rates would change the way it serves the public. This may be significant, or it may simply reflect the types of organizations that tend to have fewer lines. Alternatively, one could contend that smaller organizations have more difficulty adapting to change. Responses to the question regarding higher flat rates showed a less consistent but still decreasing pattern relative to size. Table 7-33 and Table 7-34 depict these responses.

Table 7-33

Would a Change to Flat Rates Affect the Way
Your Organization Serves the Public?
(Cleveland Responses Only)

| | <u>Yes</u> | <u>No</u> |
|--------|-------------|-------------|
| One | 10 (34.48%) | 19 (65.52%) |
| Small | 6 (28.57%) | 15 (71.43%) |
| Medium | 9 (16.07%) | 47 (83.93%) |
| Large | 6 (12.00%) | 44 (88.00%) |

Table 7-34

Would a Change from Measured Rates to Higher
Flat Rates Affect the Way Your Organization
Serves the Public?
(Cleveland Responses Only)

| | <u>Yes</u> | <u>No</u> |
|--------|-------------|-------------|
| One | 13 (39.39%) | 20 (60.61%) |
| Small | 5 (23.81%) | 16 (76.19%) |
| Medium | 16 (33.33%) | 32 (66.67%) |
| Large | 6 (12.00%) | 44 (88.00%) |

Responses to the question regarding perceived degree of control with measured rates show a curious pattern relative to size (as measured by number of lines). Organizations with 1 line and those with more than 10 lines were most likely to feel they had more control. At the same time, organizations with more than 10 lines and those with 4 to 10 lines were most likely to feel they had less control. Those with more than 10 lines were least likely to say they had the same degree of control with measured rates as with flat rates. There appears to be no clear explanation for these results, but the following are offered as two possible explanations: (1) There is no consistent relationship between number of lines and responses to these questions; or (2) While there may be a consistent relationship between number of lines and these responses, this possible relationship is obscured by the types of organizations represented in each size group, e.g., schools, libraries and charities are predominant among those with one line and those with 2-3 lines and these strata have tended to be most sensitive to change throughout the survey. By way of contrast, the majority of members of the other strata have either 4-10 lines or more than 10 lines. To the extent that the purpose of the organization influences responses, this will tend to overshadow any relationship to size or number of lines.

CHAPTER 8

TELEPHONE USAGE DATA

As a secondary thrust of this study, minimal amounts of telephone traffic data were requested from and provided by Ohio Bell and Cincinnati Bell. The results indicate that there is a difference in usage.

The first request was for aggregate traffic data routinely collected by the two companies for their own engineering studies. These data consist of aggregate traffic figures for each central office expressed in CCS (hundred call seconds). These figures are busy hour, busy season measurements. Accompanying these data was a request for the number of customers, by class, associated with each central office.

The second request was for counts on the number of local calls placed by randomly selected organizations. This request was a simple matter for Ohio Bell in the Cleveland area since they routinely collect such data for billing purposes. Cincinnati Bell had to write and implement special computer programs and restricted our random sample to ESS offices.

At the outset of this effort, it was fully expected that analysis of the traffic data would provide additional evidence to support whatever results became apparent from the questionnaire and case studies. As it turned out, the traffic data raised more questions than they answered. These questions cannot be answered at this time because of a number of weaknesses in the traffic data and some potential weaknesses in the models used for analysis. The scope and time frame of this study did not permit elimination of these weaknesses.

Our approach will be to discuss the weaknesses of each set of data and analysis, then to present the results, and finally to suggest what future steps may be taken to minimize these weaknesses.

A. Aggregate Traffic Data

One issue with respect to measured rates is that it is expected to hold down the growth in telephone traffic. If one assumes that the social, governmental, educational, and health services elements of the "business" classification telephone users would not be able to behave much differently from all the other businesses in a community, then by looking at aggregate data we can examine all business users in each city in order to compare their usages. Of course, the assumption could be false, but it does provide one a place to start given existing data.

The analysis model is intended to use the data from several central offices to separate usage by class of customer, and is defined as follows:

Let

- N_{Bj} = number of business mains in central office j
- N_{Rj} = number of residence mains in central office j
- N_{Pj} = number of PBX lines in central office j
- N_{CUj} = number of Centrex CU lines in central office j
- N_{COj} = number of Centrex CO lines in central office j
- C_B = average number of CCS/Business main
- C_R = average number of CCS/Residence main
- C_P = average number of CCS/PBX line
- C_{CU} = average number of CCS/Centrex CU line
- C_{CO} = average number of CCS/Centrex CO line

Y_j = Total CCS measured in central office j. The basic model that describes a central office is a simple linear model:

$$Y_j = N_{Bj}C_B + N_{Rj}C_R + N_{Pj}C_P + N_{CUj}C_{CU} + N_{COj}C_{CO}$$

$j=1, 2, \dots, N$

We presume the values of C_B , C_R , C_P , C_U , C_{CO} to be constant (but unknown) over the whole city (N offices) but will use the data (Y_j , N_{Bj} , N_{Rj} , N_{Pj} , N_{CUj} , $j=1, \dots, N$) and least squares to estimate the values for the unknown parameters.

There are a number of weaknesses inherent in this approach.

1. The only traffic data available are busy hour/busy season that may not be at all indicative of the day-to-day, year-around usage patterns. It is, however, indicative of that portion of the usage pattern having the greatest impact on telephone equipment configuration and capacity decisions.
2. The results may not apply to the social, governmental, educational, and health services elements of the community.
3. The parameters of the model may not be independent, and the amount of their dependence may vary greatly from office to office.
4. The data values (Y_1, Y_2, \dots, Y_N) may not be independent.
5. The total CCS figures do not distinguish between incoming and outgoing calls as they simply measure how long each line is in use. This means that every local call is double counted somewhere in the system. This double counting in itself is no problem except that localized calling patterns may cause the double counting to be nonuniformly spread over the system. In fact, it is not totally clear what effect this weakness may have.
6. The hold time per call may be an additional data requirement in order to examine the effects of measured rates where the charge is based on number of calls and not time of calls.
7. It is unknown whether one city's CCS figures included more or less proportion of local calls than the other city's.

Items 1 and 2 may limit the ability to interpret the results while 6 and 7 would have the same effect without additional data. Items 3, 4, and 5 will have the effect of increasing the variability of, and possibly biasing the estimates of, the model parameters (C_B , C_R , C_p , C_{CU} , C_{CO}). Furthermore, they would limit the availability of standard statistical techniques that could assess the amount of variability and bias in the estimates. The total effect of this is to increase over uncertainty about the results.

In addition to the inherent weaknesses in the approach, there were some weaknesses in the specific data used.

1. Only one busy season of data was used.
2. The count on number of customers by class came from data gathered at a time other than the busy season traffic data, although two sources were available and used to screen central offices where substantial changes had occurred.
3. It is difficult to ascertain from telephone company personnel precisely what traffic is counted, the extent of double counting and other technical considerations. Much more study of their precise traffic measurement techniques is needed if this type of analysis is to continue to be pursued.
4. The traffic data obtained from Cincinnati were for all offices in the metropolitan area, while the traffic data in Cleveland was primarily from offices in the Cleveland city area.

Again, these items increase uncertainty about the results of any analysis but are such that given enough time they could be resolved.

The results of the least squares fit to 17 data points (central offices) in Cincinnati and 19 in Cleveland are given in Table 8-1. No figure is given for Cleveland C_{CU} since there were no Centrex CU's in

the Cleveland data. The R^2 value given at the bottom of the table is an indication of how much of the variation in the data is explained by the model. A value of $R^2=1$ would imply a perfect least squares fit to the model.

Table 8-1
Aggregate Traffic Data

| Symbol | Definition | Cleveland | Cincinnati |
|----------|----------------------------|-----------|------------|
| C_B | Average CCS/Business main | 3.13 | 1.76 |
| C_R | Average CCS/Residence main | 2.94 | 2.76 |
| C_P | Average CCS/PBX line | 11.65 | 42.24 |
| C_{CU} | Average CCS/CU line | | 11.41 |
| C_{CO} | Average CCS/CO line | 6.21 | 5.18 |
| R^2 | | .668* | .978 |

*This value for R^2 does not indicate a particularly good fit by the regression model.

To balance all of the shortcomings of this approach is the single advantage that the data are primarily data that are routinely collected by telephone companies. An alternate approach that does not have this advantage in Cincinnati, but also has fewer shortcomings was also used. The results are in the next section.

B. Local Call Count Data

A list of randomly selected organizations was given to Ohio Bell and Cincinnati Bell that were then requested to count the number of outgoing local calls placed from all lines associated with each organization's account. Ohio Bell does this routinely in Cleveland since they need the information for billing purposes, but special effort was required from Cincinnati in order to obtain comparable data.

In this case, the analysis will consist of simple averages. Out of the seven weaknesses of the previous approach, only numbers 3 and 4 may remain, although they are probably not as likely to be a problem.

Again, the data may have some shortcomings as the original list was of necessity modified in the Cincinnati area to include only a few of those organizations who are in ESS offices. The basic weaknesses are

1. One would be uncertain about the representativeness of the samples taken, especially in Cincinnati.
2. Only month in Cleveland and one and one half months in Cincinnati were used for actual counting. Although these were the same periods of time, a much more thorough study would be needed where data are collected for at least a year in order to eliminate localized seasonal effects.

The count results are given in Table 8-2. The last row of city-wide averages was computed without universities and hospitals as they appear to be special cases when one sees the order of magnitude of difference between the two cities. It is also known that Cleveland local government is on a centrex system that may account for its large difference from the Cincinnati local government.

It is interesting to note that the ratio between counts in Cincinnati and Cleveland does not differ substantially from similar ratios between the C_p for the two cities in the aggregate data model even with all of its inherent weaknesses. However, the value for C_B in Cleveland runs counter to expectation and to the results of the count data. It is also interesting to note that differences in traffic counts do not translate into perceived differences in procedures and uses of the telephone that could be measured by the questionnaire.

Table 8-2

Telephone Usage Data by Type of Organization
(Average Calls Per Line Per Month)

| | Cincinnati | Cleveland |
|---|------------|-----------|
| Local Government | 356 | 109 |
| State Government | 183 | 113 |
| Universities | 963 | 70 |
| Hospitals | 1,418 | 185 |
| Schools | 633 | 567 |
| Libraries | 430 | 353 |
| Charities | 578 | 357 |
| All Strata | 673 | 125 |
| All Strata except Hospitals and Universities | 407 | 125 |

Source: Data collected by Ohio Bell and Cincinnati Bell Telephone Companies over the months of September and October, 1979.

The main conclusion one can draw from these results is that an analysis of traffic data have potential as direct and quantifiable means of assessing the impact of telephone rates, but a good deal more research is required in order to develop the methodology into a reliable tool. One could draw the conclusion that usage is higher in Cincinnati than Cleveland, although we should keep in mind that 1) the Cincinnati organizational usage data in most cases represented a 5% sample whereas Cleveland was 100%; 2) the CCS data presented on page 149 indicates that business main lines in Cleveland have higher usage than Cincinnati, however, overall CCS per line is 3.47 in Cincinnati and 3.39 in Cleveland.

CHAPTER 9 SUMMARY

A. Conclusions

As has been stated before, this project was undertaken for the purpose of estimating the impact of measured rate telephone service on the public/social service type agencies. The project methodology consisted primarily of survey and interview techniques, with some statistical testing of the results. It should be emphasized that the validity of the study results are highly dependent on the accuracy of organizational responses. The project team has attempted to eliminate all sources of bias which could be controlled. The sample size and identity were selected by proven methods. The questionnaires were carefully constructed, studied, tested and refined. The interviews were undertaken by a professional organization with expertise in interview techniques.

The Columbus pilot study indicates that those organizations that can, do make some adjustments when measured rates are first implemented. In the long run, there appears to be very little difference in the way in which the telephone is used to aid the provision of social services. This long run conclusion is also indicated by the lack of persuasive evidence that there are substantial differences between procedures and programs in Cincinnati and Cleveland.

However, in specific instances, there are differences between the two cities. For example, there seems to be a difference in organizational style with some Cleveland institutions opting for very strong central administrations and central control while Cincinnati tends to let subordinate units be more autonomous. We do not consider this difference in degree of centralization to be only a response to measured telephone rates. However, the case studies revealed that the Cleveland organizations do take advantage of this central control in a way that probably has the effect of limiting the number of outgoing telephone calls (i.e., many programs are run centrally). Another difference is seen in the libraries in the two cities. In Cleveland, policies have been established to minimize the need to call patrons. Not so in Cincinnati; in fact, they are currently experimenting with a program of making telephone calls to retrieve overdue books. Cleveland probably would not consider such a program because of the cost of telephoning as well as employee time involved when a call produces a busy, not home, wrong person, wrong number, etc. There was no evidence that any of these specific differences would cause a difference in the quality of the services being provided.

As discussed in Chapter 3, quality was understood to include 1) effectiveness in remedying problems and efficiency i.e. achieving objectives in a reasonable time period and at a reasonable cost. Quality can also include the satisfaction of the client population being served by the agency and the ability to achieve any possible improvements in fulfilling the agency's objectives. Thus, measured rates would be considered to have a negative impact if the fact of its use significantly reduced effectiveness, efficiency, client satisfaction and/or the ability to improve service. Since this project involved interviews with the organizations only, there is no way to evaluate client satisfaction and compare client satisfaction between like agencies in the two cities. One might infer, from the absence of comments about client dissatisfactions, that telephone rate structures have not had substantial impact on the degree of client satisfaction. However, a more certain conclusion could only be reached by surveys of the client populations.

Similarly, with respect to the ability to improve service, the project methodology was such that only limited information could be obtained. However, one persistent response from the surveys does relate to this aspect of quality. That is, the use of measured rates does make the organizations more conscious of the value of the telephone as a resource. This in turn tends to lead to increased evaluation of telephone usage. Such a result should be viewed as a positive impact since increased awareness of costs and the resultant more accurate cost-benefit analyses should lead to improved usage of any organization's limited resources.

Comparisons between responses in the two cities yielded information with respect to effectiveness and efficiency. One way to infer the impact from measured rates on the effectiveness of the organizations is to estimate whether there is a substantial difference in the services offered by like organizations in one city as opposed to those offered in the other city. If such a difference does exist, then the possibility arises that the difference is due to the type of telephone rate structure in existence. However, in fairness it should be mentioned that many other factors -- tradition, differing needs, differing funding bases, etc. -- could also be responsible for differences in services offered.

The case studies show that there was remarkable similarity between cities in the listings of activities for all three types of organizations. The one striking difference (Case 1, p. 53) was the result of a set of guidelines established by the management of that particular Cleveland agency and had the effect of merely altering the method of delivery of the service, rather than affecting the extent of service. Further, survey responses to Question 2 (identify two significant responses for placing local outgoing calls) were quite similar. Confidence interval testing of these responses shows no significant difference in responses between cities for the all strata aggregate. However, there were some differences for individual strata. These differences were as follows:

1. Local Government responses to "Contact with other organizations".
A significantly higher percentage of Cincinnati local governments cited this as a major reason for calls, than did local governments in Cleveland. While one could attribute this to the use of flat rates in Cincinnati, it would be equally valid to hypothesize that this is due to differences in local government organizational structures between the two cities.
2. Hospital responses to "Other" reasons.
Again, Cincinnati had a significantly higher percentage of responses to this category. Given the variations in types of programs and services offered by individual hospitals, it would be difficult to conclude that this difference is due to telephone rate structures.
3. University responses to "Other" reasons.
Cleveland universities had a significantly higher percentage of responses in this category, than did Cincinnati. Again, however, it should be remembered that individual universities tend to develop unique characteristics to serve the needs of their particular student bodies, and there are wide variations in sizes and types of universities. Thus, again, it would be difficult to conclude that telephone rate structures are responsible for differences in the responses.

Thus, from the evidence collected, there appears to be little difference between like organizations in the two cities in terms of services offered.

The project also collected information relative to the effect of telephone usage on efficiency. It would seem that the greatest potential impact on efficiency would relate to the possibility that higher telephone costs might lead to the use of alternate modes of communication and that this, in turn, would create delays in providing the service. There are several sources of information in the project which relate to this.

The case studies reported that those activities that are the most important are also those that require the highest frequency of telephone usage. However, the case studies also indicate that there was no significant correlation between the importance of an activity and the effect of a call reduction program for four of the six cases. In those

two cases where there was significant correlation, the correlation was negative indicating that the most important activities are not the ones that would be affected by a call reduction program.

The surveys included several questions relating to other modes of communication, and the importance of the telephone. Confidence interval tests of responses to the question, "What other modes of communication does your organization use?" show either no significant differences or only marginal differences for all strata and types of communication except one. The one response which had a significant difference between cities was the libraries' use of media, and a substantially higher percentage of Cleveland libraries reported this as an alternative mode of communication, than did Cincinnati libraries.

Responses to the question, "In those situations where either the telephone or another mode is equally appropriate, which is used most often?", were remarkably similar and showed only one significant difference between cities for any strata. Again, the one difference occurred in the library strata, where the Cincinnati libraries had a significantly higher percentage response to the use of mail.

The potential effect of measured rates on efficiency and more specifically the possibility of delays in service through the use of alternate modes of communication is probably best summarized in the results of interviews with upper level administrators (p. 58). The use of measured rates (in Cincinnati) would create the possibility of increased use of alternative modes of communication. However, important activities requiring quick response time would continue to use the telephone, and other activities would be reevaluated before any changes were made. As stated earlier, this increased tendency to view the telephone as a resource with an accompanying cost, and to evaluate and reevaluate its costs vs. benefits can only be viewed as a positive effect.

Throughout the surveys and interviews, there were three persistent themes. One is that there are few significant differences between cities with respect to responses to all the questions.

A second persistent theme is that the telephone is very important to these organizations with respect to the provision of their services. More than 85% of organizations in both cities responded that outgoing calls are necessary to accomplish the main function of the organization. There was no significant difference in responses between cities for any strata except the schools. In the school stratum a significantly higher number of Cleveland schools reported outgoing calls are necessary, than did Cincinnati schools.

The third persistent theme is that costs are a vital concern, and that the use of measured rates creates an increased awareness of the telephone as a resource with a cost attached. Slightly more than half of the organizations in each city responded that the quality of service provided would not decline if the price of a telephone call increased. However, a substantial number did respond that quality would decline. Of those responding that quality would decline, there was a significant difference between cities for only two strata -- the universities and the libraries. In both strata the Cincinnati percentage response was significantly higher. Given the similarity of responses between cities for most strata, it could be inferred that the response is more related to the fact of increased cost rather than to the type of rate structure. The re-stratifications give somewhat more information as to the identity of those who felt quality would decline if price increased. The re-stratifications show that the organizations who feel quality would decline are more inclined to have less than 10 telephone lines, are classified as "small" in terms of number of employees and more than 50% of them do not provide services requiring extensive use of the telephone. It is interesting to note that the budget re-stratification on this question indicates that budget size did not influence the responses significantly.

In summary, the project results indicate occasional but infrequent differences between the cities. There was, however, no consistent pattern of differences that would indicate any significant negative impact from measured rates. The most persistent patterns in both cities, are that the telephone is of great importance and costs per se are more significant than the type of rate structure used.

For those sporadic instances where measured rates might have some negative impact -- and the evidence is not clear that there is any consistent example of negative effects -- two factors must be considered. One, as discussed in Chapter 4, a significant negative impact will be felt when the costs of telephone usage rise, telephone usage is important to the organization, and the increased costs cannot be met either by (1) passing them on to the client population, (2) increased revenues, or (3) increased efficiency in some area of operation. In this situation, the funds for increased telephone costs would come from those reserved for another important function of the organization or the telephone usage would be reduced.

There is no pattern of evidence in the data collected to indicate that such a situation has arisen. In thinking about the hypothetical possibility, however, two factors should be considered. One, any cost can increase, and it is difficult to defend viewing increased telephone costs differently from the way one views increases in the cost of any other resource necessary to the organization. Either the organization absorbs the costs or makes other changes such as increased efficiency. Two, if such a clear-cut case of negative impact should arise, it is not at all clear that the "best" solution would be to revert back to flat rates. Under the flat rate, average price structure, low users tend to subsidize high users -- usually unknowingly. If the services of these organizations are deemed to be in society's interest, then the alternative of direct, measurable and known subsidies arises. The indirect subsidies of the flat rate have no inherent relationship to a telephone customer's ability or desire to subsidize other customers. Equity suggests that these are highly relevant considerations.

Further study could be undertaken, and one possible project which should yield increased information -- though not necessarily different results -- would be to study, over time, similar organizations which are in the process of changing from flat rates to measured rates.

To consider the impact of measured rates further, the discussion above leads one to classify organizations into four categories:

- (1) Those which by virtue of the nature of their business do not need to make extensive use of local calls and therefore would not modify their activities under measured rates.
- (2) Those which by virtue of the nature of their business have no other viable alternative to local calls and can therefore not modify their activities under measured rates.
- (3) Those which can make modifications and exercise control over telephone usage but do not do so because the savings would not warrant the effort.
- (4) Those which can and do make modifications and exercise control over telephone usage.

The study would indicate that most organizations are in the first three categories but the precise distribution among those three cannot be determined.

Under this hypothetical classification system one may now address some of the original issues. Consider the proposition that measured rates gives organizations the opportunity to allocate and control their resources better. This would be true for organizations in categories 3 and 4 so that the immediate result of a measured rate would be a price increase for those in categories 2 and 3 and possibly 4 depending upon the success of the changes they make. Suppose one subscribes to the philosophy that it is more equitable to have those pay the most who use the system the most. This is true only if the measured rate is commensurate with the actual cost of service. If the price is too high those in categories 2 and 3 would be subsidizing phone service for those in category 1 and perhaps 4. If the price is too low those in 1 and perhaps

4 would be subsidizing the telephone service for those in categories 2 and 3. Thus, if equitability is the objective it is extremely important that the measured rate be correctly based on cost of service.

B. Policy Alternatives

As previously stated, this project was undertaken at the request of the Public Utilities Commission of Ohio. The project was initiated by a policy development paper entitled "Analysis of Alternative Pricing Policies and Other Service Policies Regarding the Regulation of the Telephone Industry in Ohio," authored by the National Regulatory Research Institute. The paper was done for the Public Utilities Commission of Ohio in response to Senate Joint Resolution No. 33 (1978). The purpose of this project was to gain additional information on the impact of measured service. The information gained from the study would be used by both the Ohio General Assembly and Public Utilities Commission to help develop rate structure policies. The following paragraphs contain policy alternatives on rate structure.

Two alternatives are to either retain flat rate structures or to implement measured rate structures. Clearly, the economic literature suggests that price equal to marginal costs is the most efficient method of allocating resources. However, we have also pointed out in Chapter 2 that the marginal costs of telephone service have not been clearly defined.¹ Costs are an important consideration since the benefit of usage sensitive pricing rests in the idea of economic efficiency. The fundamental doctrine of economic efficiency is that a charge for additional usage is justified only if there is an additional cost.

Both public acceptance and economic efficiency criteria demand that rates be related to costs. From a policy standpoint the benefits that can be achieved through the use of usage sensitive rate structures probably

¹The idea of exactly what is a service is also not clearly defined, this is a fundamental starting point that has not been reached.

outweigh the costs in the long run. The introduction of usage sensitive pricing will ultimately help to achieve the goal of cost sensitive rate structures.

The policy alternative to exempt social service type organizations selectively needs to consider and compare the economic efficiency losses with any gains achieved by selective exemption. In Chapters 5, 6, 7, and 8 we presented the results of our study in the two different areas -- Cleveland, the measured rate area, and Cincinnati, the flat rate area. As stated in these chapters, there are very few significant differences in the use of the telephone to provide social services. Not surprisingly, when an area switches rate structures the telephone service, as a resource with a cost -- is given more consideration. But over time it appears that the cost of telephone service in the measured rate area is given little consideration. Still, since telephone service is a relatively small portion of most organizations' total budget, it is often given less consideration than costs that are rapidly escalating, such as energy costs. The result is that an organization should take the real cost of telephone service into consideration.

Most of our discussion thus far has centered on the fact that the services provided by social service organizations in both cities are similar and that: (1) a switch to measured service in Cincinnati would not significantly effect the quality of the service provided and (2) that in Cleveland the measured rate structure has not affected the quality of service provided by these organizations. The next logical question is whether measured service could decrease telephone usage in Cincinnati. Based on the data in Chapter 8 we can tentatively conclude that measured service could reduce calling volume in Cincinnati. Both the CCS data and organization usage data indicate that usage is higher in Cincinnati. The overall CCS per line in Cincinnati is 3.47 and in Cleveland it is 3.39. CCS per line, of course, represents all users in the exchange sampled and both incoming and outgoing calls in each city exchange. However, the organization traffic data sample also indicates

that usage is higher in Cincinnati than in Cleveland. Average calls per line per month in Cincinnati for our sample was 673 whereas in Cleveland there were 125 calls per line per month. Even given the limitation of the data, as described in Chapter 8, there is an indication that usage is higher in Cincinnati than in Cleveland. Measured service by making organizations aware of the cost per call in Cincinnati could reduce usage for these organizations.

APPENDIX A

WORK STATEMENT
FOR A STUDY OF THE
IMPACT OF MEASURED TELEPHONE RATES ON USAGE
BY NON-PROFIT COMMERCIAL CUSTOMERS

WORK STATEMENT

for a study of the

Impact of Measured Telephone Rates on Usage

By Non-Profit Commercial Customers

prepared for the

Public Utilities Commission of Ohio
180 East Broad Street
Columbus, Ohio 43215

by the

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May 2, 1979

WORK STATEMENT
FOR A PROPOSED STUDY ON

IMPACTS OF MEASURED USE TELEPHONE SERVICE

Background

There has been a general trend in the pricing of telecommunications services toward reflecting the actual cost of providing the service. One of the rate structures used to make the price of local telephone service reflect the cost is measured service pricing. Measured service pricing structures require the individual to pay for local telephone service based on his usage rather than on a flat rate related to average usage. It is argued that the ratepayer has more control over his total bill under measured service pricing since he can control use. It has been alleged that measured service pricing may force changes in the operations of social service (and other) institutions which could result in a decline in the quality of service provided a community.

Objective

The primary objective of this proposed study is to determine whether using measured rates instead of flat rates affects the manner in which social services are provided to a community. If there is a significant effect on the quality of social services a quantifications of the effect will be presented.

Scope of the Work

The magnitude of demand changes that occur with different rate structures shall be inferred from a comparative analysis of current usage patterns of selected customers on measured service and selected customers

on flat rate service. The Cleveland metropolitan area will be surveyed and evaluated for measured service determinations. The Cincinnati metropolitan area will be used to assess the comparative effects of flat rate service. In addition to the survey, a sample of telephone files and traffic data will be gathered and evaluated for use in gauging relative telephone usage.

Comparable public welfare agencies will be identified and surveyed in each area for history of usage studies. The survey will develop data on amounts and variations of customer usage under each of the alternative rate structures. The data will be used to infer the impact of measured service pricing on the telephone usage of social service institutions. The data may also be used to evaluate cost savings, delay in service caused by using alternate forms of communications, lost revenue, and differences in the use of local telephone service due to rate structure differences. Social services in the two metropolitan areas, Cleveland and Cincinnati, will be examined to determine to what extent, if any, telephone related services are provided in the flat rate area which are not provided in the measured service area.

Public welfare and other social service agencies will also be interviewed to determine their methods of operation with respect to telephone use. Total budgets and telephone (or other communications) budgets will be examined and compared to determine the effect of any fiscal constraints placed on these agencies. The growth and development of each area will also be analyzed in order to determine the comparability of the two areas or, alternatively, the adjustments that need to be made to make them comparable.

An attempt will be made to assess the response of non-profit commercial rate customers in the Columbus area to the introduction of measured rate service.

The following agencies are listed only to give the reader a representative sample of social services we may survey. In conducting the work, a complete list of all agencies will be developed and coded, and a random sample will be taken from the list.

- Health and Medical Services

- Clinics
- Disease Control
- Women Services
- Immunization Services
- Youth Services
- Geriatric Services
- Hospitals
- Mental Health Services
- Drug Programs

- Consumer Education and Protection Agencies
- Corrections Departments
- Courts
- Legal Services
- Educational Services and Public Schools
- Departments of Revenue and Finance
- Police Services
- Fire Services
- Housing Services
- Employment Services
- Libraries
- Parole Boards
- Recreation Departments
- Rehabilitation Services
- Economic Assistance Services
- Churches
- Charities

We initially will study the Columbus area to test the reliability of our survey method for the Cincinnati and Cleveland areas. The pilot study will include a discussion with Ohio Bell and a limited survey of social service agencies to determine the availability of data. The

information obtained in the pilot study will be used to develop sample plans for Cleveland and Cincinnati. Since the Columbus area has recently changed from flat rates to measured use rates, the pilot study will investigate how commercial service users responded to the rate structure change. The responses of customers to the rate structure change should give the Commission some valuable insight into the affects of measured service rates. The results will be summarized and presented in a final report.

Timetable

| | |
|------------------|---|
| May 1 - June 1 | Development of our initial sampling plan completed and a tentative listing of the agencies that will be sampled. |
| June 1 - June 15 | Gather pilot study data. |
| June 15 - July 1 | Analyze data, modify the survey, and develop a final plan for the data collection effort in Cleveland and Cincinnati. |
| July 1 - Sept 1 | Gather data in Cleveland and Cincinnati. |
| Sept 1 - Dec 31 | Analyze data and prepare final report. |

Budget for Seven Months

| | |
|------------------------------|-----------------|
| Professional Staff | \$35,140 |
| Graduate Research Assistants | 5,000 |
| Administration | 6,250 |
| Typing & Secretarial | 4,000 |
| Travel | 12,000 |
| Phone and Mail | 2,000 |
| Reproduction | 4,000 |
| | <u>\$68,390</u> |
| EES Overhead | 13,678 |
| Total | <u>\$82,068</u> |

APPENDIX B

BRIEF PROJECT CHRONOLOGY

APPENDIX B

BRIEF PROJECT CHRONOLOGY

May 1979

The project was started in May with the acceptance of the work-statement by the Public Utilities Commission of Ohio. From our initial planning sessions evolved three approaches to the problem of determining the impact of measured rates for telephone services. Specifically, these approaches were:

1. To survey the population of telephone users who provide governmental (city, county, and state agencies), educational (school, libraries and universities), social (charities), and medical services (hospital), in Cleveland, Cincinnati, and Columbus.
2. To obtain quantitative data on a subset of those interviewed above, as well as some general usage data for analyzing and correlating with survey results.
3. To extend the analysis of selected users into a more detailed case study.

For the survey (approach 1) a questionnaire was developed for use in telephone interviews. A small test of the questionnaire was conducted resulting in further refinement.

Basic plans for stratifying the population and sampling from small populations were developed. A model was developed to evaluate the impact of various sample sizes (from small populations) on the size of the confidence interval for estimates of proportions. This model was later dropped in favor of a better technique, after the preliminary pilot study data was analyzed.

Initial meetings were held with officials of Ohio Bell and Cincinnati Bell Telephone companies at which time they offered assistance and cooperation in obtaining quantitative data and gaining access to other records and information.

June 1979

We again met with the representatives from the Ohio Bell and Cincinnati Bell Telephone companies to discuss their ability to provide information and their capability to measure certain telephone lines in order to get an objective measure of usage. We provided them a list of names and numbers to be sampled in each area.

The pilot study was started by Polimetrics this month and was completed by July. We provided them a revised questionnaire that we discussed with them, and they arranged the final test questionnaire under our supervision. In addition, we defined our sample plan and sample population for the Columbus area and provided Polimetrics with the names and numbers of the sample individuals.

We continued to refine and define our sample size and population for the Cleveland and Cincinnati areas.

A library search for measured service literature was initiated to help build a firm theoretical basis for our report. We also attended hearings on measured services at the Ohio Senate. We did this in order to obtain data that may already be available. The data gathering effort also included the seeking of data relevant to demographics for each area.

July 1979

We again met with representatives from the Ohio Bell and Cincinnati Bell Telephone companies several times during the month to discuss information received by us from them and to make final our telephone company sample plan. In addition, they provided us with usage information and exchange information. We reworked both sample plans (Cleveland and Cincinnati) and provided them with a final list of names and numbers. We also worked out the dates of the survey. Cincinnati Bell agreed to sample lines from the middle of August to the end of September. Ohio Bell agreed to sample lines during the September billing cycle. The September billing cycle of Ohio Bell will include data from the middle of August. It was felt the data be comparable with only minor modifications.

The pilot study survey was completed during the month. We held several meetings with Polimetrics personnel to discuss their problems with the survey. In addition, we have performed a preliminary analysis of the data to check for inconsistencies and errors; several problems have been referred back to Polimetrics for correction. A review of some of the literature and several similar studies was completed this month. In addition, the authors of a telephone company study were consulted to determine if additional information is available. We developed a model for determining CCS usage by customer classification based on main stations during the month and have tested the model.

August 1979

The analysis of the pilot study data was started. The initial findings were presented to the PUCO in August. A complete tabulation of the data was given to PUCO and a project "midterm" report was presented to PUCO.

The main data collection effort in Cincinnati and Cleveland was started. We reworked our original questionnaire using the information gained from the pilot study in Columbus. A revised sample list was developed and delivered to Polimetrics, that performed the interview function for the Institute. In addition, WATS lines were ordered from the telephone companies for use in the interview process. An optimization model was developed that determines optimal size of strata samples with a constraint of total sample size.

September 1979

The analysis of the pilot study data continued during the month.

The main data collection effort in Cincinnati and Cleveland is still in progress. The collection effort was completed in the second week in October.

Several organizations have been interviewed in Cincinnati and Cleveland involving selected members of our sample population. This involved in-depth questioning by NRRI staff. The information obtained from these interviews will be utilized in case studies. Generally, cooperation was good; however, we experienced some problems in setting up the interviews.

In addition, the actual collection of data by the telephone companies was started during the month.

October 1979

The analysis and drafting of the section of the final report on the Columbus pilot study continued during the month.

The collection of data for the main study in Cleveland and Cincinnati was completed during the month. The data were reviewed for errors.

As mentioned in September, several organizations were being interviewed in Cincinnati and Cleveland for case study purposes; this method of data collection was concluded in October, and we have analyzed the data obtained from these interviews.

November and December 1979

The majority of the work completed during these months related to the data analysis and writing of the final report. Several sections of the report were completed during the month of November, including a section on the results of the Columbus pilot study. The final report on the project is scheduled for delivery in early January.

APPENDIX C

QUESTIONNAIRES USED IN THE STUDY

Classification of Survey Questions
by Subject Matter

| <u>Subject of Question</u> | <u>Question Number</u> | |
|--|---|---|
| | <u>Columbus, pp. C-5 - C-14</u> | <u>Cleveland-Cincinnati, pp. C-15-C-24</u> |
| Importance of Telephone | 2,3,8,15,16,32,32a,32b,35,35a,35b,37,37a,37b,40,40a,40b | 2,3,8,15,16,32,32a,32b,35,35a,35b,37,37a,37b,40,40a,40b |
| Size, Cost, and Management of Telephone Operations | 4,5,10,11,12,17,17a,18,18a,30,30a,30b,30c,30d | 4,5,10,11,12,17,17a,18,18a,30,30a,30b,30c,30d |
| Calling Characteristics of Organization | 6,7,9,17,17a,18,18a,19 | 6,7,9,17,17a,18,18a,19 |
| Organizational Characteristics | 15,24,25,26,27,28,29,38,39 | 2a,15,24,25,26,27,28,29,36,38,39 |
| Other Modes of Communication | 13,14,23,23a | 13,14 |
| Size of Population Affected by Organization | 31,33,34,36 | 31,33,34,36,38,39 |
| Impact of Measured Rate Service | 20,21,21a,22,22a,23,23a | 20,20a,21,22,22a,23,23a |
| Impact of Measured Rate Service - Hypothetical | 19a,19b,19c,19d,19e,19f | 19a,19b,19c,19d,19e,19f |

COLUMBUS QUESTIONNAIRE

1/1:1-4

I.D. Number: _____

Interviewer No.: _____

-/1:5

Deck: _____

Phone No.: _____

2/1:6-9

Time: :

Name of Respondent: _____

Name of Organization: _____

Type of Organization: _____

NRRI: Telephone Usage Survey

Hello, my name is _____, and I'm calling from the Polimetrics Laboratory at The Ohio State University. As you know, our office asked for this appointment so that you might participate in a scientific survey we are conducting to determine how organizations use their telephones. Of course, all of your comments will be held in strict confidence.

3/1:10

1. First, I have been told that you are responsible for handling telephone services for your employer. Is this correct?

1. Yes
2. No

(IF NO, TERMINATE INTERVIEW AND NOTE THAT THIS ORGANIZATION MUST BE CONTACTED AGAIN.)

4/1:11-13

5/1:14-16

6/1:17-19

2. Can you identify 3 of the most significant reasons people at your organization would need to place outgoing local telephone calls?
(PROBE) 998 999 998 999 998 999

7/1:20

3. Could your organization accomplish its main function without making outgoing phone calls?

1. Yes
2. No
8. DK
9. NA

8/1:21

4. Approximately how many telephone sets service your organization?

1. 1-5
2. 6-10
3. 11-25
4. 26-50
5. 51-100
6. over 100
8. DK
9. NA

9/1:22

5. Approximately how many telephone lines service your organization?

1. 1
2. 2
3. 3
4. 4
5. 5-7
6. 8-10
7. more than 10
8. DK
9. NA

- 10/1:23-26 6. About how many local calls are placed from your organization in an average day, week, or month, whichever is easiest to estimate?
(RECORD UNIT AND NUMBER) 9998 9999
- 11/1:27-29 7. Approximately what percentage of your organization's phone calls are incoming and what percentage are outgoing?

 % incoming
 998. DK
 999. NA
- 12/1:30 8. Do you think the quality of service your organization provides would decline if the price of a telephone call increased?

 1. Yes
 2. No
 8. DK
 9. NA
- 13/1:31-33 9. Approximately what percentage of your organization's local calls are personal and what percentage are business?

 % personal
 998. DK
 999. NA
- 14/1:34 10. Does your organization keep records on telephone usage?

 1. Yes
 2. No
 8. DK
 9. NA
- 15/1:35-36 11. Can you identify any policies governing the use of telephones in
 16/1:37-38 your organization? (IF NO, GO TO QUESTION 13) 98 99
 17/1:39-40 98 99 98 99
- 18/1:41-43 12. Who makes these policies? (RECORD TITLE) 998 999
- 19/1:44-45 13. Other than the telephone, what modes of communication does your
 20/1:46-47 organization use? 98 99 98 99 98 99
 21/1:48-49

- 22/1:50-51
23/1:52-53
24/1:54-55
14. In those situations where either the telephone or another mode is equally appropriate, which is used most often?
01. Telephone 98 99 . 99 99
- Specify: _____

- 25/1:56
15. Do most of the contacts your organization has with the public take the form of incoming phone calls?
1. Yes
2. No
8. DK
9. NA
- 26/1:57
16. If the telephone could not be used, would there be significant delays, only minor delays, or no delays in the service or benefits provided by your organization?
1. Significant delays
2. Only minor delays
3. No delays
8. DK
9. NA
- 27/1:58
17. Does your organization use the telephone differently now than it did, say, a year ago?
1. Yes (GO TO QUESTION 17a)
2. No
8. DK (GO TO QUESTION 18)
9. NA
- 28/1:59-60
29/1:61-62
30/1:63-64
- 17a. (IF YES) Why did these changes occur? (PROBE: Who initiated the changes?) 98 99 98 99 98 99
- 31/1:65
18. Does your organization use the telephone differently now than it did five years ago?
1. Yes (GO TO QUESTION 18a)
2. No
8. DK (GO TO QUESTION 19)
9. NA
- 32/1:66-67
33/1:68-69
34/1:70-71
- 18a. (IF YES) Why did these changes occur? (PROBE: Who initiated the changes?) 98 99 98 99 98 99
- 35/1:72
19. For local calls, is your organization billed according to a flat rate or measure rate?
1. Flat rate (GO TO QUESTION 19a)
2. Measured rate }
8. DK (GO TO QUESTION 20)
9. NA

36/1:73 19a. (IF FLAT RATE) Assume that the current flat rate was replaced by a measured rate where your bill remained the same if your phones were used about the same as they are now. Would this change your method of operation?

| | | |
|------------|---|----------------------|
| 1. Yes | } | (GO TO QUESTION 19b) |
| 2. No | | |
| 3. Depends | | (GO TO QUESTION 19c) |
| 8. DK | | |
| 9. NA | | |

37/1:74-75 19b. (IF YES) Could you tell me how? 98 99 98 99
38/1:76-77

39/1:78 19c. (IF FLAT RATE) Assume the current flat rate was replaced by a measured rate where your bill increased by 20% if your usage remained the same. Would this change your method of operation? (BY REDUCING USAGE THE BILL COULD BE REDUCED).

| | | |
|------------|---|----------------------|
| 1. Yes | } | (GO TO QUESTION 19d) |
| 2. No | | |
| 3. Depends | | (GO TO QUESTION 19e) |
| 8. DK | | |
| 9. NA | | |

40/2:6-7 19d. (IF YES) Could you tell me how? 98 99 98 99
41/2:8-9

42/2:10 19e. (IF FLAT RATE) Again assume that the current flat rate was replaced by a measured rate but your bill decreased by 20% and your usage remained the same. Would this change your method of operation?

| | | |
|------------|---|----------------------|
| 1. Yes | } | (GO TO QUESTION 19f) |
| 2. No | | |
| 3. Depends | | (GO TO QUESTION 20) |
| 8. DK | | |
| 9. NA | | |

43/2:11-12 19f. (IF YES) Could you tell me how? 98 99 98 99
44/2:13-14

45/2:15-17 20. To your knowledge, how have measured telephone rates affected your
46/2:18-20 organization? 998 999 998 999 998 999
47/2:21-23

- 48/2:24 21. Do you feel that measured rates allow you to have more control, less control, or about the same control over your phone bill as flat rates allow?
1. More control } (GO TO QUESTION 21a)
 2. Less control }
 3. About the same control } (GO TO QUESTION 22)
 8. DK }
 9. NA }
- 49/2:25-26 21a. (IF MORE OR LESS CONTROL) Could you explain that?
 50/2:27-28 98 99 98 99
- 51/2:29 22. Has the change from flat to measured rates affected your organizations' ability to serve the public?
1. Yes (GO TO QUESTION 22a)
 2. No }
 8. DK } (GO TO QUESTION 23)
 9. NA }
- 52/2:30-31 22a. (IF YES) In what way? 98 99 98 99
 53/2:32-33
- 54/2:34 23. As a result of the change to measured rates, does your organization now use communication services other than the telephone more, less, or about the same as it did before the change?
1. More (GO TO QUESTION 23a)
 2. Less }
 3. About the same } (GO TO QUESTION 24)
 8. DK }
 9. NA }
- 55/2:35-36 23a. (IF MORE) Specifically, what services are you using more?
 56/2:37-38 98 99 98 99
- 57/2:39-42 24. Approximately how many full-time people does your organization employ?
 9998 9999
- 58/2:43-46 25. And approximately how many part-time people? 9998 9999

- 59/2:47-49 26. Approximately what percentage of all the employees might be considered "professionals?" 998 999
- %
- 60/2:50-52 27. What percentage might be considered "clerical?" 998 999
- %
- 61/2:53-55 28. What percentage would you consider to be neither professional nor clerical? 998 999
- %
- 62/2:56 29. What is the approximate total budget for your organization? (READ CHOICES)
1. Under \$25,000
 2. 25,000 - 100,000
 3. 100,000 - 500,000
 4. 500,000 - 1 million
 5. Greater than 1 million
 6. DK, but can find out
 8. DK
 9. NA
- 63/2:57 30. Is there a specific budget for telephone service?
- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Yes 2. No 8. DK 9. NA | <p>(GO TO QUESTION 30a)</p> <p>IF GOVERNMENT AGENCY, GO TO QUESTION 31</p> <p>IF HOSPITAL, GO TO QUESTION 32</p> <p>IF SCHOOL, GO TO QUESTION 34</p> <p>IF CHURCH, GO TO QUESTION 36</p> <p>IF CHARITY, GO TO QUESTION 38</p> |
|---|---|
- 64/2:58 30a. (IF YES) Is the telephone budget flexible? (PROBE: Can the amount budgeted for telephone services be exceeded?)
1. Yes
 2. No
 8. DK
 9. NA
- 65/2:59 30b. (IF YES) To your knowledge, has the telephone budget ever been exceeded?
- | | |
|---|---|
| <ol style="list-style-type: none"> 1. Yes 2. No 8. DK 9. NA | <p>(GO TO QUESTION 30c)</p> <p>(GO TO QUESTION 30d)</p> |
|---|---|
- 66/2:60-62 30c. (IF YES) About how often? 998 999
- 67/2:63 30d. Are your telephone bills broken down by the type of service or equipment provided?
1. Yes
 2. No
 8. DK
 9. NA

68/2:64-66 31. (GOVERNMENT AGENCIES ONLY) About what percentage of the local population makes use of the services provided by your organization? 998 999

%

(GO TO END)

69/2:67 32. (HOSPITALS, CLINICS, OR HEALTH-RELATED GOVERNMENT AGENCIES ONLY) Does your institution provide any health services to the community that require extensive use of local telephone services?

- 1. Yes (GO TO QUESTION 32a)
- 2. No
- 8. DK } (GO TO QUESTION 33)
- 9. NA }

70/2:68-69 32a. (IF YES) Could you tell me what those services are? 98 99
71/2:70-71 98 99 98 99
72/2:72-73

73/2:74-75 32b. (IF AT LEAST ONE SERVICE PROVIDED) Which, if any, of these services
74/2:76-77 are/Is this service provided only by your organization? 98 99
75/2:78-79 98 99 98 99

76/3:6-9 33. Including in- and outpatients, about how many patients are treated annually? 9998 9999

(GO TO END)

77/3:10-13 34. (SCHOOLS ONLY) Approximately how many students were enrolled in your school during the past academic year? 9998 9999

78/3:14 35. Does your school provide any educational services that require extensive use of local telephone service?

- 1. Yes (GO TO QUESTION 35a)
- 2. No
- 8. DK } (GO TO END)
- 9. NA }

79/3:15-16 35a. (IF YES) What are those services? 98 99 98 99 98 99
80/3:17-18
81/3:19-20

82/3:21-22 35b. (IF AT LEAST ONE SERVICE PROVIDED) Which, if any, of these services
83/3:23-24 are/Is this service provided only by your organization? 98 99
84/3:25-26 98 99 98 99

(GO TO END)

- 85/3:27-30 36. (CHURCHES ONLY) How many people are in your congregation? 9998 9999
- 86/3:31 37. Does your church provide any social services that require extensive use of local telephone services?
1. Yes (GO TO QUESTION 35a)
2. No }
8. DK } (GO TO END)
9. NA }
- 87/3:32-33 37a. (IF YES) What are those services? 98 99 98 99 98 99
88/3:34-35
89/3:36-37
- 90/3:38-39 37b. (IF AT LEAST ONE SERVICE PROVIDED) Which, if any, of these services
91/3:40-41 are/Is this service provided only by your organization? 98 99
92/3:42-43 98 99 98 99
- (GO TO END)
- 93/3:44-47 38. (CHARITIES ONLY) Approximately how many people contribute to your charity annually? 9998 9999
- 94/3:48-52 39. Could you give me a rough idea of how much those contributions come to? 99998 99999
- 95/3:53 40. Does your organization provide any services that require extensive use of local telephone services?
1. Yes (GO TO QUESTION 40a)
2. No }
8. DK } (GO TO END)
9. NA }
- 96/3:54-55 40a. (IF YES) What are those services? 98 99 98 99 98 99
97/3:56-57
98/3:58-59
- 99/3:60-61 40b. (IF AT LEAST ONE SERVICE PROVIDED) Which, if any, of these services
100/3:62-63 are/Is this service provided only by your organization? 98 99
101/3:64-65 98 99 98 99

END

Thank you very much. You've been very helpful.

TERMINATE INTERVIEW

102/3:66-67 Length of Interview
103/3:68-69 Day of Interview
104/3:70-71 Month of Interview

| | |
|--|--|
| | |
| | |
| | |

CINCINNATI AND CLEVELAND QUESTIONNAIRE
TELEPHONE 2

1/1:1-3 ID Number: 00248 Interviewer Number: _____
/1:4 Deck: _____ Phone Number: _____
2/1:5-8 Time: : Name of Respondent: _____
Name of Organization: _____

3/1:9 [INTERVIEWER: Code type of organization here]

1. City Government
2. County Government
3. State Government
4. University
5. Hospital
6. School
7. Library
8. Charity

Hello, my name is _____ and I'm calling from the Polimetrics Laboratory at The Ohio State University. As you know, our office asked for this appointment so that you might participate in a scientific survey we are conducting to determine how organizations use their telephones. Of course, all of your comments will be held in strict confidence.

- 4/1:10 1. First, I have been told that you are responsible for handling telephone services for your employer. Is this correct?
1. yes
 2. no

[IF NO, TERMINATE INTERVIEW, FIND OUT WHO IS IN CHARGE AND MAKE A NOTE TO RECONTACT AGENCY IN FUTURE]

2. Can you identify 2 of the most significant reasons people at your organization would need to place outgoing local telephone calls? (PROBE)
998 999 998 999

5/1:11-13
6/1:14-16

7/1:17-19 2a. What is the main function of your organization? 998 999

- 8/1:20 3. Are outgoing calls necessary to accomplish the main function of your organization?
1. yes
 2. no
 8. DK
 9. NA

- 9/1:21 4. Approximately how many telephone sets service your organization?
1. 1-5
 2. 6-10
 3. 11-25
 4. 26-50
 5. 51-100
 6. over 100
 8. DK
 9. NA
- 10/1:22 5. Approximately how many telephone lines service your organization?
1. 1
 2. 2
 3. 3
 4. 4
 5. 5-7
 6. 8-10
 7. more than 10
 8. DK
 9. NA
- 11/1:23-24 6. About how many local calls are placed from your organization in an average day, week, or month, whichever is easiest to estimate?
(RECORD UNIT AND NUMBER)
- 12/1:25-27 7. Approximately what percentage of your organization's phone calls are incoming and what percentage are outgoing?
- % incoming
998. DK
999. NA
- 13/1:28 8. Would the quality of service your organization provides decline if the price of a telephone call increased?
1. yes
 2. no
 8. DK
 9. NA
- 14/1:29-31 9. Approximately what percentage of your organization's local calls are personal and what percentage are business?
- % personal
998. DK
999. NA

15/1:32 10. Does your organization keep records on telephone usage?

- 1. yes
- 2. no
- 8. DK
- 9. NA

11. Are there any policies governing the use of telephones in your organization? (PROBE: identify policies)
 (IF NO, GO TO QUESTION 13) 998 999 998 999 998 999

16/1:33-35
 17/1:36-38
 18/1:39-41

19/1:42-44 12. Who makes these policies? (RECORD TITLE) 998 999

13. Other than the telephone, what modes of communication does your organization use? 98 99 98 99 98 99

20/1:45-46
 21/1:47-48
 22/1:49-50

14. In those situations where either the telephone or another mode is equally appropriate, which is used most often?

23/1:51-52 Specify: _____
 24/1:53-54 _____

25/1:55 15. Do most of the contacts your organization has with the public take the form of incoming phone calls?

- 1. yes
- 2. no
- 8. DK
- 9. NA

26/1:56 16. If the telephone could not be used, would there be significant delays, only minor delays, or no delays in the service or benefits provided by your organization?

- 1. significant delays
- 2. only minor delays
- 3. no delays
- 8. DK
- 9. NA

27/1:57 17. Does your organization use the telephone differently now than it did, say, a year ago?

- 1. yes (GO TO QUESTION 17a, THEN QUESTION
- 2. no (GO TO QUESTION 18)
- 8. DK
- 9. NA

17a. (IF YES) Why did these changes occur? (PROBE: Who initiated the changes?)
998 999 998 999 998 999 (What were the changes?)

28/1:58-60
29/1:61-63
30/1:64-66

(GO TO QUESTION 19)

31/1:67 18. Does your organization use the telephone differently now than it did five years ago?

- 1. yes (GO TO QUESTION 18a)
- 2. no (GO TO QUESTION 19)
- 8. DK
- 9. NA

18a. (IF YES) Why did these changes occur? (PROBE: Who initiated the changes?)
998 999 998 999 (What were the changes?)

32/1:68-70
33/1:71-73
34/1:74-76

35/1:77 19. For local calls, does the telephone company bill your organization according to a flat rate or a measured rate?

- 1. flat rate (GO TO QUESTION 19a)
- 2. measured rate (GO TO QUESTION 20)
- 8. DK (IN CINCINNATI GO TO QUESTION 19a)
- 9. NA (IN CLEVELAND GO TO QUESTION 20)

36/1:78 19a. (IF FLAT RATE) Assume that the current flat rate was replaced by a measured rate where your bill remained the same if your phones were used about the same as they are now. Would this change your method of operation?

- 1. yes (GO TO QUESTION 19b)
- 2. no (GO TO QUESTION 19c)
- 8. DK
- 9. NA

37/2:5-7 19b. (IF YES) Could you tell me how? 998 999 998 999
38/2:8-10

39/2:11 19c. (IF FLAT RATE) Assume that the current flat rate was replaced by a measured rate where your bill increased by 20 percent if your usage remained the same. Would this change your method of operation?
(BY REDUCING USAGE THE BILL COULD BE REDUCED)

- | | | |
|--------|----------------------|----------------------|
| 1. yes | (GO TO QUESTION 19d) | |
| 2. no | } | |
| 8. DK | | (GO TO QUESTION 19e) |
| 9. NA | | |

19d. (IF YES) Could you tell me how? 998 999 998 999
40/2:12-14
41/2:15-17

42/2:18 19e. (IF FLAT RATE) Again assume that the current flat rate was replaced by a measured rate but your bill decreased by 20 percent and your usage remained the same. Would this change your method of operation?

- | | | |
|--------|----------------------|---------------------|
| 1. yes | (GO TO QUESTION 19f) | |
| 2. no | } | |
| 8. DK | | (GO TO QUESTION 24) |
| 9. NA | | |

19f. (IF YES) Could you tell me how? 998 999 998 999
43/2:19-21
44/2:22-24

45/2:25 20. (IF MEASURED RATE) Would a change from measured rates to flat rates change the way your organization serves the public?

- | | | |
|--------|----------------------|---------------------|
| 1. yes | (GO TO QUESTION 20a) | |
| 2. no | } | |
| 8. DK | | (GO TO QUESTION 21) |
| 9. NA | | |

20a. (IF YES) In what way? 998 999 998 999
46/2:26-28
47/2:29-31

21. (IF MEASURED RATE) To your knowledge, have measured telephone rates affected your organization? (PROBE: In what way?)
998 999 998 999 998 999

48/2:32-34
49/2:35-37
50/2:38-40

- 51/2:41 22. Some people have told us that they believe telephone users can have more control over the amount of their telephone bill with measured rates for local calls. They say that the measured rate allows them to monitor and control local calls as they do long distance calls. How about you? Do you feel that measured rates allow your organization to have more control, less control, or about the same control over your phone bill as flat rates?
1. more control } (GO TO QUESTION 22a)
 2. less control }
 3. about the same control } (GO TO QUESTION 23)
 8. DK }
 9. NA }
- 22a. (IF MORE OR LESS CONTROL) Could you explain that? 998 999 998 999
- 52/2:42-44
53/2:45-47
- 54/2:48 23. (IF MEASURED RATES) Would a change from measured rates to higher flat rates change the way your organization serves the public?
1. yes (GO TO QUESTION 23a)
 2. no }
 8. DK } (GO TO QUESTION 24)
 9. NA }
- 23a. (IF YES) In what way? (PROBE FOR SPECIFIC TYPES OF CHANGES)
 998 999 998 999 998 999
- 55/2:49-51
56/2:52-54
57/2:55-57
- 58/2:58-59 24. Approximately how many full-time people does your organization employ?
 98 99
- 59/2:60-61 25. And approximately how many part-time people? 98 99
- 60/2:62-64 26. Approximately what percentage of all the employees might be classified "professional"? 998 999

% professional

27. What percentage might be classified "clerical"? 998 999

61/2:65-67

% clerical

28. What percentage would you classify as neither "professional" or "clerical"? 998 999

62/2:68-70

%

63/2:71 29. What is the approximate total budget for your organization? (READ CHOICES)

1. under \$25,000
2. \$25,000 - \$100,000
3. \$100,000 - \$500,000
4. \$500,000 - 1 million
5. greater than 1 million
6. DK, but can find out
8. DK
9. NA

64/2:72 30. Is there a specific budget for telephone service?

1. yes
2. no
8. DK
9. NA

(GO TO QUESTION 30a)

(IF GOVERNMENT AGENCY, GO TO QUESTION 31)

(IF HOSPITAL, GO TO QUESTION 32)

(IF HEALTH RELATED GOVERNMENT AGENCY, GO TO QUESTION 31 and 32)

(IF SCHOOL OR UNIVERSITY GO TO QUESTION 34)

(IF LIBRARY, GO TO QUESTION 36)

(IF CHARITY, GO TO QUESTION 38)

65/2:73 30a. (IF YES) Is the telephone budget flexible? (PROBE: Can the amount budgeted for telephone services be exceeded?)

1. yes
2. no
8. DK
9. NA

66/2:74 30b. (IF YES) To your knowledge, has the budget for telephone services ever been exceeded?

1. yes
2. no
8. DK
9. NA

(GO TO QUESTION 30c)

(GO TO QUESTION 30d)

30c. (IF YES) About how often? 998 999

67/2:75-77

68/2:78 30d. Are your telephone bills broken down by the type of service or equipment provided?

1. yes
2. no
8. DK
9. NA

69/3:5-7 31. (GOVERNMENT AGENCIES AND HEALTH RELATED GOVERNMENT AGENCIES ONLY)
Realizing that potentially all the local population could use your services; about what percentage of the local population actually makes use of the services provided by your organization? 998 999

%

(IF GOVERNMENT AGENCY, GO TO END)
(IF HEALTH RELATED GOVERNMENT AGENCY,
GO TO QUESTION 32)

70/3:8 32. (HOSPITALS, CLINICS OR HEALTH RELATED GOVERNMENT AGENCIES ONLY)
Does your institution provide any health services to the community that require extensive use of local telephone services?

- | | |
|--------|----------------------|
| 1. yes | (GO TO QUESTION 32a) |
| 2. no | } |
| 8. DK | |
| 9. NA | |

32a. (IF YES) Could you tell me what those services are? 98 99 98 99 98 9

71/3:9-10
72/3:11-12
73/3:13-14

32b. (IF AT LEAST ONE SERVICE PROVIDED) *Which, if any, of these services are/ Is this service provided only by your organization?*
98 99 98 99 98 99

74/3:15-16
75/3:17-18
76/3:19-20

33. Including in- and outpatients, about how many patients are treated annually? 98 99

77/3:21-22

(GO TO END)

34. (SCHOOLS OR UNIVERSITIES ONLY) Approximately how many students were enrolled in your school during the past academic year? 98 99

78/3:23-24

79/3:25 35. Does your school provide any educational services that require extensive use of local telephone service?

- | | |
|--------|----------------------|
| 1. yes | (GO TO QUESTION 35a) |
| 2. no | } |
| 8. DK | |
| 9. NA | |
| | (GO TO END) |

35a. (IF YES) What are those services? 998 999 998 999 998 999
 80/3:26-28
 81/3:29-31
 82/3:32-34

35b. (IF AT LEAST ONE SERVICE PROVIDED) *Which, if any, of these services are/Is this service provided only by your organization?*
 998 999 998 999 998 999
 83/3:35-37
 84/3:38-40
 85/3:41-43

(GO TO END)

36. (LIBRARIES ONLY) Approximately how many books are circulated annually by your library? (GET FIGURE FOR BRANCH) 98 99
 86/3:44-45

87/3:46 37. Does your library provide any services that require extensive use of local telephone services?

- | | |
|--------|----------------------|
| 1. yes | (GO TO QUESTION 37a) |
| 2. no | } |
| 8. DK | |
| 9. NA | |
| | (GO TO END) |

37a. (IF YES) What are those services? 998 999 998 999 998 999
 88/3:47-49
 89/3:50-52
 90/3:53-55

37b. (IF AT LEAST ONE SERVICE PROVIDED) *Which, if any, of these services are/Is this service provided only by your organization?*
 998 999 998 999 998 999
 91/3:56-58
 92/3:59-61
 93/3:62-64

C-23

(GO TO END)

38. (CHARITIES ONLY) Approximately how many people contribute to your organization annually? 98 99
(INTERVIEWER: NOTE IF ORGANIZATION IS 100% TAX SUPPORTED)

94/3:65-66

39. Could you give me a rough idea of how much those contributions come to? 98 99

95/3:67-68

96/3:69 40. Does your organization provide any services that require extensive use of local telephone services?

- 1. yes (GO TO QUESTION 40a)
- 2. no
- 8. DK (GO TO END)
- 9. NA

40a. (IF YES) What are those services? 98 99 98 99 98 99
97/3:70-71
98/3:72-73
99/3:74-75

40b. (IF AT LEAST ONE SERVICE PROVIDED) Which, if any, of these services are/Is this service provided only by your organization?
998 999 998 999 998 999

100/3:76-78
101/4:5-7
102/4:8-10

(GO TO END)

***** END ***** END ***** END ***** END *****

Thank you very much. You've been very helpful.

TERMINATE INTERVIEW

103/4:11-12 RECORD LENGTH OF INTERVIEW
104/4:13-14 RECORD DAY OF INTERVIEW
105/4:15-16 RECORD MONTH OF INTERVIEW

| | |
|--|--|
| | |
| | |
| | |

APPENDIX D

SUMMARY OF RESULTS OF THE PILOT STUDY

Columbus Pilot Study Report

A pilot study was conducted in Columbus. The pilot study had two purposes: (1) to test the questionnaire that would be used in the main study in Cleveland and Cincinnati for clarity, ambiguities, etc., and (2) to gather data to be used in determining the sample sizes for the main study.

The remainder of this section is devoted to reporting the data obtained from the pilot study. The data will be presented on a question-by-question basis with percentages reported for all data collected and by each strata.

QUESTION 2*

Can you identify 3 of the most significant reasons people at your organization need to place local telephone calls?

| ** REASONS MENTIONED | *** ALL DATA | CHARITIES | HOSPITALS | LIBRARIES | LOCAL | SCHOOLS | STATE | UNIV. |
|--|--------------|------------|-----------|------------|------------|------------|------------|-----------|
| Personal Calls | 7 (12.93) | 0 (0.00) | 1 (7.14) | 0 (0.00) | 1 (1.89) | 2 (3.85) | 2 (5.71) | 1 (9.09) |
| Calls to similar organizations | 35 (14.64) | 6 (13.04) | 2 (14.29) | 4 (14.29) | 8 (15.09) | 8 (15.38) | 6 (17.14) | 1 (9.09) |
| Calls within organizations | 38 (15.90) | 8 (17.39) | 3 (21.43) | 5 (17.86) | 8 (15.09) | 10 (19.23) | 4 (11.43) | 0 (0.00) |
| Public Relations | 2 (.84) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 2 (5.71) | 0 (0.00) |
| Calls involving a service provided by the organization | 69 (28.87) | 12 (26.09) | 2 (14.29) | 11 (39.29) | 11 (20.75) | 21 (40.38) | 8 (22.86) | 4 (36.36) |
| General Business | 63 (26.36) | 14 (30.43) | 2 (14.29) | 6 (21.43) | 15 (28.30) | 10 (19.23) | 12 (34.29) | 4 (36.36) |
| Funding | 9 (3.77) | 2 (4.35) | 1 (7.14) | 0 (0.00) | 5 (9.43) | 0 (0.00) | 0 (0.00) | 1 (9.09) |
| Research and Consultation | 3 (1.26) | 0 (0.00) | 1 (7.14) | 0 (0.00) | 1 (1.89) | 0 (0.00) | 1 (2.86) | 0 (0.00) |
| Clients' calls | 4 (1.67) | 0 (0.00) | 2 (4.29) | 0 (0.00) | 1 (1.89) | 1 (1.92) | 0 (0.00) | 0 (0.00) |
| Call-backs | 9 (3.77) | 4 (8.70) | 0 (0.00) | 2 (7.14) | 3 (5.66) | 0 (0.00) | 0 (0.00) | 0 (0.00) |

*All percentages are rounded to nearest hundredth.

**More than one response was accepted from an organization.

***Tabled values are frequencies of responses by strata. The numbers in parentheses are percents of non-missing data within each strata.

For example, 1 hospital 7.14% of the hospitals responded "Personal calls".

QUESTION 3

Could your organization accomplish its main function without making outgoing phone calls?

| <u>RESPONSE</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|-----------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| Yes | 9 (9.00) | 0 (0.00) | 1 (20.00) | 3 (27.27) | 2 (8.70) | 1 (4.76) | 0 (0.00) | 2 (40.00) |
| No | 91 (91.00) | 20 (100.00) | 4 (80.00) | 8 (72.73) | 21 (91.30) | 20 (95.24) | 15 (100.00) | 3 (60.00) |
| NA/DK | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |

QUESTION 4

Approximately how many telephone sets service your organization?

| <u>NUMBER OF SETS</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|-----------------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1-5 | 27 (27.27) | 6 (30.00) | 0 (0.00) | 8 (72.73) | 2 (8.70) | 9 (45.00) | 1 (6.67) | 1 (20.00) |
| 6-10 | 20 (20.20) | 8 (40.00) | 0 (0.00) | 0 (0.00) | 3 (13.04) | 8 (40.00) | 1 (6.67) | 0 (0.00) |
| 11-25 | 25 (25.25) | 5 (25.00) | 0 (0.00) | 2 (18.18) | 12 (52.17) | 2 (10.00) | 4 (26.67) | 0 (0.00) |
| 26-50 | 5 (5.05) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 1 (4.35) | 1 (5.00) | 1 (6.67) | 2 (40.00) |
| 51-100 | 6 (6.06) | 1 (5.00) | 0 (0.00) | 1 (9.09) | 2 (8.70) | 0 (0.00) | 2 (13.33) | 0 (0.00) |
| > 100 | 16 (16.16) | 0 (0.00) | 5 (100.00) | 0 (0.00) | 3 (13.04) | 0 (0.00) | 6 (40.00) | 2 (40.00) |
| NA/DK | 2 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |

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QUESTION 5

Approximately how many telephone lines service your organization?

| <u>NUMBER OF LINES</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|----------------------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1 | 7 (7.22) | 1 (5.00) | 0 (0.00) | 5 (45.45) | 0 (0.00) | 1 (5.00) | 0 (0.00) | 0 (0.00) |
| 2 | 22 (22.68) | 4 (20.00) | 0 (0.00) | 3 (27.27) | 0 (0.00) | 14 (70.00) | 1 (6.67) | 0 (0.00) |
| 3 | 10 (10.31) | 5 (25.00) | 0 (0.00) | 0 (0.00) | 2 (9.52) | 2 (10.00) | 1 (6.67) | 0 (0.00) |
| 4 | 9 (9.28) | 4 (20.00) | 0 (0.00) | 0 (0.00) | 4 (19.05) | 0 (0.00) | 1 (6.67) | 0 (0.00) |
| 5-7 | 17 (17.53) | 5 (25.00) | 0 (0.00) | 1 (9.09) | 5 (23.81) | 2 (10.00) | 1 (6.67) | 3 (60.00) |
| 8-10 | 5 (5.15) | 1 (5.00) | 0 (0.00) | 1 (9.09) | 2 (9.52) | 0 (0.00) | 1 (6.67) | 0 (10.00) |
| > 10 | 27 (27.84) | 0 (0.00) | 5 (100.00) | 1 (9.09) | 8 (38.10) | 1 (5.00) | 10 (66.67) | 2 (40.00) |
| NA/DK | 4 | 0 | 0 | 0 | 3 | 1 | 0 | 0 |

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QUESTION 6

About how many local calls are placed from your organization in an average day, week, or month, whichever is easiest to estimate?

| <u>CALLS/DAY</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|------------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| < 1 | 32 (30.77) | 5 (25.00) | 0 (0.00) | 5 (45.45) | 9 (37.50) | 8 (38.10) | 3 (20.00) | 2 (40.00) |
| 2-3 | 2 (1.92) | 1 (5.00) | 0 (0.00) | 0 (0.00) | 1 (4.17) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| 4-10 | 12 (11.54) | 4 (20.00) | 0 (0.00) | 2 (18.18) | 2 (8.33) | 3 (14.29) | 1 (6.67) | 0 (0.00) |
| 11-20 | 10 (9.62) | 1 (5.00) | 0 (0.00) | 2 (18.18) | 1 (4.17) | 5 (23.81) | 1 (6.67) | 0 (0.00) |
| 21-30 | 8 (7.69) | 3 (15.00) | 1 (20.00) | 0 (0.00) | 0 (0.00) | 2 (9.52) | 2 (13.33) | 0 (0.00) |
| 31-60 | 14 (13.46) | 3 (15.00) | 0 (0.00) | 0 (0.00) | 6 (25.00) | 2 (9.52) | 2 (13.33) | 1 (20.00) |
| 61-100 | 11 (10.58) | 3 (15.00) | 1 (20.00) | 1 (9.09) | 2 (8.33) | 0 (0.00) | 3 (20.00) | 1 (20.00) |
| 101-300 | 7 (6.73) | 0 (0.00) | 3 (60.00) | 0 (0.00) | 2 (8.33) | 1 (4.76) | 1 (6.67) | 0 (0.00) |
| 301-10,000 | 6 (5.77) | 0 (0.00) | 0 (0.00) | 1 (9.09) | 1 (4.17) | 0 (0.00) | 1 (6.67) | 0 (0.00) |
| 10,000 | 2 (1.92) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 1 (6.67) | 1 (20.00) |

QUESTION 7

Approximately what percentage of your organization's phone calls are incoming and what percentage are outgoing?

| <u>PERCENT INCOMING</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|-------------------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 0-19% | 1 (1.16) | 0 (0.00) | 1 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| 20-39% | 3 (3.49) | 0 (0.00) | 1 (25.00) | 2 (22.22) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| 40-59% | 44 (51.16) | 10 (58.82) | 2 (50.00) | 3 (33.33) | 11 (52.38) | 8 (50.00) | 10 (66.67) | 0 (0.00) |
| 60-79% | 26 (30.23) | 6 (35.29) | 0 (0.00) | 4 (44.44) | 4 (19.05) | 6 (37.50) | 3 (20.00) | 3 (100.00) |
| 80-100% | 12 (13.95) | 1 (5.88) | 1 (25.00) | 0 (0.00) | 6 (28.57) | 2 (12.50) | 2 (13.33) | 0 (0.00) |
| NA/DK | 16 | 3 | 1 | 2 | 3 | 5 | 0 | 2 |

Note: 40-59% interval represents that basically it is split between incoming and outgoing calls.

37% responses > 60% incoming

versus 3% responses < 40% outgoing

QUESTION 8

Do you think the quality of service your organization provides would decline if the price of a telephone call increased?

| <u>RESPONSE</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|-----------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| Yes | 34 (36.96) | 6 (31.58) | 1 (20.00) | 4 (57.14) | 9 (39.13) | 7 (36.84) | 6 (40.00) | 1 (25.00) |
| No | 58 (63.04) | 13 (68.42) | 4 (80.00) | 3 (42.86) | 14 (60.87) | 12 (63.16) | 9 (60.00) | 3 (75.00) |
| NA/DK | 9 | 1 | 0 | 4 | 1 | 2 | 0 | 1 |

QUESTION 9

Approximately what percentage of your organization's local calls are personal and what percentage are business?

| <u>PERCENT PERSONAL</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|-------------------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 0% | 3 (3.30) | 1 (5.26) | 0 (0.00) | 0 (0.00) | 1 (4.55) | 0 (0.00) | 1 (6.67) | 0 (0.00) |
| 1- 2% | 22 (24.18) | 8 (42.11) | 0 (0.00) | 4 (36.36) | 3 (13.64) | 2 (12.50) | 4 (26.67) | 1 (25.00) |
| 5% | 22 (24.18) | 3 (5.26) | 2 (50.00) | 2 (18.18) | 8 (36.36) | 5 (31.25) | 2 (13.33) | 0 (0.00) |
| 10% | 19 (20.88) | 5 (26.32) | 1 (25.00) | 2 (18.18) | 5 (22.73) | 2 (12.50) | 3 (20.00) | 1 (25.00) |
| 15% | 3 (3.30) | 0 (0.00) | 0 (0.00) | 1 (9.09) | 0 (0.00) | 0 (0.00) | 1 (6.67) | 1 (25.00) |
| 20-39% | 16 (17.58) | 2 (18.18) | 0 (0.00) | 2 (18.18) | 4 (18.18) | 4 (25.00) | 4 (26.67) | 0 (0.00) |
| 40-59% | 3 (3.30) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 2 (12.50) | 0 (0.00) | 1 (25.00) |
| 60-79% | 1 (1.10) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 1 (6.25) | 0 (0.00) | 0 (0.00) |
| 80-100% | 2 (2.20) | 0 (0.00) | 1 (25.00) | 0 (0.00) | 1 (4.55) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| NA/DK | 10 | 1 | 1 | 0 | 2 | 5 | 0 | 1 |

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QUESTION 10

Does your organization keep records on telephone usage?

| <u>RESPONSE</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|-----------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| Yes | 37 (37.37) | 11 (57.89) | 4 (80.00) | 2 (18.18) | 8 (34.78) | 2 (9.52) | 6 (40.00) | 4 (80.00) |
| No | 62 (62.63) | 8 (42.11) | 1 (20.00) | 9 (81.82) | 15 (65.22) | 19 (90.48) | 9 (60.00) | 1 (20.00) |
| NA/DK | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |

QUESTION 11

Can you identify any policies governing the use of telephones
in your organization?

| <u>RESPONSE</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|-----------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| Yes | 96 (95.05) | 19 (95.00) | 5 (100.00) | 11 (100.00) | 22 (91.67) | 20 (95.24) | 14 (93.33) | 5 (100.00) |
| No | 5 (4.95) | 1 (5.00) | 0 (0.00) | 0 (0.00) | 2 (8.33) | 1 (4.76) | 1 (6.67) | 0 (0.00) |

How many policies could be identified?

| <u>RESPONSE</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|-----------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| None | 6 (5.94) | 1 (5.00) | 0 (0.00) | 0 (0.00) | 2 (8.33) | 2 (9.52) | 1 (6.67) | 0 (0.00) |
| One | 67 (63.34) | 16 (80.00) | 4 (80.00) | 8 (72.73) | 15 (62.50) | 15 (71.43) | 6 (40.00) | 3 (60.00) |
| Two | 22 (21.78) | 3 (15.00) | 1 (20.00) | 1 (9.09) | 7 (29.17) | 3 (14.29) | 6 (40.00) | 1 (20.00) |
| 3 or More | 6 (5.94) | 0 (0.00) | 0 (0.00) | 2 (18.18) | 0 (0.00) | 1 (4.76) | 2 (13.33) | 1 (20.00) |

QUESTION 12

Who makes these policies?

| <u>RESPONSE</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|-------------------------------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| Top level Administrator | 33 (46.88) | 8 (57.14) | 0 (0.00) | 4 (57.14) | 7 (46.67) | 6 (50.00) | 6 (42.86) | 2 (40.00) |
| 2 nd level Administrator | 11 (15.49) | 0 (0.00) | 2 (50.00) | 0 (0.00) | 3 (20.00) | 1 (8.33) | 3 (21.43) | 2 (40.00) |
| Mid-level managers | 3 (4.23) | 1 (7.14) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 1 (7.14) | 1 (20.00) |
| Policy making groups | 20 (28.17) | 4 (28.57) | 2 (50.00) | 3 (42.86) | 4 (26.67) | 5 (41.67) | 2 (14.29) | 0 (0.00) |
| Consensus of employees | 1 (1.41) | 1 (7.14) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| Other | 3 (4.23) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 1 (6.67) | 0 (0.00) | 2 (14.29) | 0 (0.00) |
| NA/DK | 30 | 6 | 1 | 4 | 9 | 9 | 1 | 0 |

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QUESTION 13

Other than the telephone, what modes of communication does your organization use?

| <u>MODES</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|-----------------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| Electronic | 28 (17.28) | 5 (15.15) | 5 (71.43) | 3 (18.75) | 9 (25.71) | 1 (2.44) | 4 (18.18) | 1 (12.50) |
| Mail | 74 (45.68) | 19 (57.58) | 0 (0.00) | 7 (43.75) | 17 (48.57) | 15 (36.59) | 12 (54.55) | 4 (50.00) |
| Personal | 14 (8.64) | 2 (6.06) | 0 (0.00) | 0 (0.00) | 3 (8.57) | 6 (14.63) | 2 (9.09) | 1 (12.50) |
| Media | 20 (12.35) | 4 (12.12) | 1 (14.29) | 3 (18.75) | 1 (2.86) | 7 (17.07) | 2 (9.09) | 2 (25.00) |
| In house delievery | 26 (16.05) | 3 (9.09) | 1 (14.29) | 3 (18.75) | 5 (14.29) | 12 (29.27) | 2 (9.09) | 0 (0.00) |

Note: Up to 3 responses were accepted per interviewee.

In question 13 the response "electronic" mode of communication includes the use of 2-way radio, teletype, telecopiers, intercom, telegrams, mobile telephone, etc. The response "personal" includes the use of home visits, fact-to-face personal contact, P.T.A. meetings, etc. "Media" as a mode of communication included, T.V., news releases, advertising, magazines, fliers, brochures, newsletters, etc. "In house delivery" included school mail system, memos, written communication, inter-office mail, etc.

QUESTION 14

In those situations where either the telephone or another mode is equally appropriate, which is used most often?

| <u>MODE OF COMMUNICATION MENTIONED AT LEAST ONCE</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|--|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| Phone | 74 (63.25) | 18 (81.82) | 2 (40.00) | 9 (75.00) | 15 (50.00) | 16 (66.67) | 10 (52.63) | 4 (80.00) |
| Other modes | 32 (27.35) | 2 (9.09) | 3 (60.00) | 3 (25.00) | 10 (33.33) | 6 (25.00) | 7 (36.84) | 1 (20.00) |
| Depends on the situation | 11 (9.40) | 2 (9.09) | 0 (0.00) | 0 (0.00) | 5 (16.67) | 2 (8.33) | 2 (10.53) | 0 (0.00) |

QUESTION 15

Do most of the contacts your organization has with the public take the form of incoming phone calls?

| <u>RESPONSE</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|-----------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| Yes | 61 (65.59) | 12 (66.67) | 2 (50.00) | 2 (18.18) | 20 (86.96) | 11 (61.11) | 10 (71.43) | 4 (80.00) |
| No | 32 (34.41) | 6 (33.33) | 2 (50.00) | 9 (81.82) | 3 (13.04) | 7 (38.89) | 4 (28.57) | 1 (20.00) |
| NA/DK | 8 | 2 | 1 | 0 | 1 | 3 | 1 | 0 |

QUESTION 16

If the telephone could not be used, would there be significant delays, only minor delays, or not delays in the service or benefits provided by your organization?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|-----------------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Significant Delays | 84 (86.60) | 18 (90.00) | 4 (80.00) | 7 (70.00) | 19 (86.36) | 17 (85.00) | 15 (100.00) | 4 (80.00) |
| 2. Only Minor Delays | 13 (13.40) | 2 (10.00) | 1 (20.00) | 3 (30.00) | 3 (13.64) | 3 (15.00) | 0 (0.00) | 1 (20.00) |
| 3. No Delays | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| 4. NA/DK | 4 | 0 | 0 | 1 | 2 | 1 | 0 | 0 |

QUESTION 17

Does your organization use the telephone differently now that it did, say, a year ago?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|----------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Yes | 32 (33.00) | 6 (31.58) | 1 (20.00) | 5 (45.45) | 12 (52.17) | 1 (5.00) | 6 (42.86) | 1 (20.00) |
| 2. No | 65 (67.00) | 13 (68.42) | 4 (80.00) | 6 (54.55) | 11 (47.83) | 19 (95.00) | 8 (57.14) | 4 (80.00) |
| 3. NA/DK | 4 | 1 | 0 | 0 | 1 | 1 | 1 | 0 |

QUESTION 17a

(If response to Question 17 was yes) Why did these changes occur?

| <u>REASONS</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|---|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| Institution of measured rates | 3 (6.84) | 1 (12.50) | 0 (0.00) | 0 (0.00) | 1 (5.88) | 0 (0.00) | 1 (14.29) | 0 (0.00) |
| Costs | 3 (6.82) | 0 (0.00) | 0 (0.00) | 2 (28.57) | 1 (5.88) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| Added lines/ upgraded service | 6 (13.63) | 1 (12.50) | 0 (0.00) | 0 (0.00) | 2 (11.76) | 0 (0.00) | 3 (42.86) | 0 (0.00) |
| Personal Calls monitored; more pay phones | 8 (18.18) | 1 (12.50) | 1 (50.00) | 1 (14.29) | 4 (23.53) | 1 (100.00) | 0 (0.00) | 0 (0.00) |
| Charges in personnel who use phone | 2 (4.55) | 1 (12.50) | 0 (0.00) | 0 (0.00) | 1 (5.88) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| Other | 22 (50.00) | 4 (50.00) | 1 (50.00) | 4 (57.14) | 8 (47.06) | 0 (0.00) | 3 (42.86) | 1 (100.00) |

QUESTION 18

Does your organization use the telephone differently now than it did five years ago?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|-------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| Yes | 29 (33.33) | 6 (31.58) | 2 (40.00) | 4 (40.00) | 7 (36.84) | 2 (11.11) | 7 (58.33) | 1 (25.00) |
| No | 58 (66.67) | 13 (68.42) | 3 (60.00) | 6 (60.00) | 12 (63.16) | 16 (88.89) | 5 (41.67) | 3 (75.00) |
| NA/DK | 14 | 1 | 0 | 1 | 5 | 3 | 3 | 1 |

Question 18a

(If yes) Why did these changes occur?

| <u>REASONS</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|--|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Institution of measured rates | 2 (4.44) | 1 (14.29) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 1 (9.09) | 0 (0.00) |
| 2. Costs | 3 (6.67) | 0 (0.00) | 0 (0.00) | 1 (14.29) | 2 (15.38) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| 3. Added lines upgraded service | 5 (11.11) | 0 (0.00) | 1 (25.00) | 1 (14.29) | 0 (0.00) | 1 (50.00) | 2 (18.18) | 0 (0.00) |
| 4. Personal calls monitored and/or more pay phones | 6 (13.33) | 1 (14.29) | 0 (0.00) | 2 (28.57) | 1 (7.69) | 1 (50.00) | 1 (9.09) | 0 (0.00) |
| 5. Changes in personnel who use phone | 4 (8.89) | 2 (28.57) | 0 (0.00) | 0 (0.00) | 2 (15.38) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| 6. Phone used more or less | 8 (17.78) | 1 (14.29) | 0 (0.00) | 1 (14.29) | 4 (30.77) | 0 (0.00) | 1 (9.09) | 1 (100.00) |
| 7. Other | 17 (37.78) | 2 (28.57) | 3 (75.00) | 2 (28.57) | 4 (30.77) | 0 (0.00) | 6 (54.55) | 0 (0.00) |
| 8. NA/DK | 96 | 20 | 4 | 10 | 21 | 21 | 15 | 5 |

Question 19

For local calls, is your organization billed according to a flat rate?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|------------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Flat rate | 13 | 2 (15.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 9 (75.00) | 1 (7.14) | 0 (0.00) |
| 2. Measured rate | 69 | 17 (85.00) | 5 (100.00) | 8 (100.00) | 20 (100.00) | 3 (25.00) | 13 (92.86) | 3 (100.00) |
| 3. NA/DK | 19 | 0 | 0 | 3 | 4 | 9 | 1 | 2 |

QUESTION 19a

(If Flat Rate) Assume that the current flat rate was replaced by a measured rate where your bill remained the same if your phones were used about the same as they are now. Would this change your method of operation?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Yes | 8 (66.67) | 1 (33.33) | 0 | 0 | 0 | 6 (75.00) | 1 (100.00) | 0 |
| 2. No | 4 (33.33) | 2 (66.67) | 0 | 0 | 0 | 2 (25.00) | 0 (0.00) | 0 |
| 3. Depends | 0 (0.00) | 0 (0.00) | 0 | 0 | 0 | 0 (0.00) | 0 (0.00) | 0 |
| 4. NA/DK | 89 | 17 | 5 | 11 | 24 | 13 | 14 | 5 |

Question 19b

(If yes) Could you tell me how?

| <u>REASON</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|---------------------------------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Fewer calls made | 4 (40.00) | 1 (100.00) | 0 | 0 | 0 | 2 (25.00) | 1 (100.00) | 0 |
| 2. Personal calls would be eliminated | 1 (0.00) | 0 (0.00) | 0 | 0 | 0 | 1 (12.50) | 0 (0.00) | 0 |
| 3. Personal calls severely limited | 1 (0.00) | 0 (0.00) | 0 | 0 | 0 | 1 (12.50) | 0 (0.00) | 0 |
| 4. Think twice before using phone | 1 (0.00) | 0 (0.00) | 0 | 0 | 0 | 1 (12.50) | 0 (0.00) | 0 |
| 5. Start charging for outgoing calls | 1 (0.00) | 0 (0.00) | 0 | 0 | 0 | 1 (12.50) | 0 (0.00) | 0 |
| 6. Cut down on parent contact | 1 (0.00) | 0 (0.00) | 0 | 0 | 0 | 1 (12.50) | 0 (0.00) | 0 |
| 7. Would look at cost more | 1 (0.00) | 0 (0.00) | 0 | 0 | 0 | 1 (12.50) | 0 (0.00) | 0 |
| 8. NA/DK | 99 | 20 | 5 | 11 | 24 | 19 | 15 | 5 |

Question 19c

(If Flat Rate) Assume the current flat rate was replaced by a measured rate where your bill increased by 20% if your usage remained the same. Would this change your method of operation?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Yes | 8 (66.67) | 1 (33.33) | 0 | 0 | 0 | 6 (75.00) | 1 (100.00) | 0 |
| 2. No | 4 (33.33) | 2 (66.67) | 0 | 0 | 0 | 2 (25.00) | 0 (0.00) | 0 |
| 3. Depends | 0 (0.00) | 0 (0.00) | 0 | 0 | 0 | 0 (0.00) | 0 (0.00) | 0 |
| 4. NA/DK | 89 | 17 | 5 | 11 | 24 | 13 | 14 | 5 |

Question 19d

(If yes) Could you tell me how?

| <u>REASONS</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|--|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Restric- tions on phone usage | 6 (54.55) | 1 (50.00) | 0 | 0 | 0 | 4 (50.00) | 1 (100.00) | 0 |
| 2. Probably take at one phone | 2 (18.18) | 1 (50.00) | 0 | 0 | 0 | 1 (12.50) | 0 (0.00) | 0 |
| 3. Would cut down on parent contact | 2 (18.18) | 0 (0.00) | 0 | 0 | 0 | 2 (25.00) | 0 (0.00) | 0 |
| 4. Would look at cost more | 1 (9.09) | 0 (0.00) | 0 | 0 | 0 | 1 (12.50) | 0 (0.00) | 0 |
| 5. NA/DK | 98 | 19 | 5 | 11 | 24 | 19 | 15 | 5 |

Question 19e

(If Flat Rate) Again assume that the current flat rate was replaced by a measured rate but your bill decreased by 20% and your usage remained the same. Would this change your method of operation?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Yes | 2 (15.38) | 0 (0.00) | 0 | 0 | 0 | 2 (25.00) | 0 (0.00) | 0 (0.00) |
| 2. No | 11 (84.62) | 3 (100.00) | 0 | 0 | 0 | 6 (75.00) | 1 (100.00) | 1 (100.00) |
| 3. Depends | 0 (0.00) | 0 (0.00) | 0 | 0 | 0 | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| 4. NA/DK | 88 | 17 | 5 | 11 | 24 | 13 | 14 | 4 |

Question 19f

(If yes) Could you tell me how?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|-----------------------------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. More restrictions on phone use | 1 (100.00) | 0 | 0 | 0 | 0 | 1 (100.00) | 0 | 0 |
| 2. NA/DK | 100 | 20 | 5 | 11 | 24 | 20 | 15 | 5 |

Question 20

To your knowledge, how have measured telephone rates affected your organization?

| <u>RESPONSE GIVEN</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|---------------------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| Costs changed | 18 (24.00) | 3 (17.65) | 4 (57.14) | 5 (50.00) | 3 (16.67) | 1 (12.50) | 1 (8.33) | 1 (33.33) |
| New methods of operation | 18 (24.00) | 4 (23.53) | 1 (14.29) | 3 (30.00) | 8 (44.44) | 1 (12.50) | 0 (0.00) | 1 (33.33) |
| Employee benefits reduced | 12 (16.00) | 3 (17.65) | 2 (28.57) | 2 (20.00) | 1 (5.56) | 1 (12.50) | 3 (25.00) | 0 (0.00) |
| No change | 27 (36.00) | 7 (41.18) | 0 (0.00) | 0 (0.00) | 6 (33.33) | 5 (62.50) | 8 (66.67) | 1 (33.33) |

Note: The response given as "new method of operation" included responses: outgoing calls cut backs -- but this tied up telephone lines, other modes of communication are used more now, programs involving extensive use of phone changed or eliminated, etc. The response given as "employee measure rates", there is a charge for personal calls, no more personal calls, etc.

Other responses (not shown in the table) included: less apt to move equipment because of expense, our primary source of communication is the phone so it is absolutely necessary, don't like measured rates, etc.

Question 21

Do you feel that measured rates allow you to have more control, less control or about the same control over your phone bill as flat rates allow?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|---------------------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. More control | 16 (21.92) | 2 (11.11) | 1 (20.00) | 0 (0.00) | 5 (26.32) | 3 (33.33) | 5 (38.46) | 0 (0.00) |
| 2. Less control | 18 (24.66) | 3 (16.67) | 2 (40.00) | 3 (50.00) | 6 (31.58) | 3 (33.33) | 1 (7.70) | 0 (0.00) |
| 3. About the same control | 39 (53.42) | 13 (72.22) | 2 (40.00) | 3 (50.00) | 8 (42.11) | 3 (33.33) | 7 (53.85) | 3 (100.00) |
| 4. NA/DK | 28 | 2 | 0 | 5 | 5 | 12 | 2 | 2 |

Question 21a

(If more or less control) Could you explain that?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|--|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Monitoring of calls in order to cut down on usage | 4 (11.76) | 1 (16.67) | 1 (33.33) | 0 (0.00) | 1 (8.33) | 1 (20.00) | 0 (0.00) | 0 |
| 2. More restrictions on usage | 9 (26.47) | 1 (16.67) | 0 (0.00) | 0 (0.00) | 3 (25.00) | 2 (40.00) | 3 (60.00) | 0 |
| 3. Less control over money spent | 2 (5.88) | 1 (16.67) | 0 (0.00) | 0 (0.00) | 1 (8.33) | 0 (0.00) | 0 (0.00) | 0 |
| 4. Makes us more aware of how money is spent | 1 (2.94) | 1 (16.67) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 |
| 5. Phone calls divided up to cut down on overall use | 1 (2.94) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 1 (20.00) | 0 |
| 6. Higher bills | 6 (17.65) | 1 (16.67) | 1 (33.33) | 1 (33.33) | 3 (25.00) | 0 (0.00) | 0 (0.00) | 0 |
| 7. Many calls necessary and it's hard to cut back | 2 (5.88) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 2 (40.00) | 0 (0.00) | 0 |

Question 21a
(cont.)

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|---|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 8. Cannot control phones | 8 (23.53) | 1 (16.67) | 1 (0.00) | 2 (66.67) | 3 (25.00) | 0 (0.00) | 1 (20.00) | 0 |
| 9. Ask people to call us instead of returning calls | 1 (2.94) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 1 (8.33) | 0 (0.00) | 0 (0.00) | 0 |
| 10. NA/DK | 97 | 19 | 5 | 11 | 21 | 21 | 15 | 5 |

Question 22

Has the change from flat to measured rates affected your organization's ability to serve the public?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|----------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Yes | 14 (16.87) | 2 (10.53) | 0 (0.00) | 3 (33.33) | 0 (0.00) | 8 (66.67) | 0 (0.00) | 1 (25.00) |
| 2. No | 69 (83.13) | 17 (89.47) | 5 (100.00) | 6 (66.67) | 20 (100.00) | 4 (33.33) | 14 (100.00) | 3 (75.00) |
| 3. NA/DK | 17 | 1 | 0 | 2 | 4 | 9 | 1 | 1 |

Question 22a

(If yes) In what way?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|---|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Cut down on calls we would normally make | 6 (33.33) | 1 (33.33) | 0 | 1 (25.00) | 0 | 4 (36.36) | 0 | 0 |
| 2. Limit personal calls | 1 (5.56) | 0 (0.00) | 0 | 0 (0.00) | 0 | 1 (9.09) | 0 | 0 |
| 3. Makes us more cost conscious | 2 (11.11) | 0 (0.00) | 0 | 1 (25.00) | 0 | 1 (9.09) | 0 | 0 |
| 4. Limits our ability to serve public and/or students | 6 (33.33) | 1 (33.33) | 0 | 0 (0.00) | 0 | 5 (45.45) | 0 | 0 |
| 5. Not able to communicate directly with patrons | 1 (5.56) | 0 (0.00) | 0 | 1 (25.00) | 0 | 0 (0.00) | 0 | 0 |

Question 22a

(cont.)

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|--|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 6. Patrons asked to call back instead of Library calling them back | 1 (5.56) | 0 (0.00) | 0 | 1 (25.00) | 0 | 0 (0.00) | 0 | 0 |
| 7. Other | 1 (5.56) | 1 (33.33) | 0 | 0 (0.00) | 0 | 0 (0.00) | 0 | 0 |
| 8. NA/DK | 95 | 19 | 5 | 10 | 24 | 17 | 15 | 5 |

Question 23

As a result of the change to measured rates, does your organization now use communication services other than the telephone more, or about the same as it did before the change?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|----------------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. More | 14 (16.28) | 2 (11.11) | 0 (0.00) | 5 (55.56) | 3 (14.29) | 3 (23.08) | 0 (0.00) | 1 (20.00) |
| 2. Less | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| 3. About the same | 72 (83.72) | 16 (88.89) | 5 (100.00) | 4 (44.44) | 18 (85.71) | 10 (76.92) | 15 (100.00) | 4 (80.00) |
| 4. NA/DK | 15 | 2 | 0 | 2 | 3 | 8 | 0 | 0 |

Question 23a

(If more) Specifically, what services are you using more?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|--|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Mail | 11 (61.11) | 2 (100.00) | 0 | 3 (42.86) | 2 (66.67) | 3 (60.00) | 0 | 1 (50.00) |
| 2. Inter-office mail, carrier, messenger | 3 (16.67) | 0 (0.00) | 0 | 2 (28.57) | 0 (0.00) | 0 (0.00) | 0 | 1 (50.00) |
| 3. 2-way radio, C.B. | 1 (5.55) | 0 (0.00) | 0 | 0 (0.00) | 1 (33.33) | 0 (0.00) | 0 | 0 (0.00) |
| 4. Notes to parents through students | 2 (11.11) | 0 (0.00) | 0 | 0 (0.00) | 0 (0.00) | 2 (40.00) | 0 | 0 (0.00) |
| 5. Advertising | 1 (5.55) | 0 (0.00) | 0 | 1 (14.29) | 0 (0.00) | 0 (0.00) | 0 | 0 (0.00) |
| 6. NA/DK | 97 | 20 | 5 | 10 | 24 | 19 | 15 | 4 |

Question 24

Approximately how many full time people does your organization employ?

| <u>RESPONSE</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|-----------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| < 4 | 14 (14.14) | 6 (30.00) | 0 (0.00) | 6 (54.55) | 0 (0.00) | 0 (0.00) | 1 (6.67) | 1 (20.00) |
| 5-9 | 12 (12.12) | 5 (25.00) | 0 (0.00) | 2 (18.18) | 4 (17.39) | 0 (0.00) | 1 (6.67) | 0 (0.00) |
| 10-24 | 19 (19.19) | 7 (35.00) | 0 (0.00) | 1 (9.09) | 4 (17.39) | 6 (28.57) | 1 (6.67) | 0 (0.00) |
| 25-49 | 18 (18.18) | 1 (5.00) | 0 (0.00) | 1 (9.09) | 4 (17.39) | 10 (47.62) | 2 (13.33) | 0 (0.00) |
| 50-99 | 11 (11.11) | 1 (5.00) | 0 (0.00) | 0 (0.00) | 3 (13.04) | 4 (19.05) | 1 (6.67) | 2 (40.00) |
| 100-499 | 13 (13.13) | 0 (0.00) | 2 (40.00) | 1 (9.09) | 6 (26.09) | 0 (0.00) | 3 (20.00) | 1 (20.00) |
| 500-999 | 5 (5.05) | 0 (0.00) | 1 (20.00) | 0 (0.00) | 1 (4.35) | 0 (0.00) | 3 (20.00) | 0 (0.00) |
| 1000-9999 | 6 (6.06) | 0 (0.00) | 2 (40.00) | 0 (0.00) | 1 (4.35) | 1 (4.76) | 2 (13.33) | 0 (0.00) |
| 10000-100000 | 1 (1.01) | 0 (0.00) | 0 (20.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 1 (6.67) | 1 (20.00) |
| DK/NA | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |

Question 25

Approximately how many part-time people?

| <u>RESPONSE</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|-----------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 0 | 25 (26.04) | 8 (40.00) | 0 (0.00) | 0 (0.00) | 9 (40.91) | 4 (21.05) | 4 (26.67) | 0 (0.00) |
| 1-2 | 19 (19.79) | 6 (30.00) | 0 (0.00) | 1 (9.09) | 3 (13.64) | 5 (26.32) | 3 (20.00) | 1 (25.00) |
| 3-5 | 17 (17.71) | 2 (10.00) | 0 (0.00) | 7 (63.64) | 1 (4.55) | 7 (36.84) | 0 (0.00) | 0 (0.00) |
| 6-10 | 8 (8.33) | 2 (10.00) | 0 (0.00) | 0 (0.00) | 3 (13.64) | 2 (10.53) | 1 (6.67) | 0 (0.00) |
| 11-25 | 10 (10.42) | 1 (5.00) | 0 (0.00) | 1 (9.09) | 4 (18.18) | 0 (0.00) | 3 (20.00) | 1 (25.00) |
| 26-50 | 8 (8.33) | 0 (0.00) | 2 (40.00) | 1 (9.09) | 2 (9.09) | 0 (0.00) | 2 (13.33) | 1 (25.00) |
| 51-100 | 2 (2.08) | 1 (5.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 1 (6.67) | 0 (0.00) |
| 101-250 | 3 (3.13) | 0 (0.00) | 1 (20.00) | 1 (9.09) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 1 (25.00) |
| 400 | 2 (2.08) | 0 (0.00) | 1 (20.00) | 0 (0.00) | 0 (0.00) | 1 (5.26) | 0 (0.00) | 0 (0.00) |
| 1000 | 1 (1.04) | 0 (0.00) | 1 (20.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| 3000 | 1 (1.04) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 1 (6.67) | 0 (0.00) |
| DK/NA | 5 | 0 | 0 | 0 | 2 | 2 | 0 | 1 |

D-40

Question 26

Approximately what percentage of all the employees might be considered "professionals"?

| <u>PERCENT</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|----------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 0-19 | 12 (12.37) | 3 (15.00) | 0 (0.00) | 1 (9.09) | 7 (33.33) | 1 (4.76) | 0 (0.00) | 0 (0.00) |
| 20-39 | 15 (15.46) | 3 (15.00) | 0 (0.00) | 7 (63.64) | 3 (14.29) | 0 (0.00) | 2 (13.33) | 0 (0.00) |
| 40-59 | 18 (18.56) | 2 (10.00) | 4 (80.00) | 2 (18.18) | 3 (14.29) | 0 (0.00) | 6 (40.00) | 1 (25.00) |
| 60-79 | 22 (22.68) | 7 (35.00) | 1 (20.00) | 1 (9.09) | 3 (14.29) | 5 (23.81) | 3 (20.00) | 2 (50.00) |
| 80-100 | 30 (30.93) | 5 (25.00) | 0 (0.00) | 0 (0.00) | 5 (23.81) | 15 (71.43) | 4 (26.67) | 1 (25.00) |
| DK/NA | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |

Question 27

What percentage might be considered "clerical"?

| <u>PERCENT</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|----------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 0-19 | 48 (50.00) | 9 (45.00) | 3 (20.00) | 1 (9.09) | 9 (42.86) | 21 (100.00) | 4 (26.67) | 1 (33.33) |
| 20-39 | 32 (33.33) | 6 (30.00) | 2 (40.00) | 7 (63.64) | 8 (38.10) | 0 (0.00) | 8 (53.33) | 1 (33.33) |
| 40-59 | 8 (8.33) | 2 (10.00) | 0 (0.00) | 1 (9.09) | 1 (4.76) | 0 (0.00) | 3 (20.00) | 1 (33.33) |
| 60-79 | 5(5.21) | 2 (10.00) | 0 (0.00) | 2 (18.18) | 1 (4.76) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| 80-100 | 3 (3.13) | 1 (5.00) | 0 (0.00) | 0 (0.00) | 2 (9.52) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| NA/DK | 5 | 0 | 0 | 0 | 3 | 0 | 0 | 2 |

Question 28

What percentage would you consider to be neither professional nor clerical?

| <u>PERCENT</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|----------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 0-19 | 60 (61.86) | 16 (80.00) | 0 (0.00) | 2 (18.18) | 13 (59.09) | 15 (71.43) | 11 (73.33) | 3 (100.00) |
| 20-39 | 13 (13.40) | 1 (5.00) | 2 (60.00) | 2 (18.18) | 1 (4.55) | 5 (23.81) | 1 (6.67) | 0 (0.00) |
| 40-59 | 13 (13.40) | 0 (0.00) | 2 (40.00) | 7 (63.64) | 2 (9.09) | 0 (0.00) | 2 (13.33) | 0 (0.00) |
| 60-79 | 6 (6.19) | 2 (10.00) | 0 (0.00) | 0 (0.00) | 3 (13.64) | 0 (0.00) | 1 (6.67) | 0 (0.00) |
| 80-100 | 5 (5.15) | 1 (5.00) | 0 (0.00) | 0 (0.00) | 3 (13.64) | 1 (4.76) | 0 (0.00) | 0 (0.00) |
| DK/NA | 4 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |

Question 29a

What is the approximate total budget for your organization?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOL</u> | <u>STATE</u> | <u>UNIV.</u> |
|--------------------------|------------|------------------|------------------|------------------|--------------|---------------|--------------|--------------|
| 1. Under \$25,000 | 2 (3.03) | 1 (6.67) | 0 (0.00) | 1 (20.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| 2. \$25,000 - 100,000 | 7 (10.61) | 3 (20.00) | 0 (0.00) | 1 (20.00) | 0 (0.00) | 2 (16.67) | 1 (12.50) | 0 (0.00) |
| 3. \$100,000 - 500,000 | 22 (33.33) | 9 (60.00) | 0 (0.00) | 1 (20.00) | 6 (31.58) | 3 (25.00) | 3 (37.50) | 0 (0.00) |
| 4. \$500,000 - 1 million | 11 (16.67) | 2 (13.33) | 1 (20.00) | 1 (20.00) | 4 (21.05) | 2 (16.67) | 1 (12.50) | 0 (0.00) |
| 5. > 1 million | 21 (31.82) | 0 (0.00) | 4 (80.00) | 1 (20.00) | 7 (36.84) | 5 (41.67) | 2 (25.00) | 2 (100.00) |
| 6. DK, but can find out | 3 (4.55) | 0 (0.00) | 0 (0.00) | 0 (0.00) | 2 (10.53) | 0 (0.00) | 1 (12.50) | 0 (0.00) |
| 7. NA/DK | 35 | 5 | 0 | 6 | 5 | 3 | 13 | 3 |

Question 30

Is there a specific budget for telephone service?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|----------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Yes | 50 (60.24) | 16 (84.21) | 3 (60.00) | 2 (22.22) | 13 (72.22) | 8 (47.06) | 6 (46.15) | 2 (100.00) |
| 2. No | 33 (39.76) | 3 (15.79) | 2 (40.00) | 7 (77.78) | 5 (27.78) | 9 (52.94) | 7 (53.85) | 0 (0.00) |
| 3. NA/DK | 18 | 1 | 9 | 2 | 6 | 4 | 2 | 3 |

Question 30a

(If yes) Is the telephone budget flexible?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|----------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Yes | 36 (76.60) | 14 (93.33) | 3 (100.00) | 0 (0.00) | 8 (66.67) | 4 (57.14) | 5 (83.33) | 2 (100.00) |
| 2. No | 11 (23.40) | 1 (6.67) | 0 (0.00) | 2 (100.00) | 4 (33.33) | 3 (42.86) | 1 (16.67) | 0 (0.00) |
| 3. NA/DK | 54 | 5 | 2 | 9 | 12 | 14 | 9 | 3 |

Question 30b

(If yes) To your knowledge, has the telephone budget ever been exceeded?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|----------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Yes | 15 (37.50) | 5 (33.33) | 2 (66.67) | 0 | 4 (44.44) | 2 (28.57) | 1 (25.00) | 1 (50.00) |
| 2. No | 25 (62.50) | 10 (66.67) | 1 (33.33) | 0 | 5 (55.56) | 5 (71.43) | 3 (75.00) | 1 (50.00) |
| 3. NA/DK | 61 | 5 | 2 | 11 | 15 | 14 | 11 | 3 |

Question 30c

(If yes) About how often?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|----------------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Every month | 5 (38.46) | 2 (50.00) | 0 (0.00) | 0 | 3 (75.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| 2. Yearly | 2 (15.38) | 0 (0.00) | 1 (100.00) | 0 | 1 (25.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| 3. Every other month | 1 (7.69) | 0 (0.00) | 0 (0.00) | 0 | 0 (0.00) | 0 (0.00) | 1 (50.00) | 0 (0.00) |
| 4. 25% of the time | 1 (7.69) | 0 (0.00) | 0 (0.00) | 0 | 0 (0.00) | 1 (100.00) | 0 (0.00) | 0 (0.00) |
| 5. Rarely | 1 (7.69) | 1 (25.00) | 0 (0.00) | 0 | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 (0.00) |
| 6. 3-4 times yearly | 1 (7.69) | 0 (0.00) | 0 (0.00) | 0 | 0 (0.00) | 0 (0.00) | 0 (0.00) | 1 (100.00) |
| 7. Once | 2 (15.38) | 1 (25.00) | 0 (0.00) | 0 | 0 (0.00) | 0 (0.00) | 1 (50.00) | 0 (0.00) |
| 8. NA/DK | 88 | 16 | 4 | 11 | 20 | 14 | 19 | 4 |

Question 30d

Are your telephone bills broken down by the type of service or equipment provided?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|--------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Yes | 30 (66.67) | 9 (60.00) | 2 (66.67) | 1 (25.00) | 9 (75.00) | 3 (75.00) | 5 (83.33) | 1 (100.00) |
| 2. No | 15 (33.33) | 6 (40.00) | 1 (33.33) | 3 (75.00) | 3 (25.00) | 1 (25.00) | 1 (16.67) | 0 (0.00) |
| NA/DK | 56 | 5 | 2 | 7 | 12 | 17 | 9 | 4 |

Question 31

(Government Agencies Only) About what percentage of the local population makes use of the services provided by your organization?

| <u>PERCENT</u> | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|----------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 0-19 | 6 (18.75) | 0 (0.00) | 0 | 1 (20.00) | 1 (7.14) | 0 | 4 (33.33) | 0 |
| 20-39 | 7 (21.88) | 1 (100.00) | 0 | 2 (40.00) | 2 (14.29) | 0 | 2 (16.67) | 0 |
| 40-59 | 3 (9.38) | 0 (0.00) | 0 | 0 (0.00) | 0 (0.00) | 0 | 3 (25.00) | 0 |
| 60-79 | 2 (6.25) | 0 (0.00) | 0 | 2 (40.00) | 0 (0.00) | 0 | 0 (0.00) | 0 |
| 80-100 | 14 (43.75) | 0 (0.00) | 0 | 0 (0.00) | 11 (78.57) | 0 | 3 (25.00) | 0 |
| NA/DK | 69 | 19 | 5 | 6 | 10 | 21 | 3 | 5 |

Question 32

(Hospitals, clinics, or health-related government agencies only) Does your institution provide any health services to the community that requires extensive use of local telephone services?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|----------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Yes | 5 (62.50) | 0 (0.00) | 3 (60.00) | 0 | 0 | 0 | 2 (100.00) | 0 |
| 2. No | 3 (37.50) | 1 (100.00) | 2 (40.00) | 0 | 0 | 0 | 0 (0.00) | 0 |
| 3. NA/DK | 93 | 19 | 0 | 11 | 24 | 21 | 13 | 5 |

Question 32a

(If yes) Could you tell me what those services are?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|--|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. CNY clinics | 1 (12.50) | 0 | 1 (33.33) | 0 | 0 | 0 | 0 (0.00) | 0 |
| 2. Rubella | 1 (12.50) | 0 | 0 (0.00) | 0 | 0 | 0 | 1 (20.00) | 0 |
| 3. V. D. investigators | 1 (12.50) | 0 | 0 (0.00) | 0 | 0 | 0 | 1 (20.00) | 0 |
| 4. Nusing home inspections and licenses | 1 (12.50) | 0 | 0 (0.00) | 0 | 0 | 0 | 1 (20.00) | 0 |
| 5. North Area Mental Health System | 1 (12.50) | 0 | 1 (33.33) | 0 | 0 | 0 | 0 (0.00) | 0 |
| 6. Psychiatric programs | 1 (12.50) | 0 | 1 (33.33) | 0 | 0 | 0 | 0 (0.00) | 0 |
| 7. Check on patients in family care homes | 1 (12.50) | 0 | 0 (0.00) | 0 | 0 | 0 | 1 (20.00) | 0 |
| 8. Check on patients out on rehabilitation | 1 (12.50) | 0 | 0 (0.00) | 0 | 0 | 0 | 1 (20.00) | 0 |
| NA/DK | 100 | 20 | 5 | 11 | 24 | 21 | 14 | 5 |

D-52

Question 32b

(If at Least One Service Provided) *Which, if any, of these services are/is this service provided only by your organization?*

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|---------------------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. V. D. Investigators | 1 (25.00) | 0 | 0 (0.00) | 0 | 0 | 0 | 1 (33.33) | 0 |
| 2. Rubella | 1 (25.00) | 0 | 0 (0.00) | 0 | 0 | 0 | 1 (33.33) | 0 |
| 3. None | 2 (50.00) | 0 | 1 (100.00) | 0 | 0 | 0 | 1 (33.33) | 0 |
| NA/DK | 100 | 20 | 5 | 11 | 24 | 21 | 14 | 5 |

Question 33

Including in- and out-patients, about how many patients are treated annually?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. 700 | 0 (0.00) | 0 (0.00) | 0 (0.00) | 0 | 0 | 0 | 0 (0.00) | 0 |
| 2. 1,200 | 1 (14.29) | 0 (0.00) | 1 (25.00) | 0 | 0 | 0 | 0 (0.00) | 0 |
| 3. 3,000 | 1 (14.29) | 1 (100.00) | 0 (0.00) | 0 | 0 | 0 | 0 (0.00) | 0 |
| 4. 21,000 | 1 (14.29) | 0 (0.00) | 1 (25.00) | 0 | 0 | 0 | 0 (0.00) | 0 |
| 5. 34,400 | 1 (14.29) | 0 (0.00) | 1 (25.00) | 0 | 0 | 0 | 0 (0.00) | 0 |
| 6. 175,000 | 1 (14.29) | 0 (0.00) | 1 (25.00) | 0 | 0 | 0 | 0 (0.00) | 0 |
| 7. None | 2 (28.57) | 0 (0.00) | 0 (0.00) | 0 | 0 | 0 | 2 (100.00) | 0 |
| NA/DK | 94 | 10 | 1 | 11 | 24 | 21 | 13 | 5 |

Question 34

(Schools Only) Approximately how many students are enrolled in your school during the past academic year?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. < 200 | 2 (7.69) | 1 (100.00) | 0 | 0 | 0 | 1 (5.00) | 0 | 0 (0.00) |
| 2. 201-300 | 1 (3.84) | 0 (0.00) | 0 | 0 | 0 | 1 (5.00) | 0 | 0 (0.00) |
| 3. 301-400 | 9 (34.62) | 0 (0.00) | 0 | 0 | 0 | 9 (45.00) | 0 | 0 (0.00) |
| 4. 401-500 | 1 (3.84) | 0 (0.00) | 0 | 0 | 0 | 1 (5.00) | 0 | 0 (0.00) |
| 5. 501-600 | 3 (11.54) | 0 (0.00) | 0 | 0 | 0 | 3 (15.00) | 0 | 0 (0.00) |
| 6. 601-700 | 3 (11.54) | 0 (0.00) | 0 | 0 | 0 | 2 (10.00) | 0 | 1 (20.00) |
| 7. 701-800 | 3 (11.54) | 0 (0.00) | 0 | 0 | 0 | 3 (15.00) | 0 | 0 (0.00) |
| 8. 2,000 | 1 (3.84) | 0 (0.00) | 0 | 0 | 0 | 0 (0.00) | 0 | 1 (20.00) |
| 9. 3,000 | 1 (3.84) | 0 (0.00) | 0 | 0 | 0 | 0 (0.00) | 0 | 1 (20.00) |
| 10. 6,000 | 1 (3.84) | 0 (0.00) | 0 | 0 | 0 | 0 (0.00) | 0 | 1 (20.00) |
| 11. 55,000 | 1 (3.84) | 0 (0.00) | 0 | 0 | 0 | 0 (0.00) | 0 | 1 (20.00) |
| 12. NA/DK | 75 | 19 | 5 | 11 | 24 | 1 | 15 | 0 |

D-55

Question 35

Does your school provide any educational services that require extensive use of local telephone service?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|----------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Yes | 7 (25.93) | 0 (0.00) | 0 | 0 | 0 | 6 (30.00) | 0 | 1 (20.00) |
| 2. No | 20 (74.07) | 1 (100.00) | 0 | 0 | 0 | 14 (70.00) | 0 | 4 (80.00) |
| 3. NA/DK | 74 | 19 | 5 | 11 | 24 | 1 | 14 | 0 |

Question 35a

(If yes) What are those services?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|--|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Clinics | 0 (0.00) | 0 | 0 | 0 | 0 | 0 (0.00) | 0 | 0 |
| 2. Kinder- garden teacher works with Ohio Bell to teach children how to use phone-- has special equip- ment | 1 (14.29) | 0 | 0 | 0 | 0 | 1 (14.29) | 0 | 0 |
| 3. Remedial classes -- each of the parents have to be contacted | 1 (14.29) | 0 | 0 | 0 | 0 | 1 (14.29) | 0 | 0 |
| 4. Talking to parents | 1 (14.29) | 0 | 0 | 0 | 0 | 1 (14.29) | 0 | 0 |
| 5. Talking to other schools | 1 (14.29) | 0 | 0 | 0 | 0 | 1 (14.29) | 0 | 0 |
| 6. Talking to central office | 1 (14.29) | 0 | 0 | 0 | 0 | 1 (14.29) | 0 | 0 |
| 7. Cultural | 1 (14.29) | 0 | 0 | 0 | 0 | 1 (14.29) | 0 | 0 |
| 8. Other * | 1 (14.29) | 0 | 0 | 0 | 0 | 1 (14.29) | 0 | 0 |
| NA/DK | 98 | 20 | 5 | 11 | 24 | 19 | 15 | 4 |

*Noted as variable 97 on data

D-57

Question 35b

(If at Least One Service Provided) *Which, if any, of these services are/is this service provided only by your organization?*

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|----------------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. None | 2 (66.67) | 0 | 0 | 0 | 0 | 2 (100.00) | 0 | 0 (0.00) |
| 2. Clinics | 1 (33.33) | 0 | 0 | 0 | 0 | 0 (0.00) | 0 | 1 (100.00) |
| 3. NA/DK MD/other | 98 | 20 | 5 | 11 | 24 | 19 | 15 | 4 |

Question 38

(Charities Only) Approximately how many people
contribute to your charity annually?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|---|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. \leq 100 | 2 (18.18) | 2 (18.18) | 0 | 0 | 0 | 0 | 0 | 0 |
| 2. 300-400 | 1 (9.09) | 1 (9.09) | 0 | 0 | 0 | 0 | 0 | 0 |
| 3. 44,000 | 1 (9.09) | 1 (9.09) | 0 | 0 | 0 | 0 | 0 | 0 |
| 4. 150,000 | 1 (9.09) | 1 (9.09) | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. Thousands | 2 (18.18) | 2 (18.18) | 0 | 0 | 0 | 0 | 0 | 0 |
| 6. Funded by Ohio De- partment of Health | 1 (9.09) | 1 (9.09) | 0 | 0 | 0 | 0 | 0 | 0 |
| 7. Funded by United Way | 1 (9.09) | 1 (9.09) | 0 | 0 | 0 | 0 | 0 | 0 |
| 8. None | 2 (18.18) | 2 (18.18) | 0 | 0 | 0 | 0 | 0 | 0 |
| 9. NA/DK/MD/ other | 90 | 9 | 5 | 11 | 24 | 21 | 15 | 5 |

Question 39

Could you give me a rough idea of how much those contributions come to?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|--------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. < \$1000 | 1 (12.50) | 1 (12.50) | 0 | 0 | 0 | 0 | 0 | 0 |
| 2. \$3,000 | 1 (12.50) | 1 (12.50) | 0 | 0 | 0 | 0 | 0 | 0 |
| 3. \$10,000 | 1 (12.50) | 1 (12.50) | 0 | 0 | 0 | 0 | 0 | 0 |
| 4. \$100,000 | 1 (12.50) | 1 (12.50) | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. \$200,000 | 2 (25.00) | 2 (25.00) | 0 | 0 | 0 | 0 | 0 | 0 |
| 6. \$350,000 | 1 (12.50) | 1 (12.50) | 0 | 0 | 0 | 0 | 0 | 0 |
| 7. \$600,000 | 1 (12.50) | 1 (12.50) | 0 | 0 | 0 | 0 | 0 | 0 |
| 8. NA/DK | 93 | 12 | 5 | 11 | 24 | 21 | 15 | 5 |

D-60

Question 40

Does your organization provide any services that require extensive use of local telephone services?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|----------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Yes | 8 (44.44) | 8 (44.44) | 0 | 0 | 0 | 0 | 0 | 0 |
| 2. No | 10 (55.56) | 10 (55.56) | 0 | 0 | 0 | 0 | 0 | 0 |
| 3. NA/DK | 83 | 2 | 5 | 11 | 24 | 21 | 15 | 5 |

Question 40a

(If yes) What are those services?

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|------------------------------|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. Information and referrals | 2 (15.38) | 2 (15.38) | 0 | 0 | 0 | 0 | 0 | 0 |
| 2. Counseling | 2 (15.38) | 2 (15.38) | 0 | 0 | 0 | 0 | 0 | 0 |
| 3. Placement & Training | 3 (23.08) | 3 (23.08) | 0 | 0 | 0 | 0 | 0 | 0 |
| 4. Direct Client Contact | 2 (15.38) | 2 (15.38) | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. General Operation | 3 (23.08) | 3 (23.08) | 0 | 0 | 0 | 0 | 0 | 0 |
| 6. Contribution | 1 (7.69) | 1 (7.69) | 0 | 0 | 0 | 0 | 0 | 0 |
| 7. NA/DK | 100 | 19 | 5 | 11 | 24 | 21 | 15 | 5 |

Question 40b

(If at Least One Service Provided) *Which, if any, of these services are/is this service provided only by your organization?*

| | <u>ALL</u> | <u>CHARITIES</u> | <u>HOSPITALS</u> | <u>LIBRARIES</u> | <u>LOCAL</u> | <u>SCHOOLS</u> | <u>STATE</u> | <u>UNIV.</u> |
|--|------------|------------------|------------------|------------------|--------------|----------------|--------------|--------------|
| 1. None | 4 (57.14) | 4 (57.14) | 0 | 0 | 0 | 0 | 0 | 0 |
| 2. 24 hour crisis line | 1 (14.29) | 1 (14.29) | 0 | 0 | 0 | 0 | 0 | 0 |
| 3. Veterans & Widows call concerning benefits | 1 (14.29) | 1 (14.29) | 0 | 0 | 0 | 0 | 0 | 0 |
| 4. Only mental health agency with school for ages 6-12 | 1 (14.29) | 1 (14.29) | 0 | 0 | 0 | 0 | 0 | 0 |
| 5. NA/DK/MD/other | 94 | 13 | 5 | 11 | 24 | 21 | 15 | 5 |

APPENDIX E

THE NOMINAL GROUP TECHNIQUE

APPENDIX E
THE NOMINAL GROUP TECHNIQUE

The nominal group technique is a structured process engaged in by a group of people to accomplish some specific task. We used this technique to accomplish two specific tasks. The first tasks had members of the group list all programs that required outgoing calls. The second task asked the group to list measures of quality of service. A good group size is 8 to 10 persons plus a moderator and a scribe. The structure of the process is as follows:

Phase I: Silent Generation - Each member of the group is given a sheet of paper with a statement at the top describing the task that the group is to accomplish. During this phase, each member generates as many ideas as he can and writes them on the paper provided. There is no verbal exchange during silent generation.

Phase II: Round Robin - During this phase, each member of the group is called on, in turn, by the moderator to offer one of the ideas the member had generated during Phase I. These ideas are recorded by the scribe in short-title form on a chalk board so that all members of the group can see. The ground rule for Phase II is that no one should comment on another's idea, in fact, the only discussion that should take place would be between the person offering an idea and the moderator. That discussion should be limited to efforts to define an appropriate short title for the idea. A person may pass at any time when called on, and he may add to his own silently generated list when new ideas occur to him. Phase II stops when everyone has passed on the same round.

Phase III: Consolidation - During consolidation discussion is held with the objective of making sure everyone understands the basic idea represented by each short title, and

combining ideas when the group consensus is that two or more titles represent ideas that are fundamentally the same. The moderator should take care to prevent any discussion of the merits of an idea.

Phase IV: Ranking - Each group member is asked to identify, from among the ideas produced by the group, the eight that he feels are more important than all the others. These eight are then to be ranked by that individual from the most important to least important. The most effective ranking method is ranking by alternate extremes. That is, the individual should rank the most important idea, then the least important, then the second most important, and so on.

Phase V: Results - The total group results are tabulated and displayed for the group to see. The tabulation consists of giving each of the most important ideas 8 points, 7 points for the second most important, down to 1 for the least important. Then the points are added to obtain the group consensus scores. The interpretation is a rank order of ideas with the order given by the order of decreasing score.*

The information obtained by using the nominal group technique and the interviews has given us some valuable insight into the following areas:

1. program development and design;
2. programs that use outgoing calls;
3. measures of quality of service provided by an organization.

The results of our case studies are presented in Chapter 5.

*Delbecq, Andre L., Andrew H. Van de Ven and David H. Gustafson, Group Techniques for Program Planning: A Guide to Nominal Group and Delphi Processes, (Glenview, Illinois: Scott, Foresman and Co., 1975).

APPENDIX F

SUMMARY OF RESULTS OF MAIN STUDY:
CLEVELAND AND CINCINNATI

APPENDIX F

SUMMARY OF RESULTS OF MAIN STUDY (CLEVELAND AND CINCINNATI)

The following is a summary of the results of our study in Cleveland and Cincinnati. The results presented represent, in most cases, a consolidation of the open-ended questions. After each open-ended question, a list of all responses is presented. In some cases Chapters 6 and 7 used either the complete open-ended data or smaller consolidations. We have not included the consolidation or disaggregations, used in the main body of this report, because of the numerous computer printouts used. In addition, since restratification of the data simply involved restructuring the data it has not been included, again because of the large size of data. However, all computer runs are available.

The statistical test, as mentioned in Chapter 3, used to determine whether there was or was not a difference between the two areas is presented in summary form for the most important questions. In each cell of question numbers 3 through 10 and 13 through 18 is either an S, M or D. S designates that the confidence interval of the two cities overlaps or are the same. M designates that the confidence intervals fall exactly on the upper bound of any one of the cities and are therefore classified as marginally alike. And D designates that the confidence intervals do not overlap, and that the cities could be different.



Question 2: Can you identify 2 of the most significant reasons people at your organization would need to place outgoing local telephone calls?

| Strata by City | Contact clients, patients, customers or employees | | Seeking, acquiring, or exchanging info | | General Business Calls | | Contact With Other Organizations | | Other | |
|----------------------|---|--------|--|--------|---------------------------|--------|-------------------------------------|--------|-------|--------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government | | | | | | | | | | |
| Cleveland | 21 | 36.84% | 14 | 24.56% | 12 | 21.05% | 7 | 12.28% | 3 | 5.26% |
| Cincinnati | 24 | 32.43% | 13 | 17.57% | 18 | 24.32% | 16 | 21.62% | 3 | 4.05% |
| State Government | | | | | | | | | | |
| Cleveland | 7 | 29.17% | 4 | 16.67% | 8 | 33.33% | 5 | 20.83% | 0 | 0.00% |
| Cincinnati | 11 | 36.67% | 2 | 6.67% | 6 | 20.00% | 10 | 33.33% | 1 | 3.33% |
| Universities | | | | | | | | | | |
| Cleveland | 3 | 30.00% | 0 | 0.00% | 6 | 60.00% | 1 | 10.00% | 0 | 0.00% |
| Cincinnati | 2 | 20.00% | 1 | 10.00% | 5 | 50.00% | 0 | 0.00% | 2 | 20.00% |
| Hospitals | | | | | | | | | | |
| Cleveland | 20 | 37.04% | 1 | 1.85% | 26 | 48.15% | 2 | 3.70% | 5 | 9.26% |
| Cincinnati | 11 | 47.83% | 1 | 4.35% | 8 | 34.78% | 3 | 13.04% | 0 | 0.00% |
| Schools | | | | | | | | | | |
| Cleveland | 66 | 42.04% | 12 | 7.64% | 33 | 21.02% | 35 | 22.29% | 11 | 7.01% |
| Cincinnati | 65 | 46.43% | 12 | 8.57% | 29 | 20.71% | 26 | 18.57% | 8 | 5.71% |
| Libraries | | | | | | | | | | |
| Cleveland | 17 | 26.56% | 27 | 42.19% | 3 | 4.69% | 17 | 26.56% | 0 | 0.00% |
| Cincinnati | 20 | 34.48% | 27 | 46.55% | 2 | 3.45% | 9 | 15.52% | 0 | 0.00% |
| Charities | | | | | | | | | | |
| Cleveland | 62 | 36.47% | 27 | 15.88% | 52 | 30.59% | 25 | 14.71% | 4 | 2.35% |
| Cincinnati | 44 | 35.27% | 26 | 20.80% | 31 | 24.80% | 21 | 16.80% | 3 | 2.40% |
| All Strata | | | | | | | | | | |
| Cleveland | 196 | 36.57% | 85 | 15.86% | 140 | 26.12% | 92 | 17.16% | 23 | 4.29% |
| Cincinnati | 177 | 38.48% | 82 | 17.83% | 99 | 21.52% | 85 | 18.48% | 17 | 3.70% |

*All percentages are rounded to the nearest hundredth.

RESPONSE CODES FOR
QUESTION 2

- 001 Contact with other organizations (general)
- 002 Contact with other city governmental agencies
- 003 Contact with other county governmental agencies
- 004 Contact with other state governmental agencies
- 005 Contact with other universities
- 006 Contact with other hospitals
- 007 Contact with other schools/central school administration/computer hook-ups
- 008 Contact with other libraries; branches; main; etc.
- 009 Contact with other charities
- 010 Contact clients, customers, patrons, employees
- 011 Call Court Personnel
- 012 Hiring of employees
- 013 Appointments (general)
- 014 Make medical appointments
- 015 Make appointments for intake interviews
- 016 Membership recruitment
- 017 Supplies, resources, purchasing orders
- 018 Information (exchanged, acquired, sought)
- 019 Public relations
- 020 Solicitation, Fund raising
- 021 Surveys
- 022 Personal calls
- 023 Arranging or coordinating meetings or programs or services
- 024 Voter registration
- 025 Contact Counselors
- 026 Contact parents
- 027 Deal with volunteers
- 028 Job placements/job training
- 029 Scheduling
- 030 Check on absences
- 031 Civil defense/keeping track of communities
- 032 Clientele use (students, partons, patients, residents)
- 033 Service (general)
- 034 Acquiring books
- 035 Reserving, holding books; notify patrons re: availability of reserved/held books
- 036 Monitoring book returns, fines, overdue notices
- 037 Calls relating to billing, accounts, collections, payrolls
- 038 General business calls
- 039 Placement of clients into treatment centers, care facilities, group homes
- 040 Referrals
- 041 Emergencies (general)

RESPONSE CONSOLIDATION CODE

- Contact Clients, Patients, Customers, or Employees - 10,12,16,19,24,25,26,27, 28,32,36,39
- Seeking, Acquiring, or Exchanging Information - 11,18,20,21,30,31,34,35,40
- General Business Calls - 13,14,15,17,23,29,33,37,38
- 997 Other Contact with other Organizations - 1,2,3,4,5,6,7,8,9
- 998 DK Other - 22,41,997
- 999 MD/NA

Question 2a: What is the main function of your organization?

| Strata by City | Health Care | | Service for Special Groups | | Referrals and Information | | Community Services | | Social Services | | Education Schools, Training | | Other | |
|----------------------|-------------|---------|-------------------------------|--------|------------------------------|--------|-----------------------|--------|--------------------|--------|--------------------------------|---------|-------|--------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government | | | | | | | | | | | | | | |
| Cleveland | 3 | 10.00% | 3 | 10.00% | 3 | 10.00% | 10 | 33.33% | 3 | 10.00% | 1 | 3.33% | 7 | 23.33% |
| Cincinnati | 6 | 13.64% | 0 | 0.00% | 5 | 11.36% | 19 | 43.18% | 4 | 9.09% | 1 | 2.27% | 9 | 20.45% |
| State Government | | | | | | | | | | | | | | |
| Cleveland | 2 | 14.29% | 1 | 7.14% | 0 | 0.00% | 2 | 14.29% | 6 | 42.86% | 2 | 14.29% | 1 | 7.14% |
| Cincinnati | 2 | 10.53% | 0 | 0.00% | 1 | 5.26% | 2 | 10.53% | 8 | 42.11% | 3 | 15.79% | 3 | 15.79% |
| Universities | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 5 | 100.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 1 | 16.67% | 0 | 0.00% | 0 | 0.00% | 5 | 83.33% | 0 | 0.00% |
| Hospitals | | | | | | | | | | | | | | |
| Cleveland | 27 | 93.10% | 0 | 0.00% | 0 | 0.00% | 1 | 3.45% | 1 | 3.45% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 12 | 100.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Schools | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 1 | 1.19% | 1 | 1.19% | 4 | 4.76% | 0 | 0.00% | 78 | 92.86% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 1 | 1.39% | 1 | 1.39% | 0 | 0.00% | 70 | 97.22% | 0 | 0.00% |
| Libraries | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 9 | 26.47% | 25 | 73.53% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 16 | 53.33% | 14 | 46.67% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Charities | | | | | | | | | | | | | | |
| Cleveland | 20 | 20.41% | 28 | 28.57% | 4 | 4.08% | 10 | 10.20% | 27 | 27.55% | 7 | 7.14% | 2 | 2.04% |
| Cincinnati | 12 | 17.14% | 18 | 25.71% | 6 | 8.57% | 6 | 8.57% | 24 | 34.29% | 4 | 5.71% | 0 | 0.00% |
| All Strata | | | | | | | | | | | | | | |
| Cleveland | 52 | 17.69% | 33 | 11.22% | 17 | 5.78% | 52 | 17.69% | 37 | 12.59% | 93 | 31.63% | 10 | 3.40% |
| Cincinnati | 32 | 12.65% | 18 | 7.11% | 30 | 11.86% | 42 | 16.60% | 36 | 14.23% | 83 | 32.81% | 12 | 4.74% |

RESPONSE CODES FOR
QUESTION 2a

- 001 Youth Agency/Center
- 002 Education (non-specific)
- 003 Church school
- 004 School for the elderly
- 005 School for the handicapped or disabled
- 006 School for the retarded
- 007 Hospital/Medical/Health care (general)
- 008 Emergency Pregnancy Clinic
- 009 Hospital/Health Center for the elderly
- 010 Hospital/Health Center for the retarded
- 011 Hospital/Health Center for the handicapped or disabled
- 012 Neighborhood Center
- 013 Family Counseling
- 014 Library
- 015 Social Service (general)
- 016 Organization/Service for the elderly
- 017 Organization/Service for the retarded
- 018 Organization/Service for the handicapped or disabled
- 019 Municipal Garage
- 020 Public Service (non-specific)
- 021 Marriage Licenses
- 022 Public Assembly/Convention Center/Fairgrounds
- 023 Referrals
- 024 Employment Service and/or Training
- 025 Information Service (non-specific)
- 026 Religious programs (non-school)
- 027 Disaster Unit
- 028 Elections
- 029 Services for women
- 030 Residential treatment center
- 031 Funds for research, fund raising (general)
- 032 Car titles
- 033 Marriage Counseling
- 034 Book circulation, printed material; make library material available to patrons
- 035 Learning center
- 036 Prevention of birth defects
- 037 Placement of clients into treatment centers, care facilities, group homes
- 038 Data processing
- 039 Identify and/or treat abnormal behavior in children
- 040 Processing of clients, patrons
- 041 Rehabilitation program
- 042 Welfare organization/financial assistance/workmen's compensation
- 043 Mental health; crisis care
- 044 Coordinating Organization; umbrella organization for other community and social service organizations
- 045 Mass Transit, transportation
- 046 Audits/governmental finance
- 047 Foreign government representation
- 997 Other
- 998 DK
- 999 MD/NA

RESPONSE CODES FOR
QUESTION 2a CONT'D

- 048 Correctional institution
- 049 Legal and court proceedings/law enforcement
- 050 Taxation matters
- 051 City and neighborhood redevelopment
- 052 Communications coordination
- 053 Records, archives
- 054 Community service
- 055 Humane society

RESPONSE CONSOLIDATION CODE

- Health Care - 7,8,9,10,11,30,36,37,39,41,43
- Service for Special Groups - 1,16,17,18,29
- Referrals and Information - 23,24,25,34,50,52,53
- Community Service - 3,12,14,20,21,22,26,27,28,32,45,51,54,55
- Social Services - 13,15,33,42,44,48
- Education, Schools, Training - 2,4,5,6,31,35
- Other - 19,38,40,46,47,49,997

Question 3: Are outgoing calls necessary to accomplish the main function of your organization?

| Strata by City | Yes | | No | |
|----------------------|-------|---------|-------|--------|
| | Freq. | % | Freq. | % |
| Local Government | | | | |
| Cleveland | 29 | 96.67% | 1 | 3.33% |
| Cincinnati | 37 | 86.05% | 6 | 13.95% |
| | S | | S | |
| State Government | | | | |
| Cleveland | 13 | 100.00% | 0 | 0.00% |
| Cincinnati | 17 | 89.47% | 2 | 10.53% |
| | S | | S | |
| Universities | | | | |
| Cleveland | 5 | 100.00% | 0 | 0.00% |
| Cincinnati | 5 | 83.33% | 1 | 16.67% |
| | S | | S | |
| Hospitals | | | | |
| Cleveland | 27 | 93.10% | 2 | 6.90% |
| Cincinnati | 11 | 91.67% | 1 | 8.33% |
| | S | | S | |
| Schools | | | | |
| Cleveland | 74 | 88.10% | 10 | 11.90% |
| Cincinnati | 55 | 75.34% | 18 | 24.66% |
| | D | | D | |
| Libraries | | | | |
| Cleveland | 29 | 85.29% | 5 | 14.71% |
| Cincinnati | 25 | 80.65% | 6 | 19.35% |
| | S | | S | |
| Charities | | | | |
| Cleveland | 91 | 92.86% | 7 | 7.14% |
| Cincinnati | 67 | 94.37% | 4 | 5.63% |
| | S | | S | |
| All Strata | | | | |
| Cleveland | 268 | 91.47% | 25 | 8.53% |
| Cincinnati | 217 | 85.10% | 38 | 14.90% |
| | M | | M | |

Question 4: Approximately how many telephone sets service your organization?

| Strata by City | 1-5 | | 6-10 | | 11-25 | | 26-50 | | 51-100 | | Over 100 | |
|---|-----------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|---------------|------------------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government Cleveland Cincinnati | 0 2 S | 0.00% 4.76% | 2 6 S | 6.67% 14.29% | 4 11 S | 13.33% 26.19% | 7 12 S | 23.33% 28.57% | 8 7 S | 26.67% 16.67% | 9 4 D | 30.00% 9.52% |
| State Government Cleveland Cincinnati | 5 7 S | 38.46% 36.84% | 2 4 S | 15.38% 21.05% | 0 3 S | 0.00% 15.79% | 1 4 S | 7.69% 21.05% | 0 1 S | 0.00% 5.26% | 5 0 D | 38.46% 0.00% |
| Universities Cleveland Cincinnati | 0 0 S | 0.00% 0.00% | 0 1 S | 0.00% 16.67% | 1 0 S | 20.00% 0.00% | 0 0 S | 0.00% 0.00% | 1 1 S | 20.00% 16.67% | 3 4 S | 60.00% 66.67% |
| Hospitals Cleveland Cincinnati | 0 0 S | 0.00% 0.00% | 0 1 S | 0.00% 8.33% | 0 0 S | 0.00% 0.00% | 4 0 S | 13.79% 0.00% | 3 0 S | 10.34% 0.00% | 22 11 S | 75.86% 91.67% |
| Schools Cleveland Cincinnati | 58 40 M | 69.05% 54.79% | 9 14 S | 10.71% 19.18% | 9 14 S | 10.71% 19.18% | 6 3 S | 7.14% 4.11% | 1 1 S | 1.19% 1.37% | 1 1 S | 1.19% 1.37% |
| Libraries Cleveland Cincinnati | 23 29 D | 67.65% 93.55% | 8 2 D | 23.53% 6.45% | 2 0 S | 5.88% 0.00% | 1 0 S | 2.94% 0.00% | 0 0 S | 0.00% 0.00% | 0 0 S | 0.00% 0.00% |
| Charities Cleveland Cincinnati | 38 30 S | 39.58% 42.25% | 21 15 S | 21.88% 21.13% | 17 13 S | 17.71% 18.31% | 10 8 S | 10.42% 11.27% | 7 4 S | 7.29% 5.63% | 3 1 S | 3.13% 1.41% |
| All Strata Cleveland Cincinnati | 124 108 S | 42.61% 42.52% | 42 43 S | 14.43% 16.93% | 33 41 D | 11.34% 16.14% | 29 27 S | 9.97% 10.63% | 20 14 S | 6.87% 5.51% | 43 21 D | 14.78% 8.27% |

Question 5: Approximately how many telephone lines service your organization?

| Strata by City | 1 | | 2 | | 3 | | 4 | | 5-7 | | 8-10 | | More than 10 | |
|---|----------|------------------|----------|------------------|----------|------------------|----------|------------------|----------|------------------|----------|-----------------|--------------|------------------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government Cleveland Cincinnati | 1 0 | 3.57% 0.00% | 0 1 | 0.00% 2.44% | 1 3 | 3.57% 7.32% | 1 3 | 3.57% 7.32% | 2 7 | 7.14% 17.07% | 2 3 | 7.14% 7.32% | 21 24 | 75.00% 58.54% |
| State Government Cleveland Cincinnati | 2 2 | 15.38% 10.53% | 2 3 | 15.38% 15.79% | 1 1 | 7.69% 5.26% | 0 0 | 0.00% 0.00% | 1 6 | 7.69% 31.58% | 1 2 | 7.69% 10.53% | 6 5 | 46.15% 26.32% |
| Universities Cleveland Cincinnati | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 1 | 0.00% 16.67% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 2 0 | 40.00% 0.00% | 3 5 | 60.00% 83.33% |
| Hospitals Cleveland Cincinnati | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 2 0 | 7.14% 0.00% | 3 1 | 10.71% 8.33% | 23 11 | 82.14% 91.67% |
| Schools Cleveland Cincinnati | 44 9 | 53.01% 12.16% | 14 19 | 16.87% 25.68% | 11 19 | 13.25% 25.68% | 2 9 | 2.41% 12.16% | 8 10 | 9.64% 13.51% | 2 5 | 2.41% 6.76% | 2 3 | 2.41% 4.05% |
| Libraries Cleveland Cincinnati | 14 26 | 41.18% 83.87% | 9 2 | 26.47% 6.45% | 7 2 | 20.59% 6.45% | 2 1 | 5.88% 3.23% | 0 0 | 0.00% 0.00% | 1 0 | 2.94% 0.00% | 1 0 | 2.94% 0.00% |
| Charities Cleveland Cincinnati | 10 10 | 10.20% 14.08% | 10 12 | 10.20% 16.90% | 17 14 | 17.35% 19.72% | 20 9 | 20.41% 12.68% | 21 11 | 21.43% 15.49% | 7 2 | 7.14% 2.82% | 13 13 | 13.27% 18.31% |
| All Strata Cleveland Cincinnati | 71 47 | 24.57% 18.50% | 35 37 | 12.11% 14.57% | 37 40 | 12.80% 15.75% | 25 22 | 8.65% 8.66% | 34 34 | 11.76% 13.39% | 18 13 | 6.23% 5.12% | 69 61 | 23.88% 24.02% |

Question 6: About how many local calls are placed from your organization in an average day, week or month, whichever is easiest to estimate?

| | Less than 299 calls/month | | 300 to 599 calls/month | | 600 to 899 calls/month | | 900 to 1999 calls/month | | 2000 to 4000 calls/month | | Greater than 4000 calls/month | | Other | |
|---|---------------------------|------------------|------------------------|------------------|------------------------|------------------|-------------------------|------------------|--------------------------|------------------|-------------------------------|------------------|-------------|-----------------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government Cleveland Cincinnati | 1 0 S | 4.35% 0.00% | 2 3 S | 8.70% 8.82% | 0 4 S | 0.00% 11.76% | 3 7 S | 13.04% 20.59% | 8 15 M | 34.78% 44.12% | 9 5 M | 39.13% 14.70% | 0 0 S | 0.00% 0.00% |
| State Government Cleveland Cincinnati | 0 0 S | 0.00% 0.00% | 2 3 S | 14.29% 20.00% | 3 2 S | 21.43% 13.34% | 2 4 S | 14.29% 26.67% | 3 3 S | 21.43% 20.00% | 4 3 S | 28.57% 20.00% | 0 0 S | 0.00% 0.00% |
| Universities Cleveland Cincinnati | 0 0 S | 0.00% 0.00% | 0 0 S | 0.00% 0.00% | 0 0 S | 0.00% 0.00% | 3 1 S | 60.00% 20.00% | 0 0 S | 0.00% 0.00% | 2 3 S | 40.00% 60.00% | 0 1 S | 0.00% 20.00% |
| Hospitals Cleveland Cincinnati | 0 0 S | 0.00% 0.00% | 0 0 S | 0.00% 0.00% | 2 1 S | 7.70% 20.00% | 1 0 S | 3.85% 0.00% | 3 0 S | 11.54% 0.00% | 19 4 S | 73.07% 80.00% | 1 0 S | 3.85% 0.00% |
| Schools Cleveland Cincinnati | 7 2 S | 9.21% 3.08% | 12 15 S | 15.79% 23.08% | 20 16 S | 26.32% 24.62% | 20 17 S | 26.32% 26.16% | 13 8 S | 17.10% 12.30% | 3 7 S | 3.95% 10.77% | 1 0 S | 1.32% 0.00% |
| Libraries Cleveland Cincinnati | 7 5 S | 21.88% 17.24% | 10 12 S | 31.26% 41.38% | 6 7 S | 18.75% 24.14% | 7 4 S | 21.88% 13.80% | 1 1 S | 3.13% 3.45% | 1 0 S | 3.13% 0.00% | 0 0 S | 0.00% 0.00% |
| Charities Cleveland Cincinnati | 11 7 S | 13.58% 11.67% | 21 6 D | 25.92% 10.00% | 15 12 S | 18.52% 20.00% | 22 18 S | 27.16% 30.00% | 4 9 D | 4.93% 15.00% | 8 8 S | 9.87% 13.33% | 0 0 | 0.00% 0.00% |
| All Strata Cleveland Cincinnati | 26 14 M | 10.11% 6.57% | 47 39 S | 18.29% 18.31% | 46 42 S | 17.89% 19.72% | 58 51 S | 22.57% 23.94% | 32 36 M | 12.45% 16.90% | 46 30 M | 17.91% 14.09% | 2 1 S | 0.78% 0.47% |

RESPONSE CODES FOR
QUESTION 6

| | | |
|----|-----------|-----------------|
| 01 | less than | 100/month |
| 02 | | 100-299/month |
| 03 | | 300-399/month |
| 04 | | 400-599/month |
| 05 | | 600-749/month |
| 06 | | 750-899/month |
| 07 | | 900-999/month |
| 08 | | 1000-1999/month |
| 09 | | 2000-2999/month |
| 10 | | 3000-3999/month |
| 11 | | 4000-4999/month |
| 12 | | 5000-5999/month |
| 13 | more than | 6000/month |

RESPONSE CONSOLIDATION CODE

Less than 300 calls/month - 1,2
300 to 599 calls/month - 3,4
600 to 899 calls/month - 5,6
900 to 1999 calls/month - 7,8
2000 to 4000 calls/month - 9,10
Greater than 4000 calls/month - 11,12,13
Other - 997

97 Other
98 DK
99 MD/NA

Question 7: Approximately what percentage of your organization's phone calls are incoming and what percentage are outgoing?

| Strata by City | 0-20% Incoming | | 21-40% Incoming | | 41-60% Incoming | | 61-80% Incoming | | 81-100% Incoming | |
|---|-------------------|----------------|--------------------|------------------|--------------------|------------------|--------------------|------------------|---------------------|-----------------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government Cleveland Cincinnati | 1 0 | 3.70% 0.00% | 3 1 | 11.11% 2.56% | 14 17 | 51.85% 43.59% | 8 17 | 29.63% 43.59% | 1 4 | 3.70% 10.26% |
| State Government Cleveland Cincinnati | 0 0 | 0.00% 0.00% | 1 3 | 8.33% 17.65% | 6 9 | 50.00% 52.94% | 3 5 | 25.00% 29.41% | 2 0 | 16.67% 0.00% |
| Universities Cleveland Cincinnati | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 1 4 | 33.33% 80.00% | 2 1 | 66.67% 20.00% | 0 0 | 0.00% 0.00% |
| Hospitals Cleveland Cincinnati | 0 0 | 0.00% 0.00% | 4 0 | 21.05% 0.00% | 10 3 | 52.63% 50.00% | 3 3 | 15.79% 50.00% | 2 0 | 10.53% 0.00% |
| Schools Cleveland Cincinnati | 1 1 | 1.23% 1.49% | 7 3 | 8.64% 4.48% | 48 36 | 59.26% 53.73% | 22 22 | 27.16% 32.84% | 3 5 | 3.70% 7.46% |
| Libraries Cleveland Cincinnati | 0 0 | 0.00% 0.00% | 5 3 | 16.67% 10.34% | 9 10 | 30.00% 34.48% | 16 11 | 53.33% 37.93% | 0 5 | 0.00% 17.24% |
| Charities Cleveland Cincinnati | 4 3 | 4.82% 4.48% | 13 13 | 15.66% 19.40% | 37 28 | 44.58% 41.79% | 21 22 | 25.30% 32.84% | 8 1 | 9.64% 1.49% |
| All Strata Cleveland Cincinnati | 6 4 | 2.35% 1.74% | 33 23 | 12.94% 10.00% | 125 107 | 49.02% 46.52% | 75 81 | 29.41% 35.22% | 16 15 | 6.27% 6.52% |

Question 8: Would the quality of service your organization provides decline if the price of a telephone call increased?

| Strata by City | Yes | | No | |
|----------------------|-------|--------|-------|---------|
| | Freq. | % | Freq. | % |
| Local Government | 7 | 24.14% | 22 | 75.86% |
| Cleveland | 10 | 23.81% | 32 | 76.19% |
| Cincinnati | | | | |
| | | S | | S |
| State Government | 3 | 23.08% | 10 | 76.92% |
| Cleveland | 5 | 29.41% | 12 | 70.59% |
| Cincinnati | | | | |
| | | S | | S |
| Universities | 0 | 0.00% | 5 | 100.00% |
| Cleveland | 4 | 66.67% | 2 | 33.33% |
| Cincinnati | | | | |
| | | D | | D |
| Hospitals | 1 | 3.70% | 26 | 96.30% |
| Cleveland | 2 | 20.00% | 8 | 80.00% |
| Cincinnati | | | | |
| | | S | | S |
| Schools | 20 | 27.78% | 52 | 72.22% |
| Cleveland | 22 | 32.35% | 46 | 67.65% |
| Cincinnati | | | | |
| | | S | | S |
| Libraries | 14 | 42.28% | 15 | 51.72% |
| Cleveland | 26 | 89.66% | 3 | 10.34% |
| Cincinnati | | | | |
| | | D | | D |
| Charities | 43 | 47.25% | 48 | 52.75% |
| Cleveland | 36 | 55.38% | 29 | 44.62% |
| Cincinnati | | | | |
| | | S | | S |
| All Strata | 88 | 33.08% | 178 | 66.92% |
| Cleveland | 105 | 44.30% | 132 | 55.70% |
| Cincinnati | | | | |
| | | D | | D |

Question 9: Approximately what percentage of your organization's local calls are personal and what percentage are business?

| Strata by City | 0-20% Personal | | 21-40% Personal | | 41-60% Personal | | 61-80% Personal | | 81-100% Personal | | Other | |
|---|-------------------|-------------------|--------------------|-----------------|--------------------|-----------------|--------------------|----------------|---------------------|----------------|-------------|----------------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government Cleveland Cincinnati | 23 35 S | 88.46% 94.59% | 0 1 S | 0.00% 2.70% | 3 1 S | 11.54% 2.70% | 0 0 S | 0.00% 0.00% | 0 0 S | 0.00% 0.00% | 0 0 S | 0.00% 0.00% |
| State Government Cleveland Cincinnati | 11 15 S | 84.62% 93.75% | 2 1 S | 15.38% 6.25% | 0 0 S | 0.00% | 0 0 S | 0.00% 0.00% | 0 0 S | 0.00% 0.00% | 0 0 S | 0.00% 0.00% |
| Universities Cleveland Cincinnati | 4 3 S | 100.00% 60.00% | 0 2 S | 0.00% 40.00% | 0 0 S | 0.00% 0.00% | 0 0 S | 0.00% 0.00% | 0 0 S | 0.00% 0.00% | 0 0 S | 0.00% 0.00% |
| Hospitals Cleveland Cincinnati | 15 5 S | 65.22% 83.33% | 4 0 S | 17.39% 0.00% | 2 1 S | 8.70% 16.67% | 1 0 S | 4.35% 0.00% | 0 0 S | 0.00% 0.00% | 1 0 S | 4.35% 0.00% |
| Schools Cleveland Cincinnati | 74 63 S | 90.24% 92.65% | 6 3 S | 7.32% 4.41% | 1 2 S | 1.22% 2.94% | 1 0 S | 1.22% 0.00% | 0 0 S | 0.00% 0.00% | 0 0 S | 0.00% 0.00% |
| Libraries Cleveland Cincinnati | 28 29 S | 87.50% 96.67% | 2 0 S | 6.25% 0.00% | 2 1 S | 6.25% 3.33% | 0 0 S | 0.00% 0.00% | 0 0 S | 0.00% 0.00% | 0 0 S | 0.00% 0.00% |
| Charities Cleveland Cincinnati | 79 60 S | 92.94% 89.55% | 3 5 S | 3.53% 7.46% | 2 0 S | 2.35% 0.00% | 0 0 S | 0.00% 0.00% | 0 2 S | 0.00% 2.99% | 1 0 S | 1.18% 0.00% |
| All Strata Cleveland Cincinnati | 234 210 S | 88.30% 91.70% | 17 12 S | 6.42% 5.24% | 10 5 S | 3.77% 2.18% | 2 0 S | .75% 0.00% | 0 2 S | 0.00% .87% | 2 0 S | .75% 0.00% |

Question 10: Does your organization keep records on telephone usage?

| Strata by City | Yes | | No | |
|----------------------|-------|--------|-------|--------|
| | Freq. | % | Freq. | % |
| Local Government | 12 | 41.38% | 17 | 58.62% |
| Cleveland | 20 | 45.45% | 24 | 54.55% |
| Cincinnati | S | | S | |
| State Government | 7 | 50.00% | 7 | 50.00% |
| Cleveland | 9 | 47.37% | 10 | 52.63% |
| Cincinnati | S | | S | |
| Universities | 4 | 80.00% | 1 | 20.00% |
| Cleveland | 4 | 66.67% | 2 | 33.33% |
| Cincinnati | S | | S | |
| Hospitals | 22 | 75.86% | 7 | 24.14% |
| Cleveland | 8 | 66.67% | 4 | 33.33% |
| Cincinnati | S | | S | |
| Schools | 13 | 15.66% | 70 | 84.34% |
| Cleveland | 17 | 23.29% | 56 | 76.71% |
| Cincinnati | S | | S | |
| Libraries | 18 | 54.55% | 15 | 45.45% |
| Cleveland | 27 | 87.10% | 4 | 12.90% |
| Cincinnati | D | | D | |
| Charities | 42 | 43.30% | 55 | 56.70% |
| Cleveland | 29 | 40.85% | 42 | 59.15% |
| Cincinnati | S | | S | |
| All Strata | 118 | 40.69% | 172 | 59.31% |
| Cleveland | 114 | 44.53% | 142 | 55.47% |
| Cincinnati | S | | S | |

Question 11: Are there any policies governing the use of telephones in your organization?

| Strata by City | Personal Calls | | Call Restrictions | | General Policies | | Other | |
|----------------------|----------------|--------|-------------------|--------|------------------|--------|-------|--------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government | | | | | | | | |
| Cleveland | 11 | 28.21% | 5 | 12.82% | 23 | 58.97% | 0 | 0.00% |
| Cincinnati | 27 | 43.55% | 8 | 12.90% | 25 | 40.32% | 2 | 3.23% |
| State Government | | | | | | | | |
| Cleveland | 8 | 34.78% | 5 | 21.74% | 9 | 39.13% | 1 | 4.35% |
| Cincinnati | 11 | 34.38% | 9 | 28.13% | 11 | 34.38% | 1 | 3.13% |
| Universities | | | | | | | | |
| Cleveland | 3 | 50.00% | 0 | 0.00% | 3 | 50.00% | 0 | 0.00% |
| Cincinnati | 4 | 40.00% | 2 | 20.00% | 3 | 30.00% | 1 | 10.00% |
| Hospitals | | | | | | | | |
| Cleveland | 23 | 50.00% | 4 | 8.70% | 19 | 41.30% | 0 | 0.00% |
| Cincinnati | 8 | 50.00% | 2 | 12.50% | 5 | 31.25% | 1 | 6.25% |
| Schools | | | | | | | | |
| Cleveland | 54 | 47.79% | 23 | 20.35% | 36 | 31.85% | 0 | 0.00% |
| Cincinnati | 43 | 43.43% | 20 | 20.20% | 36 | 36.36% | 0 | 0.00% |
| Libraries | | | | | | | | |
| Cleveland | 23 | 48.94% | 8 | 17.02% | 14 | 29.79% | 2 | 4.26% |
| Cincinnati | 15 | 35.71% | 13 | 30.95% | 14 | 33.33% | 0 | 0.00% |
| Charities | | | | | | | | |
| Cleveland | 48 | 36.09% | 19 | 14.28% | 64 | 48.12% | 2 | 1.50% |
| Cincinnati | 23 | 25.27% | 19 | 20.88% | 47 | 51.65% | 2 | 2.20% |
| All Strata | | | | | | | | |
| Cleveland | 170 | 41.77% | 64 | 15.72% | 168 | 41.28% | 5 | 1.23% |
| Cincinnati | 131 | 37.22% | 73 | 20.74% | 141 | 40.06% | 7 | 1.99% |

RESPONSE CODE FOR
QUESTION 11

- 001 # of phones determined by size of school
- 002 Keep phone lines free for incoming calls
- 003 Calls limited to city business
- 004 Long distance personal calls must be listed
- 005 Limit personal calls
- 006 Long distance calls must be authorized (by Dept. Head)long distance for emergencies only
- 007 Time limit for non-employees
- 008 Personal calls on lunch hour/free time/after work, school, etc.
- 009 Personal calls are limited to emergencies
- 010 Student calls only for emergency, patron calls only for emergency
- 011 Personal calls prohibited
- 012 Limited time on calls
- 013 Limited number of outgoing phones for employees
- 014 No calls permitted for students or residents, patrons or clients
- 015 (Faculty) use with discretion
- 016 Calls must be forwarded to secretary
- 017 Slip for long distance calls must be filled out; log, list, record long distance
- 018 Personal long distance calls are prohibited
- 019 No 3rd party calls may be billed to the office
- 020 Patrons are not charged for local calls
- 021 Discourage personal calls
- 022 Long distance calls are made during less expensive time slots
- 023 Pay for personal calls(employees, clients, non-staff)and/or long dist. pers. calls
- 024 Use pay phone for personal calls
- 025 Limited number of long distance lines
- 026 Incoming calls have priority
- 027 No long distance calls
- 028 No policies
- 029 Limit calls
- 030 Log calls (non-specific)
- 031 Limit directory assistance calls
- 032 Personal calls are allowed
- 033 Paging policies
- 034 Policies vary according to staff position
- 035 Approval needed for new phone installation
- 036 Switchboard/phones must be covered at all times
- 037 No incoming/outgoing calls; restricted hours for calls
- 038 No collect calls accepted
- 039 Limited lines for patients, clients, patrons, students, personals calls, emergency calls
- 040 Approval needed for personal calls

RESPONSE CONSOLIDATION CODE

Personal Calls - 5,8,9,10,11,21,23,24,32,40
Call Restrictions - 2,3,7,12,13,14,15,19,25,29,31,37,39
General Policies - 1,4,6,16,17,18,20,22,26,27,28,30,33,34,35,36,38
Other - 997

- 997 Other
- 998 DK
- 999 MD/NA

Question 12: Who makes the telephone policies?

| Strata by City | Board of Directors | | Chief Executives | | Supervisors | | Other | |
|----------------------|-----------------------|--------|---------------------|--------|-------------|--------|-------|-------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government | | | | | | | | |
| Cleveland | 1 | 5.56% | 15 | 83.33% | 2 | 11.11% | 0 | 0.00% |
| Cincinnati | 9 | 28.13% | 20 | 62.50% | 2 | 6.25% | 1 | 3.13% |
| State Government | | | | | | | | |
| Cleveland | 3 | 23.08% | 8 | 61.54% | 2 | 15.38% | 0 | 0.00% |
| Cincinnati | 7 | 43.75% | 9 | 56.25% | 0 | 0.00% | 0 | 0.00% |
| Universities | | | | | | | | |
| Cleveland | 1 | 25.00% | 3 | 75.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 3 | 50.00% | 3 | 50.00% | 0 | 0.00% | 0 | 0.00% |
| Hospitals | | | | | | | | |
| Cleveland | 15 | 55.56% | 10 | 37.04% | 1 | 3.70% | 1 | 3.70% |
| Cincinnati | 5 | 45.45% | 6 | 54.55% | 0 | 0.00% | 0 | 0.00% |
| Schools | | | | | | | | |
| Cleveland | 21 | 33.87% | 37 | 59.68% | 4 | 6.45% | 0 | 0.00% |
| Cincinnati | 17 | 29.82% | 35 | 61.40% | 5 | 8.77% | 0 | 0.00% |
| Libraries | | | | | | | | |
| Cleveland | 16 | 59.26% | 9 | 33.33% | 2 | 7.41% | 0 | 0.00% |
| Cincinnati | 19 | 82.61% | 3 | 13.04% | 0 | 0.00% | 1 | 4.35% |
| Charities | | | | | | | | |
| Cleveland | 11 | 16.92% | 46 | 70.77% | 7 | 10.77% | 1 | 1.54% |
| Cincinnati | 12 | 26.09% | 31 | 67.39% | 1 | 2.17% | 2 | 4.35% |
| All Strata | | | | | | | | |
| Cleveland | 68 | 31.48% | 128 | 59.26% | 18 | 8.33% | 2 | .93% |
| Cincinnati | 72 | 37.70% | 107 | 56.02% | 8 | 4.19% | 4 | 2.09% |

RESPONSE CODES FOR
QUESTION 12

- 001 Bd. of Directors
- 002 Garage policy
- 003 Personnel Manual; Bylaws
- 004 Administration(city, county, state or other; general)
- 005 Supervisor
- 006 Bldg. Manager
- 007 Exec. Director of Area Office
- 008 School Board
- 009 Principal
- 010 Director makes/Board adopts
- 011 Communications officer
- 012 Office staff
- 013 City of Cincinnati
- 014 Trustees of Cleveland Library/Cincinnati Library
- 015 Superintendent
- 016 Civil Service
- 017 Director/Head/Administrator/Executive Director
- 018 Main library

RESPONSE CONSOLIDATION CODE

Board of Directors - 1,2,3,4,8,13,14,16,18
Chief Executives - 7,9,10,11,15,17
Supervisors - 5,6,12
Other - 997

- 997 Other
- 998 DK
- 999 MD/NA

Question 13: Other than the telephone, what modes of communication does your organization use?

| Strata by City | Electronic | | Mail | | Personal | | Media | | Inhouse Message Delivery | | None | | Other | |
|---|------------|------------------|--------------|------------------|-------------|------------------|--------------|------------------|-----------------------------|------------------|----------|----------------|----------|----------------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| | | | | | | | | | | | | | | |
| Local Government Cleveland Cincinnati | 9 17 S | 17.65% 24.29% | 21 23 S | 41.18% 32.86% | 8 15 S | 15.69% 21.43% | 9 9 S | 17.65% 12.86% | 3 4 S | 5.88% 5.71% | 1 2 S | 1.96% 2.86% | 0 0 S | 0.00% 0.00% |
| State Government Cleveland Cincinnati | 5 3 S | 22.73% 9.09% | 10 14 S | 45.45% 42.42% | 4 11 M | 18.18% 33.33% | 3 3 S | 13.64% 9.09% | 0 1 S | 0.00% 3.03% | 0 0 S | 0.00% 0.00% | 0 1 S | 0.00% 3.03% |
| Universities Cleveland Cincinnati | 3 2 S | 25.00% 18.18% | 4 4 S | 33.33% 36.36% | 1 1 S | 8.33% 9.09% | 2 3 S | 16.67% 27.27% | 2 1 S | 16.67% 9.09% | 0 0 S | 0.00% 0.00% | 0 0 S | 0.00% 0.00% |
| Hospitals Cleveland Cincinnati | 34 18 S | 59.65% 62.06% | 16 6 S | 28.07% 20.69% | 1 2 S | 1.75% 6.90% | 1 1 S | 1.75% 3.45% | 3 2 S | 5.26% 6.90% | 1 0 S | 1.75% 0.00% | 1 0 S | 1.75% 0.00% |
| Schools Cleveland Cincinnati | 9 11 S | 5.56% 6.96% | 64 55 S | 39.51% 34.81% | 21 23 S | 12.96% 14.56% | 33 49 S | 20.37% 31.01% | 32 20 S | 19.75% 12.66% | 3 0 S | 1.85% 0.00% | 0 0 S | 0.00% 0.00% |
| Libraries Cleveland Cincinnati | 1 0 S | 1.41% 0.00% | 28 26 S | 39.44% 50.00% | 16 16 S | 22.54% 30.77% | 20 6 D | 28.17% 11.54% | 6 3 S | 8.45% 5.77% | 0 1 S | 0.00% 1.92% | 0 0 S | 0.00% 0.00% |
| Charities Cleveland Cincinnati | 5 1 S | 2.46% .74% | 77 53 S | 37.93% 38.97% | 46 36 S | 22.66% 26.47% | 67 34 S | 33.00% 25.00% | 6 8 S | 2.96% 5.88% | 2 2 S | .99% 1.47% | 0 2 S | 0.00% 1.47% |
| All Strata Cleveland Cincinnati | 66 52 S | 11.42% 10.63% | 220 181 S | 38.06% 37.01% | 97 104 M | 16.78% 21.27% | 135 105 S | 23.36% 21.47% | 52 39 S | 9.00% 7.98% | 7 5 S | 1.21% 1.02% | 1 3 S | .17% .61% |

RESPONSE CODES FOR
QUESTION 13

| | | |
|----|---------------------------------------|--|
| 01 | News media; general, public relations | |
| 02 | Newspaper | |
| 03 | Radio | |
| 04 | TV/Closed circuit TV | |
| 05 | Metrobus | |
| 06 | Intercom | |
| 07 | Two-way radio | |
| 08 | Mail (general) | |
| 09 | Newsletter, bulletin | |
| 10 | Monthly Bulletin | |
| 11 | Inter-office mail | |
| 12 | Telex | |
| 13 | Personal contact; meetings | |
| 14 | Bulletin Board/Posted notices | |
| 15 | Weekly list in newspaper | Electric - 6,7,12,16,19,20,26,27,30,31,40, 43,45,48 |
| 16 | P.A. system | Mail - 8,32,33,39,44 |
| 17 | Church bulletins | Personal - 13,22,28,34,36,37,41 |
| 18 | Notices to parents | Media - 1,2,3,4,5,9,10,15,17,24,25,29,35, 38,46,47 |
| 19 | Civil defense monitor | In-house Message Delivery - 11,14,18,21,23 |
| 20 | Bell system pagers | None - 42 |
| 21 | Type-written reports | Other - 97 |
| 22 | Physical presence at court visits | |
| 23 | Memoranda/memo | |
| 24 | Public service announcements | |
| 25 | News releases; publicity | |
| 26 | Data communications | |
| 27 | Computer terminal/CRT | |
| 28 | Trucks, cars | |
| 29 | Booklets | |
| 30 | CB/Ham radio | |
| 31 | Teletype | |
| 32 | Bulk rate permit | |
| 33 | 1st class mail | |
| 34 | Verbal (non-specific) | |
| 35 | Stores | |
| 36 | Speakers | |
| 37 | Door knocking | |
| 38 | Flyers | |
| 39 | UPS | |
| 40 | Centrex | |
| 41 | In-service training, workshops | |
| 42 | None | |
| 43 | Beepers | |
| 44 | Courier service | |
| 45 | Tapes, record players | |
| 46 | Billboard | |
| 47 | Periodicals; Quarterly Magazine | |
| 48 | Teleaudiograph | |
| 97 | Other | |
| 98 | DK | |
| 99 | MD/NA | |

Question 14: In those situations where either the telephone or another mode is equally appropriate, which is used most often?

| Strata by City | Telephone | | Mail | | Personal | | Media | | Electronic | | Other | |
|---|-----------------|-------------------|---------------|-----------------|---------------|------------------|---------------|-----------------|-------------|-----------------|---------------|-----------------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government Cleveland Cincinnati | 22 29 S | 62.86% 65.91% | 5 4 S | 14.29% 9.09% | 2 2 S | 5.71% 4.55% | 2 4 S | 5.71% 9.09% | 2 1 S | 5.71% 2.27% | 2 4 S | 5.71% 9.09% |
| State Government Cleveland Cincinnati | 10 15 S | 58.82% 68.18% | 3 2 S | 17.65% 9.09% | 3 1 S | 17.65% 4.55% | 1 2 S | 5.88% 9.09% | 0 2 S | 0.00% 9.09% | 0 0 S | 0.00% 0.00% |
| Universities Cleveland Cincinnati | 3 5 S | 75.00% 71.43% | 0 1 S | 0.00% 14.29% | 0 0 S | 0.00% 0.00% | 0 1 S | 0.00% 14.29% | 0 0 S | 0.00% 0.00% | 1 0 S | 25.00% 0.00% |
| Hospitals Cleveland Cincinnati | 24 12 S | 80.00% 100.00% | 2 0 S | 6.67% 0.00% | 0 0 S | 0.00% 0.00% | 0 0 S | 0.00% 0.00% | 3 0 S | 10.00% 0.00% | 1 0 S | 3.33% 0.00% |
| Schools Cleveland Cincinnati | 63 51 S | 75.90% 69.86% | 11 6 S | 13.25% 8.22% | 2 3 S | 2.41% 4.11% | 5 5 S | 6.02% 6.85% | 0 1 S | 0.00% 1.37% | 2 7 S | 2.41% 9.59% |
| Libraries Cleveland Cincinnati | 22 22 S | 64.71% 59.46% | 0 7 D | 0.00% 18.92% | 9 6 S | 26.47% 16.22% | 2 0 S | 5.88% 0.00% | 0 0 S | 0.00% 0.00% | 1 2 S | 2.94% 5.41% |
| Charities Cleveland Cincinnati | 72 46 S | 77.42% 68.66% | 6 8 S | 6.45% 11.94% | 7 4 S | 7.53% 5.97% | 2 3 S | 2.15% 4.48% | 0 0 S | 0.00% 0.00% | 6 6 S | 6.45% 8.96% |
| All Strata Cleveland Cincinnati | 216 180 S | 72.97% 68.70% | 27 28 S | 9.12% 10.69% | 23 16 S | 7.77% 6.11% | 12 15 S | 4.05% 5.73% | 5 4 S | 1.69% 1.53% | 13 19 S | 4.39% 7.25% |

RESPONSE CODES FOR
QUESTION 14

- 01 phone
- 02 written communication (non-specific)
- 03 flyers, bulletins
- 04 notices
- 05 reports
- 06 50% split: phone & (anything else)
- 07 radio
- 08 mail
- 09 personal contact
- 10 News media
- 11 Trucks/cars
- 12 Teletype
- 13 PA system
- 14 Computer system
- 15 TV
- 16 Teleaudiograph

RESPONSE CONSOLIDATION CODE

- Phone - 1
- Mail - 2,5,8
- Personal - 9,11
- Media - 3,4,7,10,15
- Electronic - 12,13,14,16
- Other - 6,97

- 97 Other
- 98 DK
- 99 MD/NA

Question 15: Do most of the contacts your organization has with the public take the form of incoming phone calls?

| Strata by City | Yes | | No | |
|----------------------|-------|--------|-------|--------|
| | Freq. | % | Freq. | % |
| Local Government | 18 | 66.67% | 9 | 33.33% |
| Cleveland | 34 | 79.07% | 9 | 20.93% |
| Cincinnati | S | | S | |
| State Government | 11 | 78.57% | 3 | 21.43% |
| Cleveland | 10 | 52.63% | 9 | 47.37% |
| Cincinnati | S | | S | |
| Universities | 2 | 66.67% | 1 | 33.33% |
| Cleveland | 5 | 83.33% | 1 | 16.67% |
| Cincinnati | S | | S | |
| Hospitals | 18 | 66.67% | 9 | 33.33% |
| Cleveland | 7 | 58.33% | 5 | 41.67% |
| Cincinnati | S | | S | |
| Schools | 44 | 55.70% | 35 | 44.30% |
| Cleveland | 41 | 55.41% | 31 | 44.59% |
| Cincinnati | S | | S | |
| Libraries | 11 | 32.35% | 23 | 67.65% |
| Cleveland | 8 | 25.81% | 23 | 74.19% |
| Cincinnati | S | | S | |
| Charities | 48 | 51.61% | 45 | 48.39% |
| Cleveland | 35 | 52.24% | 32 | 47.76% |
| Cincinnati | S | | S | |
| All Strata | 152 | 54.87% | 125 | 45.13% |
| Cleveland | 140 | 55.56% | 112 | 44.44% |
| Cincinnati | S | | S | |

Question 16: If the telephone could not be used, would there be significant delays, only minor delays, or no delays in the service or benefits provided by your organization?

| Strata by City | Significant Delays | | Only Minor Delays | | No Delays | |
|----------------------|--------------------|--------|-------------------|--------|-----------|--------|
| | Freq. | % | Freq. | % | Freq. | % |
| Local Government | 26 | 86.67% | 1 | 3.33% | 3 | 10.00% |
| Cleveland | 37 | 84.09% | 5 | 11.36% | 2 | 4.55% |
| Cincinnati | S | | S | | S | |
| State Government | 12 | 85.71% | 2 | 14.29% | 0 | 0.00% |
| Cleveland | 16 | 84.21% | 3 | 15.79% | 0 | 0.00% |
| Cincinnati | S | | S | | S | |
| Universities | 4 | 80.00% | 0 | 0.00% | 1 | 20.00% |
| Cleveland | 5 | 83.33% | 1 | 16.67% | 0 | 0.00% |
| Cincinnati | S | | S | | S | |
| Hospitals | 21 | 72.41% | 7 | 24.14% | 1 | 3.45% |
| Cleveland | 7 | 58.33% | 4 | 33.33% | 1 | 8.33% |
| Cincinnati | M | | S | | S | |
| Schools | 72 | 85.71% | 11 | 13.10% | 1 | 1.19% |
| Cleveland | 56 | 76.71% | 15 | 20.55% | 2 | 2.74% |
| Cincinnati | S | | S | | S | |
| Libraries | 29 | 87.88% | 3 | 9.09% | 1 | 3.03% |
| Cleveland | 23 | 74.19% | 7 | 22.58% | 1 | 3.23% |
| Cincinnati | S | | S | | S | |
| Charities | 85 | 87.63% | 10 | 10.31% | 2 | 2.06% |
| Cleveland | 63 | 88.73% | 8 | 11.27% | 0 | 0.00% |
| Cincinnati | S | | S | | S | |
| All Strata | 249 | 85.27% | 34 | 11.64% | 9 | 3.08% |
| Cleveland | 207 | 80.86% | 43 | 16.80% | 6 | 2.34% |
| Cincinnati | S | | S | | S | |

Question 17: Does your organization use the telephone differently now than it did, say, a year ago?

| Strata by City | Yes | | No | |
|---|---------------|------------------|-----------------|-------------------|
| | Freq. | % | Freq. | % |
| Local Government Cleveland Cincinnati | 1 4 S | 3.33% 9.30% | 29 39 S | 96.67% 90.70% |
| State Government Cleveland Cincinnati | 8 6 S | 57.14% 31.58% | 6 13 S | 42.86% 68.42% |
| Universities Cleveland Cincinnati | 3 0 D | 60.00% 0.00% | 2 6 D | 40.00% 100.00% |
| Hospitals Cleveland Cincinnati | 12 4 D | 41.38% 33.33% | 17 8 D | 58.62% 66.67% |
| Schools Cleveland Cincinnati | 11 7 S | 13.25% 9.59% | 72 66 S | 86.75% 90.41% |
| Libraries Cleveland Cincinnati | 11 3 D | 32.35% 9.68% | 23 28 D | 67.65% 90.32% |
| Charities Cleveland Cincinnati | 29 20 S | 29.59% 29.85% | 69 47 S | 70.41% 70.15% |
| All Strata Cleveland Cincinnati | 75 44 D | 25.60% 17.53% | 218 207 D | 74.40% 82.47% |

Question 17a: Why did these changes in telephone usage occur?

| Strata by City | Decrease Volume of Calls | | Increase Volume of Calls | | New Communica- tion System in Service | | Increase in Business | | Policy Changes | | Increase in Number of Employees | | Economic Incentives indicated increased use of phones | | Other | |
|---|---|-----------------|-----------------------------|------------------|---|------------------|-------------------------|------------------|-----------------|------------------|---------------------------------------|-----------------|--|-----------------|----------------|-----------------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| | Local Government Cleveland Cincinnati | 0 0 | 0.00% 0.00% | 1 1 | 50.00% 25.00% | 0 2 | 0.00% 50.00% | 1 0 | 50.00% 0.00% | 0 1 | 0.00% 25.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 |
| State Government Cleveland Cincinnati | 0 1 | 0.00% 14.29% | 3 2 | 23.08% 28.57% | 5 0 | 38.46% 0.00% | 1 0 | 7.69% 0.00% | 3 2 | 23.08% 28.57% | 0 0 | 0.00% 0.00% | 1 2 | 7.69% 28.57% | 0 0 | 0.00% 0.00% |
| Universities Cleveland Cincinnati | 0 0 | 0.00% 0.00% | 1 0 | 25.00% 0.00% | 1 0 | 25.00% 0.00% | 1 0 | 25.00% 0.00% | 1 0 | 25.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% |
| Hospitals Cleveland Cincinnati | 0 0 | 0.00% 0.00% | 2 1 | 14.29% 25.00% | 5 1 | 35.71% 25.00% | 5 0 | 35.71% 0.00% | 2 0 | 14.29% 0.00% | 0 0 | 0.00% 0.00% | 0 1 | 0.00% 25.00% | 0 1 | 0.00% 25.00% |
| Schools Cleveland Cincinnati | 1 1 | 6.67% 10.00% | 8 1 | 53.33% 10.00% | 1 2 | 6.67% 20.00% | 4 4 | 26.67% 40.00% | 1 2 | 6.67% 20.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% |
| Libraries Cleveland Cincinnati | 0 0 | 0.00% 0.00% | 7 0 | 36.84% 0.00% | 0 1 | 0.00% 33.00% | 8 0 | 42.11% 0.00% | 2 1 | 10.53% 33.33% | 1 0 | 5.26% 0.00% | 1 1 | 5.26% 33.33% | 0 0 | 0.00% 0.00% |
| Charities Cleveland Cincinnati | 0 0 | 0.00% 0.00% | 12 12 | 27.91% 42.86% | 9 2 | 20.93% 7.14% | 11 6 | 25.58% 21.43% | 7 3 | 16.28% 10.71% | 2 4 | 4.65% 14.29% | 1 1 | 2.33% 3.57% | 1 0 | 2.33% 0.00% |
| All Strata Cleveland Cincinnati | 1 2 | .91% 3.57% | 34 17 | 30.91% 30.36% | 21 8 | 19.09% 14.29% | 31 10 | 28.18% 17.86% | 16 9 | 14.55% 16.07% | 3 4 | 2.73% 7.14% | 3 5 | 2.73% 8.93% | 1 1 | .91% 1.79% |

RESPONSE CODES FOR
QUESTIONS 17a & 18a

- 001 New phone system
- 002 Managing director instituted changes
- 003 Beginning of telephone intercom
- 004 Increased business (general)
- 005 More appointments for clients by phone than letter now
- 006 Added another line/lines/ phones
- 007 Increase in number of incoming calls
- 008 Increase in number of outgoing calls
- 009 Hot-line added
- 010 Rate increases initiated by phone company
- 011 Improved/Increased contact with people/clients/patrons
- 012 Answering device installed
- 013 Increased number of employees
- 014 Increased volume of calls (general)
- 015 Changed from switchboard to centrex
- 016 Enlarged phone system to handle more calls and/or employees
- 017 3-way party phones initiated
- 018 Decrease in volume of calls
- 019 Changed from mail to phone system
- 020 "Info Switch" instituted for long distance calls
- 021 Restriction placed on outgoing calls
- 022 Extra phones installed at various times (election, fund drives, etc.)
- 023 Phones used more effectively (general)
- 024 Elimination of switchboard--calls go directly to individuals
- 025 Organizational changes
- 026 Increased flow of people
- 027 Increase in time to get a phone call in or out (supv., secty. handling calls)
- 028 Added phone connected computer terminal (CRT)
- 029 To conduct fund raising drive
- 030 New or changed FCC regulations
- 031 Monitoring of phone use
- 032 Increase use of phone due to rise in cost of postage and/or gas
- 033 Added Watts lines
- 034 Limits on phone use
- 035 Restrictions on long distance calls
- 036 Increased budget
- 037 Decreased number of phone sets or lines or phone system
- 038 Added transcribing/dictation system
- 039 Switched from Watts lines to foreign exchange
- 040 Staff initiated change

RESPONSE CONSOLIDATION CODE

- Decrease Volume of Calls - 18,37
- Increase Volume of Calls - 5,7,8,9,14,16,26
- New Comm. System in Service - 1,3,12,15,17,20,24,28,33,38,39
- Increased Business - 4,6,11,29,36
- Policy Changes - 2,10,21,25,27,30,31,34,35,40
- Increased Number of Employees - 13,22
- Economic Incentives Indicated Increased Use of Phone - 19,23,32
- 997 Other
- 998 DK
- 999 MD/NA

Question 18: Does your organization use the telephone differently now than it did five years ago?

| Strata by City | Yes | | No | |
|----------------------|-------|--------|-------|--------|
| | Freq. | % | Freq. | % |
| Local Government | | | | |
| Cleveland | 10 | 40.00% | 15 | 60.00% |
| Cincinnati | 11 | 32.35% | 23 | 67.65% |
| | S | | S | |
| State Government | | | | |
| Cleveland | 3 | 50.00% | 3 | 50.00% |
| Cincinnati | 7 | 53.85% | 6 | 46.15% |
| | S | | S | |
| Universities | | | | |
| Cleveland | 1 | 50.00% | 1 | 50.00% |
| Cincinnati | 2 | 33.33% | 4 | 66.67% |
| | S | | S | |
| Hospitals | | | | |
| Cleveland | 10 | 55.56% | 8 | 44.44% |
| Cincinnati | 2 | 33.33% | 4 | 66.67% |
| | S | | S | |
| Schools | | | | |
| Cleveland | 14 | 22.95% | 47 | 77.05% |
| Cincinnati | 19 | 34.55% | 36 | 65.45% |
| | S | | S | |
| Libraries | | | | |
| Cleveland | 14 | 70.00% | 6 | 30.00% |
| Cincinnati | 7 | 29.17% | 17 | 70.83% |
| | D | | D | |
| Charities | | | | |
| Cleveland | 20 | 35.71% | 36 | 64.29% |
| Cincinnati | 12 | 30.77% | 27 | 69.23% |
| | S | | S | |
| All Strata | | | | |
| Cleveland | 72 | 38.30% | 116 | 61.70% |
| Cincinnati | 60 | 33.90% | 117 | 66.10% |
| | S | | S | |

Question 18a: Why did these changes in telephone usage occur?

| Strata by City | Decrease Volume of Calls | | Increase Volume of Calls | | New Communica- tion System in Service | | Increase in Business | | Policy Changes | | Increase in number of Employees | | Economic Incentives indicated increased use of phones | | Other | |
|---|---|----------------|-----------------------------|------------------|---|------------------|----------------------------|------------------|------------------|------------------|---------------------------------------|-----------------|--|------------------|-----------------|----------------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| | Local Government Cleveland Cincinnati | 1 1 | 7.14% 5.56% | 0 3 | 0.00% 16.67% | 7 4 | 50.00% 22.22% | 3 5 | 21.43% 27.78% | 2 1 | 14.29% 5.56% | 0 2 | 0.00% 11.11% | 0 2 | 0.00% 11.11% | 1 0 |
| State Government Cleveland Cincinnati | 0 0 | 0.00% 0.00% | 1 3 | 25.00% 37.50% | 2 1 | 50.00% 12.50% | 1 2 | 25.00% 12.50% | 0 2 | 0.00% 25.00% | 0 0 | 0.00% 0.00% | 0 1 | 0.00% 12.50% | 0 0 | 0.00% 0.00% |
| Universities Cleveland Cincinnati | 0 0 | 0.00% 0.00% | 0 1 | 0.00% 50.00% | 1 1 | 50.00% 50.00% | 1 0 | 50.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% |
| Hospitals Cleveland Cincinnati | 0 0 | 0.00% 0.00% | 2 0 | 14.29% 0.00% | 8 2 | 57.14% 66.67% | 1 0 | 7.14% 0.00% | 3 0 | 21.43% 0.00% | 0 0 | 0.00% 0.00% | 0 1 | 0.00% 33.33% | 0 0 | 0.00% 0.00% |
| Schools Cleveland Cincinnati | 1 0 | 5.56% 0.00% | 8 6 | 44.44% 22.22% | 1 7 | 5.56% 25.93% | 3 7 | 16.67% 25.93% | 5 4 | 27.78% 14.81% | 0 1 | 0.00% 3.70% | 0 2 | 0.00% 7.41% | 0 0 | 0.00% 0.00% |
| Libraries Cleveland Cincinnati | 0 0 | 0.00% 0.00% | 5 1 | 27.78% 14.29% | 1 1 | 5.56% 14.29% | 3 0 | 16.67% 0.00% | 5 1 | 27.78% 14.29% | 0 0 | 0.00% 0.00% | 3 4 | 16.67% 57.14% | 1 0 | 5.56% 0.00% |
| Charities Cleveland Cincinnati | 2 0 | 7.14% 0.00% | 5 9 | 17.86% 42.86% | 4 2 | 14.29% 9.52% | 8 5 | 28.57% 23.81% | 4 3 | 14.29% 14.29% | 3 2 | 10.71% 9.52% | 2 0 | 7.14% 0.00% | 0 0 | 0.00% 0.00% |
| All Strata Cleveland Cincinnati | 4 1 | 4.08% 1.16% | 21 23 | 21.43% 26.74% | 24 18 | 24.49% 20.93% | 20 18 | 20.41% 20.93% | 19 11 | 19.38% 12.79% | 3 5 | 3.06% 5.81% | 5 10 | 5.10% 11.63% | 2 0 | 2.04% 0.00% |

Question 19: For local calls, does the telephone company bill your organization according to a flat rate or a measured rate?

| Strata by City | Flat Rate | | Measured Rate | |
|---|-----------|-------------------|---------------|-------------------|
| | Freq. | % | Freq. | % |
| Local Government Cleveland Cincinnati | 8 34 | 33.33% 100.00% | 16 0 | 66.67% 0.00% |
| State Government Cleveland Cincinnati | 5 10 | 45.45% 76.92% | 6 3 | 54.55% 23.08% |
| Universities Cleveland Cincinnati | 0 5 | 0.00% 83.33% | 5 1 | 100.00% 16.67% |
| Hospitals Cleveland Cincinnati | 4 11 | 14.29% 100.00% | 24 0 | 85.71% 0.00% |
| Schools Cleveland Cincinnati | 17 55 | 40.48% 96.49% | 25 2 | 59.52% 3.51% |
| Libraries Cleveland Cincinnati | 2 10 | 12.50% 100.00% | 14 0 | 87.50% 0.00% |
| Charities Cleveland Cincinnati | 17 59 | 18.09% 98.33% | 77 1 | 81.91% 1.67% |
| All Strata Cleveland Cincinnati | 53 184 | 24.09% 96.34% | 167 7 | 75.91% 3.66% |

Question 19a: Assume that the current flat rate was replaced by a measured rate where your bill remained the same if your phones were used about the same as they are now. Would this change your method of operation?

| Strata by City | Yes | | No | |
|---|----------|------------------|-----------|-------------------|
| | Freq. | % | Freq. | % |
| Local Government Cleveland Cincinnati | 1 7 | 14.29% 20.59% | 6 27 | 85.71% 79.41% |
| State Government Cleveland Cincinnati | 0 8 | 0.00% 50.00% | 5 8 | 100.00% 50.00% |
| Universities Cleveland Cincinnati | 0 3 | 0.00% 75.00% | 0 1 | 0.00% 25.00% |
| Hospitals Cleveland Cincinnati | 2 2 | 40.00% 28.57% | 3 5 | 60.00% 71.43% |
| Schools Cleveland Cincinnati | 4 29 | 28.57% 46.03% | 10 34 | 71.43% 53.97% |
| Libraries Cleveland Cincinnati | 0 10 | 0.00% 66.66% | 2 5 | 100.00% 33.33% |
| Charities Cleveland Cincinnati | 3 16 | 20.00% 27.12% | 12 43 | 80.00% 72.88% |
| All Strata Cleveland Cincinnati | 10 75 | 20.83% 37.88% | 38 123 | 79.17% 62.12% |

Question 19b: Could you tell me how your operations were changed?

| | Reduce calling volume | | Policy changes | | Budget change | | Switch to other means of communication | | Increase Service | | Cut Service | | Other | |
|------------------|-----------------------|--------|----------------|---------|---------------|---------|--|--------|------------------|-------|-------------|--------|-------|--------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 1 | 100.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 6 | 66.67% | 2 | 22.22% | 0 | 0.00% | 1 | 11.11% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| State Government | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 5 | 55.55% | 0 | 0.00% | 1 | 11.11% | 1 | 11.11% | 0 | 0.00% | 0 | 0.00% | 2 | 22.22% |
| Universities | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 2 | 22.22% | 0 | 0.00% | 1 | 33.33% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Hospitals | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 1 | 100.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 2 | 100.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Schools | | | | | | | | | | | | | | |
| Cleveland | 1 | 16.67% | 3 | 50.00% | 1 | 16.67% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 10 | 31.25% | 13 | 40.63% | 7 | 21.88% | 0 | 0.00% | 0 | 0.00% | 2 | 6.25% | 0 | 0.00% |
| Libraries | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 4 | 36.36% | 3 | 36.36% | 0 | 0.00% | 1 | 9.09% | 0 | 0.00% | 2 | 18.18% | 1 | 9.09% |
| Charities | | | | | | | | | | | | | | |
| Cleveland | 1 | 25.00% | 2 | 50.00% | 1 | 25.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 8 | 40.00% | 4 | 20.00% | 2 | 10.00% | 2 | 10.00% | 0 | 0.00% | 1 | 5.00% | 3 | 15.00% |
| All Strata | | | | | | | | | | | | | | |
| Cleveland | 2 | 16.67% | 5 | 41.67% | 4 | 33.33% | 0 | 0.00% | 1 | 8.33% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 35 | 40.70% | 24 | 27.91% | 11 | 12.79% | 5 | 5.81% | 0 | 0.00% | 5 | 5.81% | 6 | 6.98% |

Question 19c: Assume that the current flat rate was replaced by a measured rate where your bill increased by 20% if your usage remained the same. Would this change your method of operation?

| Strata by City | Yes | | No | |
|---|-----------|------------------|----------|-------------------|
| | Freq. | % | Freq. | % |
| Local Government Cleveland Cincinnati | 3 19 | 50.00% 45.24% | 3 23 | 50.00% 54.76% |
| State Government Cleveland Cincinnati | 3 10 | 60.00% 62.50% | 2 6 | 40.00% 37.50% |
| Universities Cleveland Cincinnati | 0 4 | 0.00% 80.00% | 0 1 | 0.00% 20.00% |
| Hospitals Cleveland Cincinnati | 1 10 | 33.33% 90.91% | 2 1 | 66.67% 9.09% |
| Schools Cleveland Cincinnati | 11 42 | 68.75% 66.67% | 5 21 | 31.25% 33.33% |
| Libraries Cleveland Cincinnati | 0 15 | 0.00% 83.33% | 1 3 | 100.00% 16.67% |
| Charities Cleveland Cincinnati | 2 39 | 11.76% 65.00% | 15 21 | 88.24% 35.00% |
| All Strata Cleveland Cincinnati | 20 139 | 41.67% 64.65% | 28 76 | 58.33% 35.35% |

Question 19d: Could you tell me how?

| Strata by City | Reduction in telephone sets or lines | | Reduce calline volume | | Policy changes | | Budget changes | | Switch other means of communication | | Cut Service | | Other | |
|------------------|--------------------------------------|--------|-----------------------|--------|----------------|--------|----------------|--------|-------------------------------------|--------|-------------|--------|-------|---------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 1 | 33.33% | 1 | 33.33% | 0 | 0.00% | 0 | 0.00% | 1 | 33.33% | 0 | 0.00% |
| Cincinnati | 2 | 9.09% | 11 | 50.00% | 1 | 4.55% | 2 | 9.09% | 5 | 22.73% | 1 | 4.55% | 0 | 0.00% |
| State Government | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 2 | 66.67% | 1 | 33.33% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 6 | 66.67% | 2 | 22.22% | 0 | 0.00% | 1 | 11.11% | 0 | 0.00% | 0 | 0.00% |
| Universities | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 2 | 33.33% | 0 | 0.00% | 0 | 0.00% | 3 | 50.00% | 1 | 16.67% | 0 | 0.00% | 0 | 0.00% |
| Hospitals | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 1 | 100.00% |
| Cincinnati | 0 | 0.00% | 1 | 11.11% | 4 | 44.44% | 2 | 22.22% | 1 | 11.11% | 1 | 11.11% | 0 | 0.00% |
| Schools | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 6 | 54.55% | 3 | 27.27% | 1 | 9.09% | 1 | 9.09% | 2 | 18.18% | 0 | 0.00% |
| Cincinnati | 2 | 4.17% | 22 | 45.83% | 11 | 22.92% | 6 | 12.50% | 2 | 4.17% | 3 | 6.25% | 2 | 4.17% |
| Libraries | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 11 | 64.71% | 2 | 11.76% | 0 | 0.00% | 3 | 17.65% | 1 | 5.88% | 0 | 0.00% |
| Charities | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 2 | 66.67% | 0 | 0.00% | 1 | 33.33% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 1 | 2.22% | 17 | 37.78% | 5 | 11.11% | 7 | 15.56% | 8 | 17.78% | 6 | 13.33% | 1 | 2.22% |
| All Strata | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 9 | 39.13% | 7 | 30.43% | 1 | 4.35% | 2 | 8.69% | 3 | 13.04% | 1 | 4.36% |
| Cincinnati | 7 | 4.49% | 68 | 43.59% | 25 | 16.03% | 20 | 12.82% | 21 | 13.46% | 12 | 7.69% | 3 | 1.92% |

Question 19e: Again assume that the current flat rate was replaced by a measured rate but your bill decreased by 20% and your usage remained the same. Would this change your method of operation?

| Strata by City | Yes | | No | |
|---|---------|------------------|-----------|-------------------|
| | Freq. | % | Freq. | % |
| Local Government Cleveland Cincinnati | 1 1 | 14.29% 2.44% | 6 40 | 85.71% 97.56% |
| State Government Cleveland Cincinnati | 1 4 | 20.00% 25.00% | 4 12 | 80.00% 75.00% |
| Universities Cleveland Cincinnati | 0 1 | 0.00% 20.00% | 0 4 | 0.00% 80.00% |
| Hospitals Cleveland Cincinnati | 1 0 | 33.33% 0.00% | 2 10 | 66.67% 100.00% |
| Schools Cleveland Cincinnati | 0 6 | 0.00% 9.09% | 16 60 | 100.00% 90.91% |
| Libraries Cleveland Cincinnati | 0 2 | 0.00% 10.53% | 2 17 | 100.00% 89.47% |
| Charities Cleveland Cincinnati | 4 7 | 23.53% 11.48% | 13 54 | 76.47% 88.52% |
| All Strata Cleveland Cincinnati | 7 21 | 14.00% 9.63% | 43 197 | 86.00% 90.37% |

Question 19f: Could you tell me how your method of operations changed?

| Strata by City | Increase in telephone sets or lines | | Reduce Calling volume | | Policy changes | | Budget changes | | Increase Service | | Other | |
|---|---|------------------|--------------------------|-----------------|----------------|------------------|------------------|------------------|---------------------|-------------------|------------------|-----------------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| | Local Government Cleveland Cincinnati | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 1 | 0.00% 100.00% | 0 0 | 0.00% 0.00% | 1 0 | 100.00% 0.00% | 0 0 |
| State Government Cleveland Cincinnati | 0 0 | 0.00% 0.00% | 0 1 | 0.00% 33.33% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 1 2 | 100.00% 66.67% | 0 0 | 0.00% 0.00% |
| Universities Cleveland Cincinnati | 0 1 | 0.00% 100.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% |
| Hospitals Cleveland Cincinnati | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 1 0 | 100.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% |
| Schools Cleveland Cincinnati | 0 0 | 0.00% 0.00% | 0 1 | 0.00% 14.29% | 0 2 | 0.00% 28.57% | 0 2 | 0.00% 28.57% | 0 1 | 0.00% 14.29% | 0 1 | 0.00% 14.29% |
| Libraries Cleveland Cincinnati | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 2 | 0.00% 100.00% | 0 0 | 0.00% 0.00% |
| Charities Cleveland Cincinnati | 0 1 | 0.00% 12.50% | 0 1 | 0.00% 12.50% | 1 1 | 25.00% 12.50% | 1 0 | 25.00% 0.00% | 2 4 | 50.00% 50.00% | 0 1 | 0.00% 12.50% |
| All Strata Cleveland Cincinnati | 0 2 | 0.00% 9.09% | 0 3 | 0.00% 13.64% | 1 4 | 14.29% 18.18% | 2 2 | 28.57% 9.09% | 4 9 | 57.14% 40.91% | 0 2 | 0.00% 9.09% |

QUESTION # 19b,d,f

- 001 Outgoing calls would be reduced, limited, number and time limits
- 002 Costs would rise
- 003 Rationing of phone sets
- 004 Rules would be set regarding phone usage
- 005 Limits on personal calls
- 006 No personal calls
- 007 Reduction in number of phone sets and lines
- 008 Monitoring to control usage
- 009 Change in budget; change in financing
- 010 Switch to other means of communication (non-specific)
- 011 Switch to more written communication
- 012 Increase use of long distance calls; also outgoing calls
- 013 Use daily log sheet
- 014 Use money/budget in other ways; re-allocate funds
- 015 Better, faster service
- 016 Cut service
- 017 addition of phones sets or lines
- 018 Would not log or monitor

- 997 Other
- 998 DK
- 999 MD/NA

Question 20: Would a change from measured rates to flat rates change the way your organization serves the public?

| Strata by City | Yes | | No | |
|----------------------|-------|--------|-------|---------|
| | Freq. | % | Freq. | % |
| Local Government | | | | |
| Cleveland | 1 | 5.88% | 16 | 94.12% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| State Government | | | | |
| Cleveland | 1 | 16.67% | 5 | 83.33% |
| Cincinnati | 0 | 0.00% | 3 | 100.00% |
| Universities | | | | |
| Cleveland | 0 | 0.00% | 5 | 100.00% |
| Cincinnati | 0 | 0.00% | 1 | 100.00% |
| Hospitals | | | | |
| Cleveland | 2 | 8.70% | 21 | 91.30% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| Schools | | | | |
| Cleveland | 11 | 23.40% | 36 | 76.60% |
| Cincinnati | 0 | 0.00% | 2 | 100.00% |
| Libraries | | | | |
| Cleveland | 6 | 37.50% | 10 | 62.50% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| Charities | | | | |
| Cleveland | 15 | 21.43% | 55 | 78.57% |
| Cincinnati | 0 | 0.00% | 1 | 100.00% |
| All Strata | | | | |
| Cleveland | 36 | 19.57% | 148 | 80.43% |
| Cincinnati | 0 | 0.00% | 7 | 100.00% |

Question 20a: In what way would the change effect the way your organization serves the public?

| Strata by City | Less Cautious in using the phone | | Increase Service | | Reduce Service | | Policy Changes | | Budget Changes | | Decrease Volume of Calls | | | |
|----------------------|-------------------------------------|---------|------------------|--------|----------------|--------|----------------|--------|----------------|---------|-----------------------------|--------|---|-------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | | |
| Local Government | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 1 | 100.00% | 0 | 0.00% | | |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | | |
| State Government | | | | | | | | | | | | | | |
| Cleveland | 1 | 100.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Universities | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Hospitals | | | | | | | | | | | | | | |
| Cleveland | 2 | 100.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Schools | | | | | | | | | | | | | | |
| Cleveland | 5 | 45.45% | 0 | 0.00% | 1 | 9.09% | 3 | 27.27% | 1 | 9.09% | 1 | 9.09% | | |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | | |
| Libraries | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 1 | 20.00% | 1 | 20.00% | 0 | 0.00% | 2 | 40.00% | 1 | 20.00% | | |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | | |
| Charities | | | | | | | | | | | | | | |
| Cleveland | 7 | 41.18% | 3 | 17.65% | 0 | 0.00% | 3 | 17.65% | 4 | 23.53% | 0 | 0.00% | | |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | | |
| All Strata | | | | | | | | | | | | | | |
| Cleveland | 15 | 40.54% | 4 | 10.81% | 2 | 5.41% | 6 | 16.22% | 8 | 21.62% | 2 | 5.41% | | |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | | |

RESPONSE CODES FOR
QUESTION 20a

- 001 Would feel less cautious in using the phone
- 002 More freedom in calling
- 003 More service to the public
- 004 If cost increased, calls would be monitored
- 005 Use money/ budget in different ways; reallocate money
- 006 Easier budgeting
- 007 If cost increased, calls would be limited/decreased
- 008 Decrease volume of calls
- 009 More of a burden
- 010 Reduced service

RESPONSE CONSOLIDATION CODE

- Less Cautious in Using Phone - 1,2
- Increase Service - 3
- Reduce Service - 10
- Policy Changes - 4,7,9
- Budget Changes - 5,6
- Decrease Volume of Calls - 8

- 997 Other
- 998 DK
- 999 MD/NA

Question 21: To your knowledge have measured telephone rates affected your organization?

| Strata by City | No | | Yes | | Yes, costs are a concern | | Yes, costs are increasing | | Yes, costs have decreased | | Yes, policies have changed | | Yes, service has decreased | | Yes, service has increased | |
|---|----------|--------------------|--------|----------------|-----------------------------|-----------------|------------------------------|------------------|------------------------------|----------------|-------------------------------|-----------------|-------------------------------|-----------------|-------------------------------|----------------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government Cleveland Cincinnati | 13 0 | 81.25% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 1 0 | 6.25% 0.00% | 0 0 | 0.00% 0.00% | 1 0 | 6.25% 0.00% | 1 0 | 6.25% 0.00% |
| State Government Cleveland Cincinnati | 4 1 | 57.14% 50.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 1 | 0.00% 50.00% | 0 0 | 0.00% 0.00% | 3 0 | 42.86% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% |
| Universities Cleveland Cincinnati | 4 1 | 100.00% 100.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% |
| Hospitals Cleveland Cincinnati | 16 0 | 66.67% 0.00% | 0 0 | 0.00% 0.00% | 3 0 | 12.50% 0.00% | 4 0 | 16.67% 0.00% | 0 0 | 0.00% 0.00% | 1 0 | 4.17% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% |
| Schools Cleveland Cincinnati | 31 0 | 70.45% 0.00% | 1 0 | 2.27% 0.00% | 1 0 | 2.27% 0.00% | 4 1 | 9.09% 50.00% | 1 0 | 2.27% 0.00% | 2 1 | 4.55% 50.00% | 3 0 | 6.82% 0.00% | 1 0 | 2.27% 0.00% |
| Libraries Cleveland Cincinnati | 12 0 | 66.67% 0.00% | 0 0 | 0.00% 0.00% | 2 0 | 11.11% 0.00% | 2 0 | 11.11% 0.00% | 0 0 | 0.00% 0.00% | 0 0 | 0.00% 0.00% | 2 0 | 11.11% 0.00% | 0 0 | 0.00% 0.00% |
| Charities Cleveland Cincinnati | 43 1 | 56.58% 100.00% | 0 0 | 0.00% 0.00% | 5 0 | 6.58% 0.00% | 21 0 | 27.63% 0.00% | 0 0 | 0.00% 0.00% | 1 0 | 1.32% 0.00% | 5 0 | 6.58% 0.00% | 1 0 | 1.32% 0.00% |
| All Strata Cleveland Cincinnati | 123 3 | 65.08% 50.00% | 1 0 | .53% 0.00% | 11 0 | 5.82% 0.00% | 31 2 | 16.40% 33.33% | 2 0 | 1.06% 0.00% | 7 1 | 3.70% 16.67% | 11 0 | 5.82% 0.00% | 3 0 | 1.59% 0.00% |

F-45

RESPONSE CODES FOR
QUESTION 21

- 001 No, but as costs rise more care will be taken to limit calls.
- 002 Yes, cost has risen.
- 003 Yes, cost has risen, have tried to limit calls.
- 004 Yes, curtails service.
- 005 Yes, limits use of phone by students & teachers and employees and patients
- 006 Yes, student & personal calls must be directed to pay phone
- 007 Yes, as operating costs (e.g., telephone) increase, funds are diverted from our primary function
- 008 More of a phone burden.
- 009 Have always had measured rates.
- 010 No
- 011 Yes, cost is a concern now
- 012 Increased use of phone/switch to phone
- 013 More convenient
- 014 Yes, records of calls are available
- 015 Yes (no reason given)
- 016 Reduction in number of lines
- 017 Yes, costs have decreased

RESPONSE CONSOLIDATION CODE

No - 1,9,10

Yes - 15

Yes, costs are a concern - 11

Yes, costs are increasing - 2,3,8

Yes, costs have decreased - 16,17

Yes, policies have changed - 5,6

Yes, service has decreased - 4,7

Yes, service has increased - 12,13,14

- 997 Other
- 998 DK
- 999 MD/NA

Question 22: Some people have told us that they believe telephone users can have more control over the amount of their telephone bill with measured rates for local calls. They say that the measured rate allows them to monitor and control local calls as they do long distance calls. How about you? Do you feel that measured rates allow your organization to have more control, less control, or about the same control over your phone bill as flat rates?

| Strata by City | More Control | | Less Control | | About the same Control | |
|---|--------------|-------------------|--------------|-----------------|---------------------------|-------------------|
| | Freq. | % | Freq. | % | | |
| Local Government Cleveland Cincinnati | 9 0 | 60.00% 0.00% | 0 0 | 0.00% 0.00% | 6 0 | 40.00% 0.00% |
| State Government Cleveland Cincinnati | 1 0 | 14.29% 0.00% | 1 0 | 14.29% 0.00% | 5 3 | 71.43% 100.00% |
| Universities Cleveland Cincinnati | 2 0 | 40.00% 0.00% | 1 0 | 20.00% 0.00% | 2 1 | 40.00% 100.00% |
| Hospitals Cleveland Cincinnati | 6 0 | 28.57% 0.00% | 1 0 | 4.76% 0.00% | 14 0 | 66.67% 0.00% |
| Schools Cleveland Cincinnati | 13 0 | 28.89% 0.00% | 2 0 | 4.44% 0.00% | 30 2 | 66.66% 100.00% |
| Libraries Cleveland Cincinnati | 2 0 | 15.38% 0.00% | 1 0 | 7.69% 0.00% | 10 0 | 76.92% 0.00% |
| Charities Cleveland Cincinnati | 14 1 | 19.44% 100.00% | 12 0 | 16.67% 0.00% | 46 0 | 63.89% 0.00% |
| All Strata Cleveland Cincinnati | 47 1 | 26.40% 14.29% | 18 0 | 10.11% 0.00% | 113 6 | 63.48% 85.71% |

Question 22a: (If more or less control) Could you explain that?

| Strata by City | Actually Experienced More Control | | Actually Experienced Less Control | | Other | |
|------------------|-----------------------------------|---------|-----------------------------------|--------|-------|--------|
| | Freq. | % | Freq. | % | Freq. | % |
| Local Government | | | | | | |
| Cleveland | 9 | 90.00% | 1 | 10.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| State Government | | | | | | |
| Cleveland | 1 | 50.00% | 0 | 0.00% | 1 | 50.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Universities | | | | | | |
| Cleveland | 4 | 100.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Hospitals | | | | | | |
| Cleveland | 7 | 100.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Schools | | | | | | |
| Cleveland | 16 | 84.21% | 1 | 5.26% | 2 | 10.53% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Libraries | | | | | | |
| Cleveland | 2 | 66.67% | 1 | 33.33% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Charities | | | | | | |
| Cleveland | 15 | 60.00% | 0 | 0.00% | 10 | 40.00% |
| Cincinnati | 2 | 100.00% | 0 | 0.00% | 0 | 0.00% |
| All Strata | | | | | | |
| Cleveland | 54 | 77.14% | 3 | 4.29% | 13 | 18.57% |
| Cincinnati | 2 | 100.00% | 0 | 0.00% | 0 | 0.00% |

RESPONSE CODES FOR
QUESTION 22a

- 001 In theory it would work, but no knowledge of who actually is using phone
- 002 If number of calls is known, you can cut down/restrict usage
- 003 Number of calls that are over the allotment causes costs to rise
- 004 Costs are known at all times
- 005 Number of calls made is known
- 006 Money collected for personal calls
- 007 If number of calls cut, business suffers
- 008 Allows curtailment of unnecessary calls
- 009 More of a burden
- 010 More convenient
- 011 Unlimited flat rates let you increase number of calls

RESPONSE CONSOLIDATION CODE

Actually Experienced More Control - 1,2,4,5,6,8,9,10
Actually Experienced Less Control - 11
Other - 3,7

- 997 Other
- 998 DK
- 999 MD/NA

Question 23: (If Measured Rates) Would a change to higher flat rates change the way your organization serves the public?

| Strata by City | Yes | | No | |
|------------------|-------|--------|-------|---------|
| | Freq. | % | Freq. | % |
| Local Government | | | | |
| Cleveland | 2 | 14.29% | 12 | 85.71% |
| Cincinnati | 0 | | 0 | |
| State Government | | | | |
| Cleveland | 1 | 12.50% | 7 | 87.50% |
| Cincinnati | 0 | 0.00% | 2 | 100.00% |
| Universities | | | | |
| Cleveland | 1 | 20.00% | 4 | 80.00% |
| Cincinnati | 0 | 0.00% | 1 | 100.00% |
| Hospitals | | | | |
| Cleveland | 1 | 4.55% | 21 | 95.45% |
| Cincinnati | 0 | | 0 | |
| Schools | | | | |
| Cleveland | 12 | 24.00% | 38 | 76.00% |
| Cincinnati | 0 | 0.00% | 2 | 100.00% |
| Libraries | | | | |
| Cleveland | 5 | 38.46% | 8 | 61.54% |
| Cincinnati | 0 | | 0 | |
| Charities | | | | |
| Cleveland | 24 | 36.92% | 41 | 63.08% |
| Cincinnati | 0 | 0.00% | 1 | 100.00% |
| All Strata | | | | |
| Cleveland | 46 | 25.99% | 131 | 74.01% |
| Cincinnati | 0 | 0.00% | 6 | 100.00% |

Question 23a: (If yes) In what way would the change effect the way you serve the public?

| Strata by City | Decreased Use of Telephone | | Increased Use of Telephone | | Decreased Service | | Increased Service | | Budget Impact | | Other | |
|------------------|----------------------------|---------|----------------------------|--------|-------------------|---------|-------------------|-------|---------------|---------|-------|--------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government | | | | | | | | | | | | |
| Cleveland | 2 | 100.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| State Government | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 1 | 100.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Universities | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 1 | 100.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Hospitals | | | | | | | | | | | | |
| Cleveland | 1 | 50.00% | 1 | 50.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Schools | | | | | | | | | | | | |
| Cleveland | 6 | 50.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 6 | 50.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Libraries | | | | | | | | | | | | |
| Cleveland | 2 | 40.00% | 2 | 40.00% | 0 | 0.00% | 0 | 0.00% | 1 | 20.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Charities | | | | | | | | | | | | |
| Cleveland | 10 | 40.00% | 3 | 12.00% | 2 | 8.00% | 1 | 4.00% | 8 | 32.00% | 1 | 4.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| All Strata | | | | | | | | | | | | |
| Cleveland | 21 | 43.75% | 6 | 12.50% | 3 | 6.25% | 1 | 2.09% | 10 | 20.83% | 7 | 14.58% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |

RESPONSE CODES FOR
QUESTION 23a

- 001 More savings with flat rates
- 002 Cut back on usage
- 003 Increase in usage
- 004 Funds diverted from primary function to cover operating costs
- 005 Reduce contact with the public
- 006 Increase in residential fund raising
- 007 Cut number of phone lines
- 008 Changes (non-specific)
- 009 Reduced personal usage
- 010 Cut service

RESPONSE CONSOLIDATION CODE

- Decreased use of telephone - 2,7,9
- Increased use of telephone - 3
- Decreased Service - 5,10
- Increased Service - 6
- Budget Import - 1,4
- Other - 8

- 997 Other
- 998 DK
- 999 MD/NA

Question 24: Approximately how many full-time people does your organization employ?

| Strata by City | Less than 10 | | 10 - 50 | | 51 - 100 | | 101 - 250 | | 251 - 500 | | 501 - 1000 | | More than 1000 | | Other | |
|-------------------------|--------------|--------|---------|--------|----------|--------|-----------|--------|-----------|--------|------------|--------|----------------|--------|-------|--------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government | | | | | | | | | | | | | | | | |
| Cleveland | 1 | 3.33% | 10 | 33.33% | 3 | 10.00% | 11 | 36.67% | 2 | 6.67% | 1 | 3.33% | 2 | 6.67% | 0 | 0.00% |
| Cincinnati | 4 | 9.09% | 20 | 45.45% | 8 | 18.18% | 5 | 11.36% | 4 | 9.09% | 2 | 4.55% | 1 | 2.27% | 0 | 0.00% |
| State Government | | | | | | | | | | | | | | | | |
| Cleveland | 6 | 42.86% | 2 | 14.24% | 0 | 0.00% | 2 | 14.29% | 2 | 14.29% | 2 | 14.29% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 5 | 26.32% | 10 | 52.63% | 2 | 10.53% | 1 | 5.26% | 1 | 5.26% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Universities | | | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 1 | 20.00% | 1 | 20.00% | 0 | 0.00% | 0 | 0.00% | 1 | 20.00% | 2 | 40.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 1 | 16.67% | 2 | 33.33% | 1 | 16.67% | 0 | 0.00% | 1 | 16.67% | 1 | 16.67% | 0 | 0.00% |
| Hospitals | | | | | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 2 | 7.14% | 3 | 10.71% | 4 | 14.29% | 4 | 14.29% | 6 | 21.43% | 6 | 21.43% | 3 | 10.71% |
| Cincinnati | 0 | 0.00% | 1 | 9.09% | 0 | 0.00% | 1 | 9.09% | 2 | 18.18% | 3 | 27.27% | 4 | 36.36% | 0 | 0.00% |
| Schools | | | | | | | | | | | | | | | | |
| Cleveland | 4 | 4.82% | 58 | 69.88% | 18 | 21.69% | 3 | 3.61% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 2 | 2.70% | 52 | 70.27% | 14 | 20.00% | 6 | 8.11% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Libraries | | | | | | | | | | | | | | | | |
| Cleveland | 31 | 91.18% | 2 | 5.88% | 1 | 2.94% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 25 | 80.65% | 6 | 19.35% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Charities | | | | | | | | | | | | | | | | |
| Cleveland | 51 | 52.58% | 26 | 26.80% | 16 | 16.49% | 2 | 2.06% | 2 | 2.06% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 35 | 49.30% | 24 | 33.80% | 6 | 8.45% | 3 | 4.23% | 1 | 1.41% | 0 | 0.00% | 0 | 0.00% | 2 | 2.82% |
| All Strata | | | | | | | | | | | | | | | | |
| Cleveland | 93 | 31.96% | 101 | 34.71% | 42 | 14.43% | 22 | 7.56% | 10 | 3.44% | 10 | 3.44% | 10 | 3.44% | 3 | 1.03% |
| Cincinnati | 71 | 27.73% | 114 | 44.53% | 32 | 12.50% | 17 | 6.64% | 8 | 3.13% | 6 | 2.34% | 6 | 2.34% | 2 | .78% |

RESPONSE CODES FOR
QUESTION 25

- 01 none
- 02 1-9 (at present)
- 03 10-50 (at present)
- 04 51-100 (at present)
- 05 101-250 (at present)
- 06 251-500 (at present)
- 07 501-1000 (at present)
- 08 more than 1000 (at present)
- 09 volunteers
- 10 seasonal or varies, but usually less than 10
- 11 seasonal or varies, but usually 10-50
- 12 seasonal or varies, but usually 51-100
- 13 seasonal or varies, but usually 101-250
- 14 seasonal or varies, but usually 251-500
- 15 seasonal or varies, but usually 501-1000
- 16 seasonal or varies (number unspecified)
- 17 seasonal or varies, less than 10 (at present)
- 18 seasonal or varies, 10-50 (at present)
- 19 seasonal or varies, 51-100 (at present)
- 20 seasonal or varies, 101-250 (at present)
- 21 seasonal or varies, 251-500 (at present)
- 22 seasonal or varies, 501-1000 (at present)

RESPONSE CONSOLIDATION CODE

- Less than 10 - 1,2
- 10 to 50 - 3
- 51 to 100 - 4
- Greater than 100 - 5,6,7,8
- Seasonal/Varies less than 10 - 10,17
- Seasonal/Varies 10 to 50 - 11,18
- Seasonal/Varies greater than 50 - 12,13,14,15,19,20,21,22
- Other - 9,16,97

- 97 other
- 98 DK
- 99 MD/NA

Question 26: Approximately what percentage of all the employees might be classified "professional"?

| Strata by City | 0 - 20% Professional | | 21 - 40% Professional | | 41 - 60% Professional | | 61 - 80% Professional | | 81 - 100% Professional | |
|------------------|----------------------|--------|-----------------------|--------|-----------------------|--------|-----------------------|--------|------------------------|--------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government | | | | | | | | | | |
| Cleveland | 8 | 27.59% | 11 | 37.93% | 2 | 6.90% | 4 | 13.79% | 4 | 13.79% |
| Cincinnati | 16 | 36.36% | 7 | 15.91% | 9 | 20.45% | 8 | 18.18% | 4 | 9.09% |
| State Government | | | | | | | | | | |
| Cleveland | 7 | 50.00% | 1 | 7.14% | 2 | 14.29% | 4 | 28.57% | 0 | 0.00% |
| Cincinnati | 4 | 21.05% | 5 | 26.32% | 2 | 10.53% | 3 | 15.74% | 5 | 26.32% |
| Universities | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 2 | 40.00% | 2 | 40.00% | 1 | 20.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 1 | 16.67% | 1 | 16.67% | 3 | 50.00% | 1 | 16.67% |
| Hospitals | | | | | | | | | | |
| Cleveland | 3 | 12.00% | 8 | 32.00% | 9 | 36.00% | 5 | 20.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 2 | 20.00% | 4 | 40.00% | 4 | 40.00% | 0 | 0.00% |
| Schools | | | | | | | | | | |
| Cleveland | 2 | 2.41% | 3 | 3.61% | 7 | 8.43% | 41 | 49.40% | 30 | 36.14% |
| Cincinnati | 0 | 0.00% | 4 | 5.48% | 17 | 23.29% | 18 | 24.66% | 34 | 46.58% |
| Libraries | | | | | | | | | | |
| Cleveland | 8 | 24.24% | 19 | 57.57% | 5 | 15.15% | 1 | 3.03% | 0 | 0.00% |
| Cincinnati | 15 | 48.39% | 13 | 41.94% | 3 | 9.68% | 0 | 0.00% | 0 | 0.00% |
| Charities | | | | | | | | | | |
| Cleveland | 20 | 20.83% | 21 | 21.88% | 18 | 18.75% | 14 | 14.58% | 23 | 23.96% |
| Cincinnati | 6 | 8.57% | 12 | 17.14% | 17 | 24.29% | 22 | 31.43% | 13 | 18.57% |
| All Strata | | | | | | | | | | |
| Cleveland | 48 | 16.84% | 65 | 22.81% | 45 | 15.79% | 70 | 24.56% | 57 | 20.00% |
| Cincinnati | 41 | 16.21% | 44 | 17.39% | 53 | 20.45% | 58 | 22.92% | 57 | 22.53% |

Question 27: What percentage might be classified "clerical"?

| Strata by City | 0-20% Clerical | | 21-40% Clerical | | 41-60% Clerical | | 61-80% Clerical | | 81-100% Clerical | |
|----------------------|-------------------|--------|--------------------|--------|--------------------|--------|--------------------|--------|---------------------|--------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government | | | | | | | | | | |
| Cleveland | 16 | 57.14% | 6 | 21.43% | 0 | 0.00% | 2 | 7.14% | 4 | 14.29% |
| Cincinnati | 24 | 54.55% | 8 | 18.18% | 5 | 11.36% | 3 | 6.82% | 4 | 9.09% |
| State Government | | | | | | | | | | |
| Cleveland | 6 | 42.86% | 6 | 42.86% | 2 | 14.29% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 15 | 78.95% | 1 | 5.26% | 2 | 10.53% | 1 | 5.26% | 0 | 0.00% |
| Universities | | | | | | | | | | |
| Cleveland | 2 | 40.00% | 3 | 60.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 4 | 66.67% | 2 | 33.33% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Hospitals | | | | | | | | | | |
| Cleveland | 15 | 60.00% | 7 | 28.00% | 3 | 12.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 7 | 70.00% | 3 | 30.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Schools | | | | | | | | | | |
| Cleveland | 77 | 92.77% | 4 | 4.82% | 2 | 2.41% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 71 | 97.26% | 2 | 2.74% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Libraries | | | | | | | | | | |
| Cleveland | 7 | 21.21% | 19 | 57.58% | 6 | 18.18% | 1 | 3.03% | 0 | 0.00% |
| Cincinnati | 7 | 23.33% | 13 | 43.33% | 4 | 13.33% | 6 | 20.00% | 0 | 0.00% |
| Charities | | | | | | | | | | |
| Cleveland | 61 | 65.59% | 20 | 21.51% | 6 | 6.45% | 4 | 4.30% | 2 | 2.15% |
| Cincinnati | 39 | 56.52% | 18 | 26.09% | 11 | 15.94% | 0 | 0.00% | 1 | 1.45% |
| All Strata | | | | | | | | | | |
| Cleveland | 184 | 65.48% | 65 | 23.13% | 19 | 6.76% | 7 | 2.49% | 6 | 2.14% |
| Cincinnati | 167 | 66.53% | 47 | 18.73% | 22 | 8.76% | 10 | 3.98% | 5 | 1.99% |

Question 28: What percentage would you classify as neither "professional" nor "clerical"?

| Strata by City | 0-20% | | 21-40% | | 41-60% | | 61-80% | | 81-100% | |
|----------------------|-------|---------|--------|--------|--------|--------|--------|--------|---------|--------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government | | | | | | | | | | |
| Cleveland | 15 | 55.56% | 5 | 18.52% | 4 | 14.81% | 1 | 3.70% | 2 | 7.41% |
| Cincinnati | 24 | 55.81% | 3 | 6.98% | 5 | 11.63% | 6 | 13.95% | 5 | 11.63% |
| State Government | | | | | | | | | | |
| Cleveland | 8 | 57.14% | 1 | 7.14% | 1 | 7.14% | 1 | 7.14% | 3 | 21.43% |
| Cincinnati | 11 | 57.89% | 0 | 0.00% | 3 | 15.79% | 1 | 5.26% | 4 | 21.05% |
| Universities | | | | | | | | | | |
| Cleveland | 2 | 40.00% | 1 | 20.00% | 2 | 40.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 6 | 100.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Hospitals | | | | | | | | | | |
| Cleveland | 12 | 48.00% | 6 | 24.00% | 6 | 24.00% | 0 | 0.00% | 1 | 4.00% |
| Cincinnati | 9 | 90.00% | 1 | 10.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Schools | | | | | | | | | | |
| Cleveland | 66 | 80.49% | 12 | 14.63% | 4 | 4.88% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 47 | 64.38% | 19 | 26.03% | 5 | 6.85% | 2 | 2.74% | 0 | 0.00% |
| Libraries | | | | | | | | | | |
| Cleveland | 11 | 35.48% | 6 | 19.35% | 12 | 38.71% | 2 | 6.45% | 0 | 0.00% |
| Cincinnati | 11 | 40.74% | 4 | 14.81% | 10 | 37.04% | 1 | 3.70% | 1 | 3.70% |
| Charities | | | | | | | | | | |
| Cleveland | 54 | 60.00% | 13 | 14.44% | 10 | 11.11% | 6 | 6.67% | 7 | 7.77% |
| Cincinnati | 50 | 73.53% | 8 | 11.76% | 7 | 10.29% | 2 | 2.94% | 1 | 1.47% |
| All Strata | | | | | | | | | | |
| Cleveland | 168 | 61.31% | 44 | 16.06% | 39 | 14.23% | 10 | 3.65% | 13 | 4.74% |
| Cincinnati | 158 | 64.23% | 35 | 14.23% | 30 | 12.20% | 12 | 4.88% | 11 | 4.47% |

Question 29: What is the approximate total budget for your organization?

| Strata by City | Under \$25,000 | | \$25,000 to \$100,000 | | \$100,000 to \$500,000 | | \$500,000 to \$1,000,000 | | Greater than \$1,000,000 | |
|----------------------|-------------------|--------|--------------------------|--------|---------------------------|--------|-----------------------------|--------|-----------------------------|---------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 2 | 9.09% | 6 | 27.27% | 5 | 22.73% | 9 | 40.91% |
| Cincinnati | 1 | 2.63% | 3 | 7.89% | 11 | 28.95% | 5 | 13.16% | 18 | 47.37% |
| State Government | | | | | | | | | | |
| Cleveland | 1 | 14.29% | 0 | 0.00% | 1 | 14.29% | 1 | 14.29% | 4 | 57.14% |
| Cincinnati | 1 | 11.11% | 2 | 22.22% | 3 | 33.33% | 0 | 0.00% | 3 | 33.33% |
| Universities | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 1 | 20.00% | 0 | 0.00% | 4 | 80.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 1 | 20.00% | 4 | 80.00% |
| Hospitals | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 1 | 5.00% | 1 | 5.00% | 3 | 15.00% | 15 | 75.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 5 | 100.00% |
| Schools | | | | | | | | | | |
| Cleveland | 2 | 6.25% | 10 | 31.25% | 11 | 34.38% | 5 | 15.63% | 4 | 12.50% |
| Cincinnati | 8 | 14.81% | 7 | 12.96% | 27 | 50.00% | 6 | 11.11% | 6 | 11.11% |
| Libraries | | | | | | | | | | |
| Cleveland | 4 | 15.38% | 12 | 46.15% | 8 | 30.76% | 0 | 0.00% | 2 | 7.69% |
| Cincinnati | 4 | 15.38% | 13 | 50.00% | 9 | 34.62% | 0 | 0.00% | 0 | 0.00% |
| Charities | | | | | | | | | | |
| Cleveland | 12 | 14.46% | 20 | 24.10% | 28 | 33.73% | 12 | 14.46% | 11 | 13.25% |
| Cincinnati | 8 | 12.50% | 14 | 21.88% | 30 | 46.88% | 5 | 7.81% | 7 | 10.94% |
| All Strata | | | | | | | | | | |
| Cleveland | 19 | 9.74% | 45 | 23.08% | 56 | 28.72% | 26 | 13.33% | 49 | 25.13% |
| Cincinnati | 22 | 10.45% | 39 | 19.40% | 80 | 39.80% | 17 | 8.46% | 43 | 21.39% |

Question 30: Is There a Specific Budget for Telephone Service?

| Strata by City | Yes | | No | |
|----------------------|-------|--------|-------|--------|
| | Freq. | % | Freq. | % |
| Local Government | | | | |
| Cleveland | 18 | 64.29% | 10 | 35.71% |
| Cincinnati | 26 | 66.67% | 13 | 33.33% |
| State Government | | | | |
| Cleveland | 9 | 75.00% | 3 | 25.00% |
| Cincinnati | 8 | 53.33% | 7 | 46.67% |
| Universities | | | | |
| Cleveland | 4 | 80.00% | 1 | 20.00% |
| Cincinnati | 5 | 83.33% | 1 | 16.67% |
| Hospitals | | | | |
| Cleveland | 22 | 78.57% | 6 | 21.43% |
| Cincinnati | 11 | 91.67% | 1 | 8.33% |
| Schools | | | | |
| Cleveland | 22 | 37.93% | 36 | 62.07% |
| Cincinnati | 36 | 56.25% | 28 | 43.75% |
| Libraries | | | | |
| Cleveland | 10 | 35.71% | 18 | 64.29% |
| Cincinnati | 1 | 7.69% | 12 | 92.31% |
| Charities | | | | |
| Cleveland | 75 | 81.52% | 17 | 18.48% |
| Cincinnati | 54 | 79.41% | 14 | 20.59% |
| All Strata | | | | |
| Cleveland | 160 | 63.75% | 91 | 36.25% |
| Cincinnati | 141 | 64.98% | 76 | 35.02% |

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Question 30a: (If Yes) Is the telephone budget flexible? (Probe: Can the amount budgeted for telephone services be exceeded?)

| Strata by City | Yes | | No | |
|----------------------|-------|---------|-------|--------|
| | Freq. | % | Freq. | % |
| Local Government | | | | |
| Cleveland | 14 | 82.35% | 3 | 17.65% |
| Cincinnati | 22 | 88.00% | 3 | 12.00% |
| State Government | | | | |
| Cleveland | 7 | 77.78% | 2 | 22.22% |
| Cincinnati | 7 | 100.00% | 0 | 0.00% |
| Universities | | | | |
| Cleveland | 4 | 100.00% | 0 | 0.00% |
| Cincinnati | 2 | 50.00% | 2 | 50.00% |
| Hospitals | | | | |
| Cleveland | 16 | 72.73% | 6 | 27.27% |
| Cincinnati | 10 | 90.91% | 1 | 9.09% |
| Schools | | | | |
| Cleveland | 10 | 71.43% | 4 | 28.57% |
| Cincinnati | 24 | 68.57% | 11 | 31.43% |
| Libraries | | | | |
| Cleveland | 5 | 100.00% | 0 | 0.00% |
| Cincinnati | 0 | | 0 | |
| Charities | | | | |
| Cleveland | 58 | 81.69% | 13 | 18.31% |
| Cincinnati | 42 | 80.77% | 10 | 19.23% |
| All Strata | | | | |
| Cleveland | 114 | 80.28% | 28 | 19.72% |
| Cincinnati | 107 | 79.85% | 27 | 20.15% |

Question 30b: To your knowledge, has the budget for telephone services ever been exceeded?

| Strata by City | Yes | | No | |
|----------------------|-------|---------|-------|--------|
| | Freq. | % | Freq. | % |
| Local Government | | | | |
| Cleveland | 3 | 27.27% | 8 | 72.73% |
| Cincinnati | 9 | 45.00% | 11 | 55.00% |
| State Government | | | | |
| Cleveland | 1 | 14.29% | 6 | 85.71% |
| Cincinnati | 2 | 40.00% | 3 | 60.00% |
| Universities | | | | |
| Cleveland | 4 | 100.00% | 0 | 0.00% |
| Cincinnati | 3 | 100.00% | 0 | 0.00% |
| Hospitals | | | | |
| Cleveland | 11 | 61.11% | 7 | 38.89% |
| Cincinnati | 7 | 70.00% | 3 | 30.00% |
| Schools | | | | |
| Cleveland | 7 | 63.64% | 4 | 36.36% |
| Cincinnati | 13 | 54.17% | 11 | 45.83% |
| Libraries | | | | |
| Cleveland | 1 | 25.00% | 3 | 75.00% |
| Cincinnati | 0 | | 0 | |
| Charities | | | | |
| Cleveland | 31 | 56.36% | 24 | 43.64% |
| Cincinnati | 21 | 56.76% | 16 | 43.24% |
| All Strata | | | | |
| Cleveland | 58 | 52.73% | 52 | 47.27% |
| Cincinnati | 55 | 55.56% | 44 | 44.44% |

Question 30c: (If Yes) About how often?

| Strata by City | Often | | Occasionally | | Seldom | | Other | |
|----------------------|-------|---------|--------------|---------|--------|--------|-------|--------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government | | | | | | | | |
| Cleveland | 1 | 33.33% | 0 | 0.00% | 2 | 66.67% | 0 | 0.00% |
| Cincinnati | 1 | 14.29% | 0 | 0.00% | 6 | 85.71% | 0 | 0.00% |
| State Government | | | | | | | | |
| Cleveland | 1 | 100.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 1 | 50.00% | 0 | 0.00% | 1 | 50.00% | 0 | 0.00% |
| Universities | | | | | | | | |
| Cleveland | 0 | 0.00% | 2 | 50.00% | 2 | 50.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 2 | 100.00% | 0 | 0.00% | 0 | 0.00% |
| Hospitals | | | | | | | | |
| Cleveland | 2 | 18.18% | 3 | 27.27% | 6 | 54.55% | 0 | 0.00% |
| Cincinnati | 1 | 16.67% | 0 | 0.00% | 4 | 66.67% | 1 | 16.67% |
| Schools | | | | | | | | |
| Cleveland | 2 | 33.33% | 4 | 66.67% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 1 | 11.11% | 1 | 11.11% | 7 | 77.77% | 0 | 0.00% |
| Libraries | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Charities | | | | | | | | |
| Cleveland | 13 | 44.83% | 9 | 31.03% | 7 | 24.14% | 0 | 0.00% |
| Cincinnati | 2 | 10.53% | 7 | 36.84% | 9 | 47.37% | 1 | 5.26% |
| All Strata | | | | | | | | |
| Cleveland | 19 | 35.19% | 18 | 33.33% | 17 | 31.48% | 0 | 0.00% |
| Cincinnati | 6 | 13.33% | 10 | 22.22% | 27 | 60.00% | 2 | 4.44% |

RESPONSE CODES FOR
QUESTION 30c

001 0-9% of the time
002 10-19% of the time
003 20-29% of the time (once in 5 years)
004 30-39% of the time
005 40-49% of the time
006 50-59% of the time (half the time; 2 years out of 4)
007 60-69% of the time (3 out of 5 years)
008 70-79% of the time
009 80-89% of the time
010 90-99% of the time
011 100% of the time
012 often
013 occasionally
014 seldom
015 the majority of the time
016 once per year
017 only on a monthly basis
018 every year
019 once/last year

RESPONSE CONSOLIDATION CODE

Often - 8,9,10,11,12,15,18
Occasionally - 4,5,6,7,13,17
Seldom - 1,2,3,14,16,19
Other - 997

997 other
998 DK
999 MD/NA

Question 30d: Are your telephone bills broken down by the type of service or equipment provided?

| Strata by City | Yes | | No | |
|----------------------|-------|---------|-------|--------|
| | Freq. | % | Freq. | % |
| Local Government | | | | |
| Cleveland | 12 | 85.71% | 2 | 14.29% |
| Cincinnati | 14 | 70.00% | 6 | 30.00% |
| State Government | | | | |
| Cleveland | 4 | 57.14% | 3 | 42.86% |
| Cincinnati | 5 | 71.43% | 2 | 28.57% |
| Universities | | | | |
| Cleveland | 2 | 66.67% | 1 | 33.33% |
| Cincinnati | 4 | 100.00% | 0 | 0.00% |
| Hospitals | | | | |
| Cleveland | 17 | 89.47% | 2 | 10.53% |
| Cincinnati | 10 | 100.00% | 0 | 0.00% |
| Schools | | | | |
| Cleveland | 6 | 60.00% | 4 | 40.00% |
| Cincinnati | 9 | 45.00% | 11 | 55.00% |
| Libraries | | | | |
| Cleveland | 1 | 50.00% | 1 | 50.00% |
| Cincinnati | 0 | | 0 | |
| Charities | | | | |
| Cleveland | 41 | 65.08% | 22 | 34.92% |
| Cincinnati | 25 | 56.82% | 19 | 43.18% |
| All Strata | | | | |
| Cleveland | 83 | 70.34% | 35 | 29.66% |
| Cincinnati | 67 | 63.81% | 38 | 36.19% |

Question 31: (Government Agencies and Health Related Government Agencies Only) Realizing that potentially all the local population could use your services, about what percentage of the local population actually makes use of the services provided by your organization?

| Strata by City | 0-20% | | 21-40% | | 41-60% | | 61-80% | | 81-100% | | Other | |
|----------------------|-------|--------|--------|--------|--------|-------|--------|--------|---------|--------|-------|---------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Local Government | | | | | | | | | | | | |
| Cleveland | 7 | 30.43% | 5 | 21.74% | 1 | 4.35% | 4 | 17.39% | 6 | 26.09% | 0 | 0.00% |
| Cincinnati | 10 | 33.33% | 5 | 16.67% | 1 | 3.33% | 6 | 20.00% | 6 | 20.00% | 2 | 6.67% |
| State Government | | | | | | | | | | | | |
| Cleveland | 5 | 45.45% | 1 | 9.09% | 0 | 0.00% | 2 | 18.18% | 2 | 18.18% | 1 | 9.09% |
| Cincinnati | 6 | 54.55% | 0 | 0.00% | 1 | 9.09% | 0 | 0.00% | 2 | 18.18% | 2 | 18.18% |
| Universities | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Hospitals | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 1 | 100.00% |
| Schools | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Libraries | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Charities | | | | | | | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| All Strata | | | | | | | | | | | | |
| Cleveland | 12 | 35.29% | 6 | 17.65% | 1 | 2.94% | 6 | 17.65% | 8 | 23.53% | 1 | 2.94% |
| Cincinnati | 16 | 38.10% | 5 | 11.90% | 2 | 4.76% | 6 | 14.29% | 8 | 19.05% | 5 | 11.90% |

Question 32: (Hospitals, Clinics or Health Related Government Agencies Only)
 Does your institution provide any health services to the community that require extensive use of local telephone services?

| Strata by City | Yes | | No | |
|----------------------|-------|---------|-------|---------|
| | Freq. | % | Freq. | % |
| Local Government | | | | |
| Cleveland | 2 | 100.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 3 | 100.00% |
| State Government | | | | |
| Cleveland | 0 | 0.00% | 1 | 100.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| Universities | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| Hospitals | | | | |
| Cleveland | 12 | 42.86% | 16 | 57.14% |
| Cincinnati | 8 | 66.67% | 4 | 33.33% |
| Schools | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| Libraries | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| Charities | | | | |
| Cleveland | 1 | 50.00% | 1 | 50.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| All Strata | | | | |
| Cleveland | 15 | 45.45% | 18 | 54.55% |
| Cincinnati | 8 | 53.33% | 7 | 46.67% |

Question 32a: (If Yes) Could you tell me what those services are?

| Strata by City | General Health Services | | Special Programs | |
|----------------------|----------------------------|--------|---------------------|---------|
| | Freq. | % | Freq. | % |
| Local Government | | | | |
| Cleveland | 1 | 33.33% | 2 | 66.67% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| State Government | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| Universities | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| Hospitals | | | | |
| Cleveland | 11 | 61.11% | 7 | 38.89% |
| Cincinnati | 5 | 55.56% | 4 | 44.44% |
| Schools | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| Libraries | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| Charities | | | | |
| Cleveland | 0 | 0.00% | 2 | 100.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| All Strata | | | | |
| Cleveland | 12 | 52.17% | 11 | 47.83% |
| Cincinnati | 5 | 55.56% | 4 | 44.44% |

RESPONSE CODES FOR
QUESTION 32a

- 01 inpatient services
- 02 outpatient services
- 03 inpatient and outpatient services
- 04 alcohol rehabilitation program
- 05 home health care program
- 06 health care information for the public
- 07 pre-natal, pregnancy, lamaze classes
- 08 visiting nurse services
- 09 research studies
- 10 training of staff (nurses, residents, interns)
- 11 emergency room
- 12 physical therapy
- 13 surgery
- 14 regular hospital routine (non-specific)
- 15 social services (non-specific)
- 16 specific associations (blind and deaf, diabetes, heart, etc.)
- 17 mental health
- 18 x-ray
- 19 patient use
- 20 emergency line

RESPONSE CONSOLIDATION CODE

general health services - 1,2,3,11,12,13,14,18,19
special programs - 4,5,6,7,8,9,10,15,16,17,20

- 97 Other
- 98 DK
- 99 MD/NA

Question 32b: (If at least one service provided) Which, if any, of these services are/Is this service provided only by your organization?

| Strata by City | None | | General Health Services | | Special Programs | |
|----------------------|-------|--------|----------------------------|---------|---------------------|---------|
| | Freq. | % | Freq. | % | Freq. | % |
| Local Government | | | | | | |
| Cleveland | 0 | 0.00% | 2 | 100.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| State Government | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Universities | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Hospitals | | | | | | |
| Cleveland | 7 | 58.33% | 3 | 25.00% | 2 | 16.67% |
| Cincinnati | 3 | 75.00% | 1 | 25.00% | 0 | 0.00% |
| Schools | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Libraries | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Charities | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 1 | 100.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| All Strata | | | | | | |
| Cleveland | 7 | 46.67% | 5 | 33.33% | 3 | 20.00% |
| Cincinnati | 3 | 75.00% | 1 | 25.00% | 0 | 0.00% |

RESPONSE CODE FOR
QUESTION 32b

- 01 none
- 02 all
- 03 inpatient services
- 04 outpatient services
- 05 inpatient and outpatient services
- 06 alcohol rehabilitation program
- 07 home health care program
- 08 health care information for the public
- 09 pre-natal, pregnancy, lamaze classes
- 10 visiting nurse services
- 11 research studies
- 12 training of staff (nurses, residents, interns)
- 13 emergency room
- 14 physical therapy
- 15 surgery
- 16 regular hospital routine (non-specific)
- 17 social services (non-specific)
- 18 specific associations (blind and deaf, diabetes, heart, etc.)

RESPONSE CONSOLIDATION CODE

general health services - 2,3,4,5,13,14,15,16
special programs - 6,7,8,9,10,11,12,17,18
none - 1

- 97 other
- 98 DK
- 99 MD/NA

Question 33: Including in- and outpatients, about how many patients are treated annually?

| Strata by City | < 5000 | | ≥ 5000 | |
|----------------------|--------|---------|--------|---------|
| | Freq. | % | Freq. | % |
| Local Government | | | | |
| Cleveland | 1 | 100.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| State Government | | | | |
| Cleveland | 0 | 0.00% | 1 | 100.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| Universities | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| Hospitals | | | | |
| Cleveland | 4 | 26.67% | 11 | 73.33% |
| Cincinnati | 2 | 25.00% | 6 | 75.00% |
| Schools | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| Libraries | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| Charities | | | | |
| Cleveland | 1 | 100.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| All Strata | | | | |
| Cleveland | 6 | 33.33% | 12 | 66.67% |
| Cincinnati | 2 | 33.33% | 6 | 66.67% |

RESPONSE CODE FOR
QUESTION 33

- 01 less than 100 patients or families/year
- 02 100-999 patients or families/year
- 03 1,00-4,999 patients or families/year
- 04 5,000-9,999 patients or families/year
- 05 10,000-24,999 patients or families/year
- 06 25,000-49,999 patients or families/year
- 07 50,000-74,999 patients or families/year
- 08 75,000-99,999 patients or families/year
- 09 100,000-199,999 patients or families/year
- 10 200,000-499,999 patients or families/year
- 11 more than 500,000 patients or families/year

RESPONSE CONSOLIDATION CODE

- < 5000 - 1,2,3
- > 5000 - 4,5,6,7,8,9,10,11

- 97 Other
- 98 DK
- 99 MD/NA

Question 34: (Schools or universities only) Approximately how many students were enrolled in your school during the past academic year?

| Strata by City | < 1000 Students | | ≥ 1000 Students | |
|----------------------|-----------------|--------|-----------------|---------|
| | Freq. | % | Freq. | % |
| Local Government | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| State Government | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| Universities | | | | |
| Cleveland | 0 | 0.00% | 4 | 100.00% |
| Cincinnati | 3 | 50.00% | 3 | 50.00% |
| Hospitals | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| Schools | | | | |
| Cleveland | 76 | 90.48% | 8 | 9.52% |
| Cincinnati | 64 | 87.67% | 9 | 12.33% |
| Libraries | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| Charities | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| All Strata | | | | |
| Cleveland | 76 | 86.36% | 12 | 13.64% |
| Cincinnati | 67 | 84.81% | 12 | 15.19% |

RESPONSE CODES FOR
QUESTION 34

- 01 less than 100 students
- 02 100-499 students
- 03 500-999 students
- 04 1,000-1,999 students
- 05 2,000-3,499 students
- 06 3,500-4,999 students
- 07 5,000-9,999 students
- 08 10,000-19,999 students
- 09 20,000-34,999 students
- 10 35,000-49,999 students
- 11 50,000-74,999 students
- 12 75,000-99,999 students
- 13 100,000-249,999 students
- 14 more than 250,000 students

RESPONSE CONSOLIDATION CODE

- < 1000 students - 1,2,3
- ≥ 1000 students - 4,5,6,7,8,9,10,11,12,13,14

- 97 Other
- 98 DK
- 99 MD/NA

Question 35: Does your school provide any educational services that require extensive use of local telephone service?

| Strata by City | Yes | | No | |
|----------------------|-------|--------|-------|--------|
| | Freq. | % | Freq. | % |
| Local Government | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| State Government | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| Universities | | | | |
| Cleveland | 2 | 40.00% | 3 | 60.00% |
| Cincinnati | 1 | 16.67% | 5 | 83.33% |
| Hospitals | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| Schools | | | | |
| Cleveland | 17 | 20.99% | 64 | 79.01% |
| Cincinnati | 33 | 45.21% | 40 | 54.79% |
| Libraries | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| Charities | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% |
| All Strata | | | | |
| Cleveland | 19 | 22.09% | 67 | 77.91% |
| Cincinnati | 34 | 43.04% | 45 | 56.96% |

Question 35a: (If Yes) What are those services?

| Strata by City | General Educational Services | | Specific Edu- cational Programs | | None | |
|----------------------|---------------------------------|---------|------------------------------------|--------|-------|-------|
| | Freq. | % | Freq. | % | Freq. | % |
| Local Government | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| State Government | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Universities | | | | | | |
| Cleveland | 3 | 100.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 2 | 66.67% | 1 | 33.33% | 0 | 0.00% |
| Hospitals | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Schools | | | | | | |
| Cleveland | 20 | 74.07% | 6 | 22.22% | 1 | 3.70% |
| Cincinnati | 34 | 85.00% | 6 | 15.00% | 0 | 0.00% |
| Libraries | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Charities | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| All Strata | | | | | | |
| Cleveland | 23 | 76.67% | 6 | 20.00% | 1 | 3.33% |
| Cincinnati | 36 | 83.72% | 7 | 16.28% | 0 | 0.00% |

Question 35b: (If at least one service provided) Which, if any, of these services are/Is this service provided only by your agency?

| Strata by City | General Educational Services | | Specific Edu- cational Programs | | None | |
|----------------------|---------------------------------|---------|------------------------------------|-------|-------|--------|
| | Freq. | % | Freq. | % | Freq. | % |
| Local Government | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| State Government | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Universities | | | | | | |
| Cleveland | 1 | 50.00% | 0 | 0.00% | 1 | 50.00% |
| Cincinnati | 1 | 100.00% | 0 | 0.00% | 0 | 0.00% |
| Hospitals | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Schools | | | | | | |
| Cleveland | 5 | 33.33% | 0 | 0.00% | 10 | 66.67% |
| Cincinnati | 3 | 10.34% | 1 | 3.45% | 25 | 86.21% |
| Libraries | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Charities | | | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| All Strata | | | | | | |
| Cleveland | 6 | 35.29% | 0 | 0.00% | 11 | 64.71% |
| Cincinnati | 4 | 13.33% | 1 | 3.33% | 25 | 83.33% |

RESPONSE CODES FOR
QUESTIONS 35a&b

- 001 tutorial services (reading, math)
- 002 psychological services
- 003 counseling (general)
- 004 consumer services (information and advice)
- 005 record-keeping (non-specific)
- 006 lunch-room services
- 007 health records
- 008 scheduling
- 009 supervising
- 010 computers; terminal hook-ups
- 011 security
- 012 health personnel and services
- 013 community liaison work
- 014 reading instruction programs
- 015 none/no
- 016 social services
- 017 library services
- 018 client contact
- 019 distributing resources and supplies
- 020 recreation programs
- 021 Job placement

RESPONSE CONSOLIDATION CODE

general educational services - 1,3,4,5,6,7,8,9,10,11,12,13,16,18,19
specific educational programs - 2,14,17,20,21
none - 15

- 097 other
- 098 DK
- 099 MD/NA

Question 36: (Libraries Only) Approximately how many books are circulated annually by your library?

| Strata by City | <50,000 | | ≥ 50,000 | | Other | |
|----------------------|---------|--------|----------|--------|-------|-------|
| | Freq. | % | Freq. | % | Freq. | % |
| Libraries | 17 | 50.00% | 17 | 50.00% | 0 | 0.00% |
| Cleveland | 8 | 25.81% | 22 | 70.97% | 1 | 3.23% |
| Cincinnati | | | | | | |
| All Strata | 17 | 50.00% | 17 | 50.00% | 0 | 0.00% |
| Cleveland | 8 | 25.81% | 22 | 70.97% | 1 | 3.23% |
| Cincinnati | | | | | | |

RESPONSE CODES FOR
QUESTION 36

- 01 less than 1,000 books
- 02 1,000 - 9,999 books
- 03 10,000 - 19,999 books
- 04 20,000 - 49,999 books
- 05 50,000 - 74,999 books
- 06 75,000 - 149,999 books
- 07 150,000 - 299,999 books
- 08 300,000 - 499,999 books
- 09 500,000 - 999,999 books
- 10 more than 1,000,000 books

RESPONSE CONSOLIDATION CODE

- less than 50,000 - 1,2,3,4
- more than 50,000 - 5,6,7,8,9,10

- 97 Other
- 98 DK
- 99 MD/NA

Question 37: Does your library provide any services that require extensive use of local telephone services?

| Strata by City | Yes | | No | |
|----------------------|-------|--------|-------|--------|
| | Freq. | % | Freq. | % |
| Libraries | | | | |
| Cleveland | 10 | 29.41% | 24 | 70.59% |
| Cincinnati | 13 | 43.33% | 17 | 56.67% |
| All Strata | | | | |
| Cleveland | 10 | 29.41% | 24 | 70.59% |
| Cincinnati | 13 | 43.33% | 17 | 56.67% |

Question 37a: (If yes) What are those services?

| Strata by City | General Services | | Specific Programs | |
|----------------------|------------------|--------|-------------------|--------|
| | Freq. | % | Freq. | % |
| Libraries | | | | |
| Cleveland | 2 | 10.00% | 18 | 90.00% |
| Cincinnati | 6 | 28.57% | 15 | 71.43% |
| All Strata | | | | |
| Cleveland | 2 | 10.00% | 18 | 90.00% |
| Cincinnati | 6 | 28.57% | 15 | 71.43% |

Question 37b: (If at least one service provided) Which, if any, of these services are/Is this service provided by your organization?

| Strata by City | General Services | | Specific Programs | | None | | Other | |
|----------------------|------------------|--------|-------------------|--------|-------|--------|-------|-------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Libraries | | | | | | | | |
| Cleveland | 1 | 9.09% | 3 | 27.27% | 6 | 54.55% | 1 | 9.09% |
| Cincinnati | 2 | 13.33% | 6 | 40.00% | 7 | 46.67% | 0 | 0.00% |
| All Strata | | | | | | | | |
| Cleveland | 1 | 9.09% | 3 | 27.27% | 6 | 54.55% | 1 | 9.09% |
| Cincinnati | 2 | 13.33% | 6 | 40.00% | 7 | 46.67% | 0 | 0.00% |

RESPONSE CODES FOR
QUESTIONS 35a&b

001 no/none
002 inter-loan services
003 securing and locating books for patrons
004 notifying patrons
005 extensive searches for material for a patron
006 information
007 contacting public, agencies, libraries (general)
008 contacting schools
009 programs (non-specific)

RESPONSE CONSOLIDATION CODE

general services - 7,8,9
specific programs - 2,3,4,5,6
none - 1
other - 997

997 other
998 DK
999 MD/NA

Question 38: Approximately how many people contribute to your organization annually? (Charities)

| Strata by City | Contributions from other funds | | < 1000 | | ≥ 1000 | | Other | |
|----------------|--------------------------------|--------|--------|--------|--------|--------|-------|-------|
| | Freq. | % | Freq. | % | Freq. | % | Freq. | % |
| Charities | | | | | | | | |
| Cleveland | 43 | 55.84% | 19 | 24.68% | 14 | 18/18% | 1 | 1.30% |
| Cincinnati | 34 | 61.82% | 13 | 23.64% | 6 | 10/91% | 2 | 3.64% |
| All Strata | | | | | | | | |
| Cleveland | 43 | 55.84% | 19 | 24.68% | 14 | 18.18% | 1 | 1.30% |
| Cincinnati | 34 | 61.82% | 13 | 23.64% | 6 | 10.91% | 2 | 3.64% |

RESPONSE CODES FOR
QUESTION # 38

- 01 government contributes; 100% tax supported
- 02 Community Chest contributes
- 03 religious charities contribute
- 04 private firms contribute
- 05 United Appeal contributes
- 06 United Way contributes
- 07 foundations or memorial contributions
- 08 non-profit organizations contribute
- 09 clients contribute
- 10 individual contributors
- 11 0-49
- 12 50-99
- 13 100-199
- 14 200-399
- 15 400-599
- 16 600-999
- 17 1,000-1,499
- 18 1,500-1,999
- 19 2,000-2,499
- 20 2,500-4,999
- 21 5,000-9,999
- 22 10,000-99,999
- 23 more than 100,000
- 24 combination of charitable, private organizations, individuals and government

RESPONSE CONSOLIDATION CODE

contribution came from other funds - 1,2,3,4,5,6,7,8,9,10,24
< 1000 - 11,12,13,14,15,16
> 1000 - 17,18,19,20,21,22,23

- 95 Received no financial contributions
- 96 refused to answer; not allowed to give information; etc.
- 97 other
- 98 DK
- 99 MD/NA

RESPONSE CODES FOR
QUESTION 39

- 01 \$15,000-\$24,999
- 02 \$25,000-\$49,999
- 03 \$50,000-\$99,999
- 04 \$100,000-\$149,999
- 05 \$150,000-\$199,999
- 06 \$200,000-\$249,999
- 07 \$250,000-\$399,999
- 08 \$400,000-\$599,999
- 09 \$600,000-\$749,999
- 10 \$750,000-\$999,999
- 11 greater than \$1 million
- 12 \$100,000-\$149,999 (based on an average contribution per contributor)
- 13 \$100 or less
- 14 Gave partial figure, applicable only to private contributions; DK amount of others
- 15 \$101-\$499.
- 16 \$500-\$999
- 17 \$1,000-\$4,999
- 18 \$5,000-\$9,999
- 19 \$10,000-\$14,999

RESPONSE CONSOLIDATION CODE

- < 200,000 - 1,2,3,4,5,12,13,14,15,16,17,18,19
- > 200,000 but less than 1,000,000 - 6,7,8,9,10
- > 1,000,000 - 11

- 96 refused to answer; not allowed to give information; etc.
- 97 other
- 98 DK
- 99 MD/NA

Question 40: Does your organization provide any services that require extensive use of local telephone services?

| Strata by City | Yes | | No | |
|------------------|-------|---------|-------|--------|
| | Freq. | % | Freq. | % |
| Local Government | | | | |
| Cleveland | 0 | 0.00% | 0 | 0.00% |
| Cincinnati | 1 | 100.00% | 0 | 0.00% |
| Charities | | | | |
| Cleveland | 55 | 59.14% | 38 | 40.86% |
| Cincinnati | 40 | 60.61% | 26 | 39.39% |
| All Strata | | | | |
| Cleveland | 55 | 59.14% | 38 | 40.86% |
| Cincinnati | 41 | 61.19% | 26 | 38.81% |

Question 40a: (If yes) What are those services?

| Strata by City | General Social Services | | Specific Programs | | Other | |
|------------------|-------------------------|--------|-------------------|---------|-------|-------|
| | Freq. | % | Freq. | % | Freq. | % |
| Local Government | 0 | 0.00% | 0 | 0.00% | 0 | 0.00% |
| Cleveland | 0 | 0.00% | 1 | 100.00% | 0 | 0.00% |
| Cincinnati | | | | | | |
| Charities | 57 | 68.67% | 24 | 28.92% | 2 | 2.41% |
| Cleveland | 58 | 82.86% | 11 | 15.71% | 1 | 1.43% |
| Cincinnati | | | | | | |
| All Strata | 57 | 68.67% | 24 | 28.92% | 2 | 2.41% |
| Cleveland | 58 | 81.69% | 12 | 16.90% | 1 | 1.41% |
| Cincinnati | | | | | | |

RESPONSE CODES FOR
QUESTION 40a

- 01 emergency services
- 02 mental health referral
- 03 information referral
- 04 manpower and jobs development
- 05 code violation complaints
- 06 organizing and securing volunteers
- 07 contacting families
- 08 social services (general)
- 09 client advocacy
- 10 client contact
- 11 transportation arrangement
- 12 ideological help
- 13 referrals (non-specific)
- 14 accounting services
- 15 fund raising
- 16 job placement
- 17 elderly day care
- 18 information (general)
- 19 telethon
- 20 nutrition program
- 21 pension specialists
- 22 residential care (general)
- 23 counseling
- 24 patient aid/assistance
- 25 membership recruitment
- 26 children's services
- 27 surveys
- 28 contacting other agencies, organizations
- 29 community service, community crises

RESPONSE CONSOLIDATION CODE

general social service - 6,7,8,9,10,11,12,13,14,15,18,22,23,24,25,26,27,28,29
specific programs - 1,2,3,4,5,16,17,19,20,21

- 97 other
- 98 DK
- 99 MD/NA

Question 40b: (If at least one service provided) Which, if any, of these services are/is this service provided only by your organization?

| Strata by City | General Social Services | | Specific Programs | | Other | |
|----------------|-------------------------|--------|-------------------|--------|-------|-------|
| | Freq. | % | Freq. | % | Freq. | % |
| Charities | 11 | 18.97% | 47 | 81.03% | 0 | 0.00% |
| Cleveland | 13 | 26.53% | 34 | 69.39% | 2 | 4.08% |
| Cincinnati | | | | | | |
| All Strata | 11 | 18.97% | 47 | 81.03% | 0 | 0.00% |
| Cleveland | 13 | 26.53% | 34 | 69.39% | 2 | 4.08% |
| Cincinnati | | | | | | |

RESPONSE CODES FOR
QUESTION 40b

001 yes
002 none
003 no
004 emergency services
005 counseling
006 mental health referral
007 information referral
008 manpower and jobs development
009 code violation complaints
010 organizing and securing volunteers
011 contacting families
012 social services (general)
013 client advocacy
014 client contact
015 transportation arrangement
016 ideological help
017 referrals (non-specific)
018 accounting services
019 fundraising
020 job placement
021 elderly day care
022 information (general)
023 telethon
024 nutrition program
025 pension specialists
026 residential care (general)
027 children's services

RESPONSE CONSOLIDATION CODE

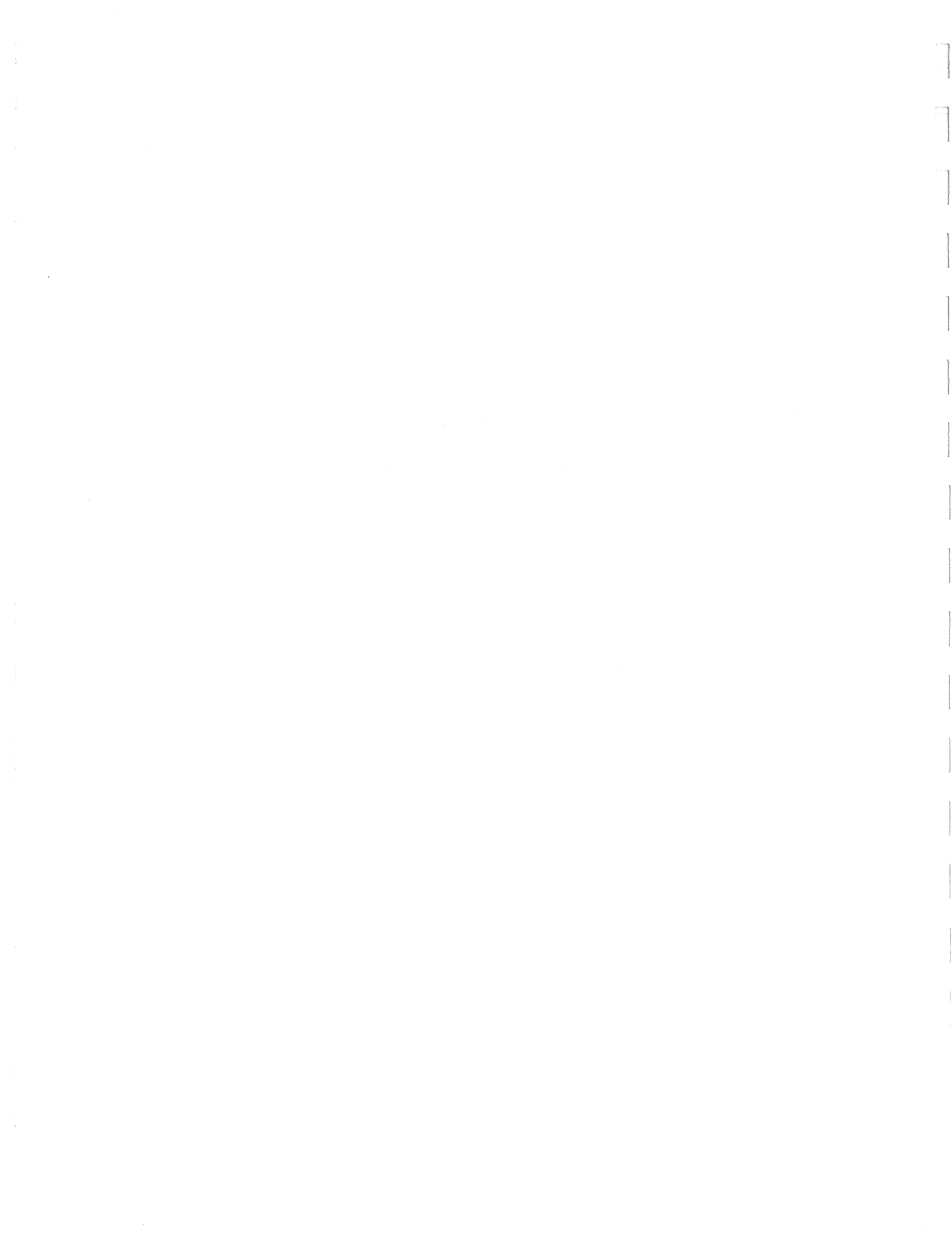
general services - 1,5,10,11,12,13,14,15,16,17,18,19,22,26,27
specific programs - 4,6,7,8,9,20,21,23,24,25
none - 2,3

997 other
998 DK
999 MD/NA



APPENDIX G

DEMOGRAPHIC CONSIDERATIONS



APPENDIX G
DEMOGRAPHIC CONSIDERATIONS

Since this project is concerned with comparing telephone usage between Cincinnati and Cleveland, it is useful to look at the demographic statistics for the two cities. In the following paragraphs, key variables--population, employment and income--are compared for the two standard metropolitan statistical areas (a Bureau of the Census designation). All data collected are contained in tables at the end of this appendix.

The first demographic characteristics to discuss are those concerning population. In July 1975, the total population of Cincinnati was 1,381,196. For Cleveland, this figure was 1,966,725 which is approximately 42.4% more. Of interest was the population density per square mile. In Cincinnati, this figure was 643. For Cleveland, this figure was 1295, which is 101% more. This has interesting implications concerning social and/or public services. It is of interest to note that the percentage of population that is sixty-five years or older was the same for both cities--10.3 percent.¹ That age group demands certain types of social services that our study is interested in.

The data presented is for those individuals employed under social security coverage in 1975. For Cincinnati, the total employed was 452,930. For Cleveland, this figure was 720,246--59 percent more. In

¹U.S. Department of Commerce, U.S. Bureau of the Census, County and City Data Book, 1977 (A Statistical Abstract Supplement), pp. 548-557.

Cincinnati, 34.5% and 27% of the total employed were in manufacturing, and wholesale and retail trade respectively. For Cleveland, these figures were 37.1% and 24.9%.²

Income was another relevant demographic characteristic. In 1974, total per capita income in Cincinnati was \$4,637.³ In Cleveland this figure was \$5,138, or 10.8% more. With respect to effective buying income in 1978, Cincinnati had a total estimated buying income of \$9,411,360,000, and a median household effective buying income of \$17,827. For Cleveland these figures were \$11,092,732,000 and \$17,948. The income distribution was roughly comparable between cities, for those with effective buying incomes of \$8,000 or more (see Table B).

²Ibid.

³U.S. Bureau of Commerce, op. cit.

TABLE A
DEMOGRAPHIC CHARACTERISTICS OF CINCINNATI AND CLEVELAND

| <u>Category</u> | <u>Cincinnati</u> | <u>Cleveland</u> | <u>% More/Less in Cleveland</u> |
|---|-------------------|------------------|-------------------------------------|
| 1. Land Area (Sq. Mi.) | 2,149 | 1,519 | Cleveland 71% of Cincinnati |
| 2. Population (July 1975) | | | |
| A. Total | 1,381,196 | 1,966,725 | ≈42.4% more |
| B. Per square mile | 643 | 1,295 | ≈101.4% more |
| C. 65 years (%) & over | 10.3% | 10.3% | same |
| D. Change 1970-1975 | | | |
| Total (%) | -.2% | -4.3% | 4.1% more |
| 3. Employment Social Security Coverage (1975) | | | |
| A. Total | 452,930 | 720,246 | ≈59.0% more |
| B. In Manufacturing (%) | 34.5% | 37.1% | 2.6% more |
| C. In Wholesale & Retail Trade (%) | 27.0% | 24.9% | 2.1% less |
| D. Payroll (mil. dol.) | 4,711.3 | 7,926.9 | 68.2% more |
| 4. Public School Enrollment (1975) | 268,947 | 389,910 | ≈44.9% more |
| 5. Money Income | | | |
| A. Per capita Income in 1974 (based on July 1, 1975 population) | | | |
| 1. Total (dollars) | 4,637 | 5,138 | ≈10.8% more |
| 2. Average annual change 1969-1974 (%) | 7.4% | 6.9% | .5% less |

Source: U.S. Department of Commerce, U.S. Bureau of the Census, County and City Data Book, 1977 (A Statistical Abstract Supplement), pp. 548-557.

TABLE B
EFFECTIVE BUYING INCOME OF CINCINNATI AND CLEVELAND

| ESTIMATES | | Median Hsld EBI* | EFFECTIVE BUYING INCOME 1978 | | | | Buyers Power Index |
|--------------|--------------------|------------------|--|------|------|------|--------------------|
| Metropolitan | Total EBI* (\$000) | | % of Hslds. By EBI* Group | | | | |
| | | | (A) \$ 8,000-\$ 9,999 (B) \$10,000-\$14,999 (C) \$15,000-\$24,999 (D) \$25,000 & Over | | | | |
| | | | A | B | C | D | |
| Cincinnati | 9,411,360 | 17,827 | 5.1 | 14.6 | 33.0 | 26.7 | .6430 |
| Cleveland | 14,567,842 | 19,446 | 4.3 | 12.9 | 34.1 | 31.2 | .9683 |

*Effective Buying Income

Source: "Survey of Buying Power," Sales and Marketing Management, July 23, 1979, (c-164) - (C-165).