ANALYSIS OF THE RESIDENTIAL DEMAND FOR IMPROVED CB/MOBILE RADIO SERVICES IN RURAL CANADA

Presented to: Keith Richardson, Department of Communications, Journal Tower Building North, 300 Slater Street, Suite 1720, Ottawa, Ontario KlA 0C8

(March, 1982)



DEMAND RESEARCH CONSULTANTS INCORPORATED

P 92 C2 B6772 1982

Government of Canada Department of Communications

Gouvernement du Canada Ministère des Communications

DOC CONTRACTOR REPORT

DOC-CR-CS-(1981)-(0028)

Industry Canada Library Queen

JUL 23 1998

Industrie Canada

Bibliothèque Queen

Vérifier Proces C2 B6772 1982

DEPARTMENT OF COMMUNICATIONS - OTTAWA - CANADA

COMMUNICATIONS SYSTEMS RESEARCH AND DEVELOPMENT

TITLE: /AN ANALYSIS OF THE DEMAND FOR IMPROVED CB/MOBILE RADIO SERVICES, IN RURAL CANADA AUTHOR(S): Dr./Jacques C. LBOURGEOIS/ Dr. Renaud de CAMPRIEU

ISSUED BY CONTRACTOR AS REPORT NO: 8101002

CONTRACTOR: DEMAND Research Consultants Inc.

DEPARTMENT OF SUPPLY AND SERVICES CONTRACT NO: 06ST.36001-0-3271

DOC SCIENTIFIC AUTHORITY: Keith Richardson

CLASSIFICATION; Unclassified

This report presents the views of the author(s). Publication of this report does not constitute DOC approval of the report's findings or conclusions. This report is available outside the Department by special arrangement.



DATE: March, 1982

.

.

DD 4484367 DL4484414 \mathcal{P} 92 C3 B6112 1982

. .

.

ľ

₿

ł

1

Î

•

AN ANALYSIS OF THE RESIDENTIAL DEMAND FOR IMPROVED <u>CB/MOBILE RADIO</u> SERVICES IN RURAL CANADA

raye

Executive	Summary	of	Findings
-----------	---------	----	----------

1.	<pre>Introduction 1.1 Background 1.2 Objectives 1.2.1 Objectives of Need Analysis 1.2.2 Objectives of Demand Forecasting 1.2.3 Extent of Analysis 1.3 Overview of Methodology</pre>	1 3 3 4 4
II.	Analysis of Results	6
	2.1 Services Currently Used	6
	2.1.1 Proportion of Households Owning CB/GRS	
	and/or Mobile Radio Equipment	6
	2.1.2 Profiling CB and Mobile Radio Owners	
	Against Non-Owners	8
	2.1.3 Profiling Mobile Radio Owners Against	
	CB/GRS Owners ·	19
	2.2 Motivations	20
	2.2.1 Motivations for Using CB/GRS	20
	2.2.2 Motivations for Using Mobile Radio	20
	2.2.3 Differences in Motivational Patterns	•
. •	Between CB and Mobile Radio Users	23
	2.3 Perceived Need for Improvement in Service	27
	2.3.1 Priority Against Other Services	27
	2.3.2 Intensity of Need Relative to	~~
	Telecommunication Services	29
	2.3.3 Correlates of Intensity of Need for	
	Improvement in CB or Mobile Radio	~ ~
	Services	32
	2.4 Short Term Demand Forecast	39
	Z.4.1 Combined Telephone-Mobile Radio	20
	2 A 2 Correlator	59
	2.4.2 COlletaces 2.5 Long Term Demand Forecast	55
	2.5 L Combined Telephone-Mobile Padio	55
	Service	55

III. Conclusions

DEMAND RESEARCH CONSULTANTS INCORPORATED



61

Appendix A - Methodology

A.l Genesis

A.2 Need and Forecasting Models

A.2.1 Conjoint Measurement

A.2.2 Simulated Choice Scenarios

A.2.3 Diffusion Model

A.3 Survey Method and Instrument

A.4 Sampling

A.4.1 Sampling frame

A.4.2 Sample size

A.4.3 Sampling procedure

A.5 Sample Characteristics and Representativeness

A.5.1 Population Dispersion Characteristics

A.5.2 Sample Characteristics

A.5.3 Weighting Scheme

Appendix B - Glossary of Technical Terms

Appendix C - Questionnaire

DEMAND RESEARCH CONSULTANTS INCORPORATED

RE

'n

EXECUTIVE SUMMARY OF FINDINGS

i -

G

This report is one of three which analyse the results of a survey of 2,667 rural households. These households were selected to represent a statistically valid sample of the more than 1.4 million rural households in Canada. In this volume¹ we analyse a number of aspects of residential CB/GRS2 mobile radio³ and services to determine the underlying concerns of rural households and forecast what services they require in the short and long term.

Results are presented for the five regions of Canada (Atlantic, Quebec, Ontario, Prairie, British Columbia). National results are also shown for households in "small" communities (less than 1000 residents) and "large" communities (1000 - 2499 residents). Some key findings are:

- 1 Companion reports are concerned with rural residential demand for telephone and television services.
- 2 The survey questionnaire was couched in terms of "CB" or "General Radio Service" since these two terms were most easily recognizable by respondents.
- ³ "Mobile radio" is a blanket category which covers many different kinds of service (e.g. mobile telephone); the survey sample was too small to differentiate this category.

- approximately five percent (5.1%) of the rural households in Canada own mobile radio equipment and roughly three times as many (14.7%) own CB/GRS equipment (noting that 3.9% own both).
- of those respondents who own both CB/GRS and mobile radio equipment, over half (51.2%) consider CB to be the most important.
- Canadian rural households which own CB/GRS equipment tend to:
 - be more physically isolated
 - be more educated
 - have more household members
 - be younger
 - have a higher household income
 - consider their way of life to be rural
 - have lived in their present home for a shorter period of time
 - be less satisfied with their overall telephone service
 - not be retired
 - be labourers or farmers
 - be married
 - speak English most often at home

similarly, respondents in rural Canada who own mobile radio equipment were found to:

- have more people in their home
- be younger
- have a higher household income
- consider their way of life rural
- have lived in their present home for a shorter period of time
- not be retired

DEMAND RESEARCH CONSULTANTS INCORPORATED

RE

- speak English most often at home
- mobile radio owners differed from CB/GRS owners on only two characteristics - language and occupation:
 - mobile radio owners are relatively more likely to speak English most often at home
 - a smaller proportion of mobile radio owners are farmers, while relatively more are homemakers and executives.
- in Canada, "business" received the highest average score as the basic motivation for using both CB/GRS and mobile radios. "Emergencies" and "fun/hobby" were the second and third most important underlying motives.
- the motivational patterns of both CB/GRS and mobile radio owners were found to be similar.
- in rural Canada, "roads and public transportation" was the service which was most strongly thought to require improvement.
- according to the average national rating for each of twelve public services, television ranked second, telephone fourth, and radio broadcasting and CB/mobile radio eleventh and twelfth respectively.

- with regard to the relative intensity of need for improvement to telecommunication services in Canada, the four services rank in the same order as when compared to the other services (i.e. television first, telephone second, radio third, and CB/mobile radio fourth).
- at the national level, as the intensity of need for improvement in CB/GRS and mobile radio services increase, so does the likelihood that respondents:
 - will own CB/GRS and/or mobile radio equipment
 - use their equipment for convenience.
 - have a higher household income
 - be farmers or executives
 - speak French most often at home (although the majority speak English)
 - with regard to a new combined telephone and mobile radio service, it was found that approximately 15% to 20% of the respondents in rural Canada would be interested in this service within the first year of the service being offered. Although the proportion of households remains fairly consistent across regions and community sizes, the sensitivity of demand to price varies between regions.
- those respondents who are more likely to buy, within a year, the new equipment necessary for the combined

telephone - mobile radio service at each of three different prices (\$300, \$500, \$700), are profiled in terms of various household characteristics (at the national level only).

- long term demand was also forecasted for the combined telephone - mobile radio service. The forecast indicated that approximately half (or 222,900 households if the price is \$300), of the "potential market" would purchase the necessary equipment within three years. For this service, market saturation would occur after approximately nine years.

I. INTRODUCTION

1.1 Background

The present document is one of a series of four, reporting on an empirical analysis of the need and demand for improved telecommunication services in rural Canada; it focuses on residential mobile radio services.

The identification of the needs of rural people and the analysis of their demand is one of the many facets of Phase II of the Rural Communications Program¹; its raison d'être has been expressed by Keith Richardson (DOC) in the following fashion:

"The Rural Communications Program was established by the Department of Communications as a result of growing concern about the apparently increasing disparity in the level of communications services available in urban and rural Canada ... The basic problems with rural communications are related to cost, i.e. the high cost of providing services from distribution point to а subscribers scattered over a wide geographic area. This fact, coupled with a relatively small market base, results in a high unit cost per subscriber and hence service which is "uneconomic" at affordable rates. Fortunately, at this point in time, several new technologies have the potential appear to for altering the cost equations in а significant way. Briefly, studies have identified the most promising for technologies the delivery of services to rural homes to be:

1

"Present Status of Rural Communications in Canada", Inter-Branch Working Group on Rural Communications, Department of Communications, Ottawa, (July 1976).

- broadband networks based on fiber optic or coaxial cables
- satellite direct to home broadcasting
- radio telephone distribution systems

Each technology has its own special capabilities however which ...; technologies be technology or should brought forward is not obvious, partly because the Department does not yet have clear understanding of the service a requirements of the rural subscriber and his ability and willingness to pay for improvement."1

This statement gives the rationale behind the analysis of demand and clarifies the nature of the input required. The purpose of this report is to provide that input with respect to residential mobile radio services. Results dealing with residential television service, residential telephone service and business telephone and mobile radio services can be found in companion reports.2,3,4

Demand analysis and forecasting is a difficult exercise; the validity of the results rests upon:

- Richardson, K., "Study of the Demand for Communication Services in Rural Canada - Field Survey - Domestic Segment". Planning Report, Department of Communications, Ottawa, (May 1980) p.3.
- Bourgeois, J.C., and Camprieu, R. (de), "An Analysis of the Residential Demand for Improved Television Services in Rural Canada", DEMAND Research Consultants Inc., Ottawa, (March, 1982).
- Bourgeois, J.C., and Camprieu, R. (de), "An Analysis of the Residential Demand for Telephone Services in Rural Canada", DEMAND Research Consultants Inc., Ottawa, (March, 1982).
- ⁴ Bourgeois, J.C., and Camprieu, R. (de), "An Analysis of the Business Demand for Improved Telecommunication Services in Rural Canada", DEMAND Research Consultants Inc., Ottawa, (March, 1982).

- 2 -

n

- 1) the research objectives that are pursued,
- 2) the relevance of a series of assumptions and operational definitions,
- 3) the appropriateness of the methodological apparatus set up to infer needs and demand forecasts.

The research objectives underlying this report are stated in section 1.2, and a summary of the methodology is given in section 1.3. Appendix A provides a more detailed account of the methodology.

1.2 Objectives

The overall objective of this report is to analyse the needs of rural households for mobile radio service and to forecast their demand for a mobile telephone service. Specific, actionable objectives have been defined as follows:

1.2.1 Objectives of Need Analysis

Within the context of the present research, the concept of need can be approached from several perspectives.¹ Five specific objectives, each focussing on one aspect of need, have been retained:

- Survey the current usage pattern and cost of mobile radio service. The information will indicate how rural people currently attempt to satisfy their need for communication with respect to that medium.
- Identify the motivations underlying the current usage (or non-usage) of mobile radio service. This will suggest why rural people use (or do not use) this service.
- Estimate the degree of satisfaction with the various aspects of their current mobile radio service. This will indicate how rural people perceive the adequacy of their current service.
- 1
- Camprieu, R. (de), and Bourgeois, J.C., "Demand for Rural Communication Services in Canada: Focus Groups and Research Instruments", University of Ottawa, Ottawa, (December 1979), pp. 48-50.

DEMAND RESEARCH CONSULTANTS INCORPORATED

n

- Estimate the strength of the need for improvement in mobile radio service relative to:
 - a) other public services
 - b) other telecommunication services

This will reveal the relative priority given by rural people to programs aiming at improving mobile radio service.

1.2.2 Objectives of Demand Forecasting

- Estimate "short-term" (one year time horizon) demand for a mobile telephone (a service combining telephone and mobile radio benefits)
- Estimate "long-term" demand for this mobile telephone service.

1.2.3 Extent of Analysis

Need analyses and demand forecasts will be conducted at both the national and regional levels (Atlantic, Quebec, Ontario, Prairies, British Columbia) and will be stratified in terms of community size (less than 1,000 population versus 1,000 to 2,499 population).

survey demographic The also covers and socio-economic information; it can be used to identify "who needs and demands what". However, this aspect of the analysis will be limited to a few relationships explicitly requested the Department by of Communications, although further analyses are also possible.

1.3 Overview of Methodology

This section gives a brief account of the methodology described in more detail in Appendix A.

The data required to answer the research questions underlying the objectives was collected through 2,667 personal interviews conducted among a sample of rural households representative of the five Canadian regions: Atlantic, Quebec, Ontario, Prairies and British Columbia.

DEMAND RESEARCH CONSULTANTS INCORPORATED

Richardson and Brown's definition of "rural" was used in this research¹; it is based on census Enumeration Areas (EA). An EA was classified as rural if it had an overall population density between 0.8 and 999 persons/sq. mile (1976 Census) and lay outside the boundary of communities of 2,500 or more people. EA's located on Indian reservations and EA's with no private households were excluded².

The questionnaire reproduced in Appendix B was administered to either (random selection) the male or female head of the household. Only households which could be identified as **primary** residences were considered. The sampling plan was expected to give estimates at the regional level with an accuracy of ± 5 % at the 95% level of confidence. When national estimates are involved, the five Canadian regions were weighted by their respective rural population base according to the 1976 Census figures.

The need and forecasting models underlying the development of the questionnaire are discussed in Appendix A.

1

Brown, Steve and Keith Richardson: "Sampling Frame for the Rural Residential and Business Demand Surveys", Department of Communications, Ottawa, (May 1981).

n

Richardson, Keith and Steve Brown: "Regional Demographic Studies for the Rural Communications Program - Summary Report and Analysis", Department of Communications, Ottawa, (November 1978).

II. ANALYSIS OF RESULTS

- 6 -

2.1 Services Currently Used

2.1.1 Proportion of Households Owning CB/GRS and/or Mobile Radio Equipment¹

In rural Canada, less than twenty percent (15.8%) of the households own CB/General Radio Service (GRS) and/or mobile radio equipment. In fact, just under fifteen percent (14.7%) of the respondents own CB/GRS equipment, and roughly one third as many (5.1%) own radio equipment. There is significant2 modile a relationship between ownership of this type of equipment and regional location. For example, while less than ten percent (8.7%) of the rural households in Quebec region own CB/GRS and/or mobile radio the equipment, this percentage almost triples (22.2%) in the Prairie region (see Table 1). More specifically, in terms of just CB/GRS equipment owners, over three times as many households in the Prairies as in Quebec own only this type of equipment (17.9% versus 5.5%). With regard to owners of only mobile radio equipment,

1 Based upon responses to questions 24, 25 and 26.

DEMAND RESEARCH CONSULTANTS INCORPORATED

n

All measures of association are deemed statistically significant if they reach the 5.0% level of significance or less.

TABLE 1

OWNERSHIP OF CB/GRS AND MOBILE RADIO EQUIPMENT

			Region			
	Atlantic	Quebec	<u>Ontario</u>	<u>Prairies</u>	<u>B.C.</u>	<u>National</u>
CB/GRS Equipment	10.2%	5.5%	10.3%	17.9%	11.2%	10.8%
	(56)	(32)	(52)	(98)	(53)	(221)
Mobile Radio	0.9	0.3	1.0	1.1	4.8	1.2
Equipment	(5)	(2)	(5)	(6)	(23)	(24)
Both	3.6	2.9	5.3	3.3	4.4	3.9
	(20)	(17)	(27)	(18,)	(21)	(79)
Neither	85.3	91.3	83.4	77.8	79.6	84.2
	(470)	(534)	(423)	(427)	(378)	(1722)
Total	100.0	100.0	100.0	100.0	100.0	100.0
	(551)	(585)	(507)	(549)	(475)	(2047)

Note: The upper figure refers to the percentage of the column total and the lower figure (in parenthesis) to the actual number of households. As the sample was weighted for the national analysis, in order to correct for disproportionate regional sampling, the national and regional analyses are based on different sample sizes (see Section A.5.3 for more details).

in most regions at most one percent of the respondents have just mobile equipment while in British Columbia almost five percent (4.8%) have this type of equipment.

There is no significant relationship between ownership of CB/GRS and/or mobile radio equipment, and community size (see Table 2).

Examining respondents' perceptions of whether CB/GRS or mobile radio equipment is more important to their household, it is apparent that just over half (51.2%) of Canadian rural households who own both types of equipment, consider CB/GRS equipment to be the most significant is important. Although there а relationship between regional location and the relative importance of each type of equipment, 1 the relationship between community size and the relative importance was not significant (see Tables 3 and 4).

2.1.2 Profiling CB and Mobile Radio Owners Against Non-Owners

In order to profile owners of CB/GRS equipment and owners of mobile radio equipment against non-owners,

DEMAND RESEARCH CONSULTANTS INCORPORATED

- 8 -

¹ It would be misleading to draw conclusions from the regional data because of the small number of respondents in each region who have both types of equipment.

T?	\B	L	E	•	2

OWNERSHIP OF CB/GRS AND MOBILE RADIO EQUIPMENT

S	ize	of	Commun	ity
---	-----	----	--------	-----

	less than 1,000	1,000 to 2,499	National
CB/GRS Equipment	11.0%	9.6%	10.8%
	(197)	(26)	(221)
Mobile Radio	1.2	0.9 (2)	1.2
Equipment	(22)		(24)
Both	4.1	2.2	3.9
	(73)	(6)	(79)
Neither	83.7	87.3	84.2
	(1495)	(236)	(1722)
TOTAL	100.0	100.0	100.0
	(1787)	(270)	(2047)

Note:

: The upper figure refers to the percentage of the column total and the lower figure (in parenthesis) to the actual number of households. As the sample was weighted for the national analysis, in order to correct for disproportionate regional sampling, the national and community size analyses are based on different sample sizes (see Section A.5.3 for more details).



TABLE 3

MOST IMPORTANT EQUIPMENT FOR HOUSEHOLDS WITH BOTH CB/GRS AND MOBILE RADIO

			Region			
•	Atlantic	Quebec	<u>Ontario</u>	Prairies	<u>B.C.</u>	National
CB/GRS	55.0% (11)	57.1% (8)	65.4% (17)	17.7% (3)	47.1% (8)	51.2% (37)
Mo bile Radio	45.0 (9)	42.9 (6)	19.2 (5)	41.2 (7)	52.9 (9)	35.3 (26)
Both Equally	0.0(0)	0.0 (0)	15.4 (4)	41.2 (7)	0.0 (0)	13.5 (10)
TOTAL	100.0 (20)	100.0 (14)	100.0 (26)	100.0 (17)	100.0 (17)	100.0 (73)

Note: The upper figure refers to the percentage of the column total and the lower figure (in parenthesis) to the actual number of households. As the sample was weighted for the national analysis, in order to correct for disproportionate regional sampling, the national and regional analyses are based on different sample sizes (see Section A.5.3 for more details).

DEMAND RESEARCH CONSULTANTS INCORPORATED

U DRC

TABLE 4

MOST IMPORTANT EQUIPMENT FOR HOUSEHOLDS WITH BOTH CB/GRS AND MOBILE RADIO

Size of Community							
less than 1,000	1,000 to 2,499	National					
53.2% (36)	26.5% (2)	51.2% (37)					
34.8 (23)	42.9 (3)	35.3 (26)					
12.0 (8)	30.6 (2)	13.5					
100.0 (67)	100.0 (6)	100.0 (73)					
	Size of Com <u>less than 1,000</u> 53.2% (36) 34.8 (23) 12.0 (8) 100.0 (67)	Size of Communityless than 1,0001,000 to 2,499 53.2 % 26.5 % (36) (2) 34.8 42.9 (23) (3) 12.0 30.6 (8) (2) 100.0 100.0 (67) (6)					

Note:

The upper figure refers to the percentage of the column total and the lower figure (in parenthesis) to the actual number of households. As the sample was weighted for the national analysis, in order to correct for disproportionate regional sampling, the national and community size analyses are based on different sample sizes (see Section A.5.3 for more details).

DEMAND RESEARCH CONSULTANTS INCORPORATED

IJ IRC

the groups were compared across a series of household characteristics. In this manner, any significant differences between owners and non-owners could be identified.1

The results of this analysis at the **national** level indicate that respondents who **own CB/GRS** equipment tend to:

- be more physically isolated. For example, while over half (53.5%) of those who own CB equipment are more isolated than the national average, this is true for only 38.0% of the "non-owners".
- be more educated.
- have more household members. Relatively more of these respondents have at least five people in their home (31.5% vs 21.7%).
- **be younger.** A larger proportion of these respondents are under 35 years of age (38.5% vs 28.9%).
- have a higher household income. Comparatively more of the respondents who own CB's, than those who don't, earn at least \$25,000 a year (36.4% vs 19.6%).
- consider their way of life to be rural.
- have lived in their present home for a shorter period of time. A larger proportion of CB/GRS owners, than non-owners, have lived in their home less than six years (40.4% vs 36.8%).

1 In view of the small number of households, at the regional and large community level, which own mobile equipment, the analysis comparing mobile radio owners and non-owners will only be discussed at the national level.

DEMAND RESEARCH CONSULTANTS INCORPORATED

u BRE

 \mathbf{n}

- be less satisfied with their overall telephone service. Relatively more of these respondents are dissatisfied with the telephone service in general (19.3% vs 13.4%).
- not be retired. A smaller percentage of CB/GRS owners, than of non-owners, are retired (2.4% vs 13.9%).
- be labourers or farmers. Relatively more of these respondents are skilled labourers (20.1% vs 14.7%), unskilled labourers (10.7% vs 6.8%), or farmers (13.0% vs 10.0%).
- be married. In relative terms, more of the CB/GRS owners are married (91.2% vs 84.6%).
- speak English most often at home. Comparatively more of those who own CB/GRS equipment, than those who do not, speak English most often (82.6% vs 67.2%).

Similarly, in rural Canada respondents who own mobile radio equipment were found to:

- have more people in their home. A smaller proportion of these respondents have only one or two household members (20.1% vs 36.0%).
- be younger. Relatively more of the respondents who own mobile radio equipment, than those who do not, are under 35 years of age (39.3% vs 29.9%).
- have a higher household income. Proportionately more of these respondents earn \$25,000 a year or more (30.7% vs 21.7%).
- consider their way of life rural.
- have lived in their present home for a shorter period of time.
- not be retired. A smaller proportion of mobile radio owners, than non-owners, are retired (4.2% vs l2.6%).

U IRC

- be skilled labourers or executives. In relative terms, more of these respondents are skilled labourers (20.4% vs 15.2%), or executives (9.1% vs 3.9%).
- speak English most often at home. Comparatively more of those who own mobile equipment, than those who do not, speak English most often (81.8% vs 68.8%).

In the Atlantic Region it was found that those respondents who presently own CB/GRS equipment are more likely to:

- **be younger.** While over half (56.6%) of those who do not own CB/GRS equipment are over 44 years of age, this is true of only 37.3% of those who do own this equipment.
- have a higher household income. A larger proportion of "owners", than "non-owners", earn at least \$25,000 a year (23.5% vs 8.4%).
- consider their way of life to be rural. Relatively more of these respondents consider their way of life "rural" (89.5% vs 82.5%).
- have lived in their present home for a shorter period of time.
- be married. Proportionately more of these respondents are married (90.8% vs 83.2%).

This analysis illustrates that in the Quebec Region respondents who are CB/GRS equipment owners are more likely to:

 have more household members. Less than half as many "owners" as "non-owners" have only one or two people in their home (14.3% vs 31.7%).

DEMAND RESEARCH CONSULTANTS INCORPORATED

U DRC

- **be younger.** Relatively more of the respondents who own CB equipment, than those who do not, are under 35 years of age (44.9% vs 32.6%).
- have a higher household income.

.

 have lived in their present home for a shorter period of time.

Respondents in the Ontario Region who own CB/GRS equipment were found to:

- be more physically isolated.
- consider their way of life "rural". A larger proportion of the respndents who own CB equipment, than those who do not, consider their way of life to be rural (88.6% vs 75.8%).
- have fewer parties on their telephone line. In fact, the majority (68.9%) of these respondents have a private line (compared to 49.1% of "non-owners").
 - have lived in their home for a shorter period of time. Relatively more of the CB/GRS "owners", than "non-owners", have lived in their present home less than ll years (67.1% vs 56.9%).
- have more people in their home. A smaller proportion of the respondents who own CB equipment, than those who don't, have only one or two people in their home (12.7% vs 40.4%).
- be younger. Comparatively more of these respndents are under 35 years of age (40.5% vs 31.6%).
- have a higher household income. In relative terms, more "owners" than "non-owners" earn \$25,000 a year or more (39.1% vs 20.9%).
- be labourers or in sales. A larger proportion of these respondents are labourers (skilled: 27.9% vs 18.3%, and unskilled: 11.4% vs 7.5%), or are in sales (7.6% vs 1.6%).

speak English most often at home. In fact, all of these respondents speak English at home (compared to 90.9% for the "non-owners").

In the **Prairie Region** it was found that those respondents who presently **own CB/GRS equipment** are more likely to:

- have more household members. A relatively larger percentage of respondents who own CB's, than those who don't, have five of more people in their home (29.3% vs 18.5%).
- be more educated.
- **be younger.** Proportionately more of these respondents are under 35 years of age (37.9% vs 24.8%).
- have a higher household income. In relative terms, more of these respondents earn \$25,000 a year or more (44.4% vs 29.0%).
- have lived in their present home for a shorter period of time.
- be less satisfied with the telephone service in general. Relatively more "owners" than "non-owners" are dissatisfied with their current service (12.3% vs 5.0%).
- have more parties on their telephone line. A larger proportion of these respondents have multi-party service (38.6% vs 32.3%).
- be a farmer or labourer. Comparatively more of the respondents who own CB equipment, than those who don't, are farmers (31.0% vs 26.6%), skilled labourers (11.2% vs 8.6%) or unskilled labourers (6.0% vs 3.2%).

DEMAND RESEARCH CONSULTANTS INCORPORATED

U DRC

This analysis illustrates that in the British Columbia Region respondents who are CB/GRS owners tend to:

- 17 -

- be more "tele-isolated". For example, a larger proportion of those who own CB's, than of those who don't, have to make long distance calls to reach at least three "essential services" (23.0% vs 9.8%).
- have more people in their home. Relatively more of these respondents have five or more people in their home (27.0% vs 16.2%).
- be younger.
- have a higher household income.
- have fewer parties on their telephone line.

The results of this analysis for small communities indicate that respondents who own CB/GRS equipment are more likely to:

- be more physically isolated. While over half (53.7%) of the respondents who own CB equipment are more isolated than is the average for small communities, this is true for only 39.5% of those who do not own this equipment.
- have more household members. A smaller proportion of these respondents have only one or two people in their home (18.8% vs 37.4%).
- have more education.
- be younger. Relatively more "owners" than "non-owners" are under 35 years of age (37.7% vs 28.4%).
- have a higher household income. Almost twice as many of these respondents have a household income of at least \$25,000 a year (36.9% vs 20.0%).
- consider their way of life to be rural.

have lived in their present home for a shorter period of time. Relatively fewer "owners" than "non-owners" have lived in their home more than ten years (38.9% vs 47.6%).

- less satisfied with their overall telephone service.
- be labourers or farmers. A larger proportion of the respondents who own CB equipment, than those who don't, are skilled labourers (18.6% vs 14.1%), unskilled labourers (10.6% vs 6.3%), or farmers (14.4% vs 11.1%).
- not be retired. Relatively fewer of these respondents are farmers (2.7% vs 13.3%).
- speak English most often at home. Proportionately more "owners" than "non-owners" speak English most often (82.9% vs 68.5%).

In large communities it was found that those respondents who presently own CB/GRS equipment are more likely to:

- be more physically isolated. While the majority (71.3%) of CB/GRS owners are more isolated than the average for large communities, this is the case for less than half (45.0%) of "non-owners".
- have more education.
- be younger. A larger proportion of these respondents are under 35 years of age (46.1% vs 32.6%).
- have a higher household income. Almost twice as many "owners" as "non-owners" earn at least \$25,000 a year (34.1% vs 17.7%).
- have lived in their present home for a shorter period of time.
- be less satisfied with their telephone service in general.

DEMAND RESEARCH CONSULTANTS INCORPORATED

U BR@

2.1.3 Profiling Mobile Radio Owners Against CB/GRS Owners

An analysis was undertaken, at the national level onlyl, to evaluate the differences in household charactertistics between owners of CB equipment, and mobile equipment. The results of radio owners indicated that CB/GRS owners differed from mobile radio only two characteristics: language and owners on occupation. Mobile radio owners were found to be relatively more likely to speak English most often at home than were CB/GRS owners (88.0% versus 83.6%). In addition, a smaller proportion of mobile radio owners are farmers (9.8% versus 14.4%), while relatively more are homemakers² (42.7% versus 33.5%) and executives (12.7% versus 4.7%).

While it may be surprising that "homemakers" own CB or mobile radio equipment, these findings are supported by the results of the focus groups. Camprieu, R. (de), and Bourgeois, J.C., "Demand for Rural Communication Services in Canada: Focus Groups and Research Instruments", University of Ottawa, Ottawa, (December 1979), pp. 45-47 and p. 80.

As only 1.2% (24 households) of the rural households in Canada own only mobile radio equipment, it would be misleading to evaluate any apparent differences between CB/GRS owners and mobile radio owners at the regional and community size levels.

2.2 Motivations

2.2.1 Motivations for Using CB/GRS

- 20 -

In Canada, business received the highest average score as the basic motivation for using CB/GRS equipment¹. Emergencies the second most were important underlying motive, followed by "fun/hobby". Although business remains the primary motivation in each region, the rankings of the other five motives vary across Canada (see Table 5)2.

With regard to community size, while it may be noted that motivational patterns in small communities are essentially the same as the national, no conclusions may be made for large communities due to the small number of responses (see Table 6).

2.2.2 Motivations for Using Mobile Radio

Rural households in Canada who own mobile radio equipment indicated that their primary motivation for using the equipment was **business.** "Emergencies"

2 It would be unwise to draw any conclusions regarding regional differences in view of the small number of mentions for each motivation across the regions.

DEMAND RESEARCH CONSULTANTS INCORPORATED

¹ The question (i.e. question 27) used to gather this data was open-ended, that is, respondents were providing "top-of-mind" awareness.

TABLE 5

INDEX1 FOR EACH MOTIVATION FOR USING CB/GRS EQUIPMENT

			Region			
	Atlantic	Quebec	<u>Ontario</u>	<u>Prairies</u>	B.C.	National
Business	2.5	3.0	2.5	2.9	2.9	2.77
	(13)	(7)	(13)	(48)	(10)	(72)
Emergencies	2.4	2.0	2.5	2.1	2.5	2.32
	(23)	(13)	(41)	(37)	(24)	(109)
Fun/Hobby	2.4	2.3	2.3	2.2	1.9	2.28
	(22)	(12)	(24)	(25)	(15)	(76)
Outdoor Sports	2.5	2.3	2.0	1.0	2.4	2.11
	(2)	(3)	(4)	(2)	(9)	(13)
Convenience	2.1	1.9	2.1	2.0	2.1	2.02
	(19)	(11)	(16)	(37)	(14)	(76)
Security	1.3 (7)	1.9 (10)	1.3 (4)	1.8 (5)	2.0 (3)	1.65 (23)

1

The upper figure represents the mean score for each motivation. The higher the score, the more important the reason. This score was constructed by giving a score of 3 for first mention, 2 for second mention, and 1 for third mention. The lower figure (in parenthesis) is the actual number of mentions for each motivation.



TABLE 6

INDEX¹ FOR EACH MOTIVATION FOR USING CB/GRS EQUIPMENT

Size of Community						
	less than 1,000	1,000 to 2,499	National			
Business	2.8 (71)	3.0 (2)	2.77 (72)			
Emergencies	2.3 (99)	2.5 (10)	2.32 (109)			
Fun/Hobby	2.3 (70)	2.4 (7)	2.28 (76)			
Outdoor Sports	2.2 (11)	1.9 (2)	2.11 (13)			
Convenience	2.0 (69)	2.1 (6)	2.02 (76)			
Security	1.6 (22)	3.0 (1)	1.65 (23)			

1 The upper figure represents the mean score for each motivation. The higher the score, the more important the reason. This score was constructed by giving a score of 3 for first mention, 2 for second mention, and 1 for third mention. The lower figure (in parenthesis) is the actual number of mentions for each motivation.

DEMAND RESEARCH CONSULTANTS INCORPORATED

U BRC

ranked second, and were followed by "fun/hobby". The national results are, in fact, very similar to the motivations of CB/GRS owners. The only exception is that "convenience" received the lowest average score, whereas this was not the case with CB owners (see Tables 7 and 8)1.

2.2.3 Differences in Motivational Patterns Between CB and Mobile Radio Users.

An investigation of differences in motivational patterns between CB and mobile radio owners was carried out at the national level only (due to the small number of mentions for each motive at the regional and community size levels).

The results of this analysis indicated that ownership of either CB or mobile radio equipment are significantly related to only two motivations: business and security. In both cases, a relatively larger proportion of the respondents who own mobile radio equipment and consider this equipment to be the most important, mentioned business and/or security as

As was the case with the motivations for CB owners, the number of mentions for each motive for mobile radio owners is too small to allow conclusions to be drawn with respect to regional or community size differences in motivational patterns.

TABLE 7

INDEX1 FOR EACH MOTIVATION FOR USING MOBILE RADIO

	Region					
	Atlantic	Quebec	<u>Ontario</u>	<u>Prairies</u>	<u>B.C.</u>	National
Business	2.4	2.9	2.5	2.7	3.0	2.72
	(8)	(7)	(2)	(14)	(19)	(32)
Emergencies	2.6	2.0	2.3	1.9	2.2	2.19
	(11)	(8)	(6)	(11)	(21)	(38)
Fun/Hobby	2.2	2.0	2.0	2.0	2.0	2.04
	(6)	(7)	(4)	(2)	(6)	(18)
Outdoor Sports	2.0	1.0	0.0	3.0	1.8	1.89
	(1)	(1)	(0)	(1)	(4)	(4)
Security	1.9	1.8	2.0	1.5	1.8	1.83
	(9)	(6)	(1)	(2)	(6)	(17)
Convenience	2.0	1.7	2.0	1.5	1.9	1.79
	(6)	(7)	(4)	(8)	(11)	(25)
					-	

1 The upper figure represents the mean score for each motivation. The higher the score, the more important the reason. This score was constructed by giving a score of 3 for first mention, 2 for second mention, and 1 for third mention. The lower figure (in parenthesis) is the actual number of mentions for each motivation.

DEMAND RESEARCH CONSULTANTS INCORPORATED

U BRE

TABLE 8

INDEX¹ FOR EACH MOTIVATION FOR USING MOBILE RADIO

Size of Community			
	less than 1,000	1,000 to 2,499	National
Business	2.8 (30)	2.5 (3)	2.72 (32)
Emergencies	2.2 (35)	2.6 (3)	2.19 (38)
Fun/Hobby	2.1 (16)	2.0 (3)	2.04 (18)
Outdoor Sports	1.9 (4)	0.0(0)	1.89 (4)
Security	1.8 (17)	0.0 (0)	1.83 (17)
Convenience	1.8 (23)	1.4 (3)	1.79 (25)

¹ The upper figure represents the mean score for each motivation. The higher the score, the more important the reason. This score was constructed by giving a score of 3 for first mention, 2 for second mention, and 1 for third mention. The lower figure (in parenthesis) is the actual number of mentions for each motivation.

П

reasons for using their equipment (62.2% vs 40.3% of CB owners, and 30.8% vs 13.0% of CB owners respectively).

It is also interesting to note that relatively more CB/GRS owners, than mobile radio owners, mentioned "fun/hobby" as a motivation for using their equipment (42.3% vs 26.9%). However, this relationship is only significant at the 10% level rather than our usual 5%.
2.3 Perceived Need for Improvement in Service2.3.1 Priority Against Other Services1

In rural Canada, "roads and public transportation" was the service which was most strongly felt to require improvement (i.e. with the highest average score among 12 services). According to the average rating for each service, television services rank second, telephone fourth and radio broadcasting and CB/mobile radio eleventh and twelfth respectively (see Table 9).

Although the rankings are generally similar across the regions, some differences are apparent. In Quebec health/medical services ranked first, followed by roads and public transportation, and telephone service, while in the Prairies television service was first, roads second and mail service third. Finally, in British Columbia, mail service ranked the highest, with telephone service second.

Households in "small" rural communities follow the national pattern with one exception; telephone service ranked third rather than fourth relative to all other services (see Table 10). In "large" communities,

1 Based upon responses to Question 1.

DEMAND RESEARCH CONSULTANTS INCORPORATE

- 27 -

TABLE 9

INDEX OF PERCEIVED NEED FOR IMPROVEMENT

FOR EACH SERVICE1

	REGION					
	<u>Atlantic</u>	Quebec	<u>Ontario</u>	<u>Prairies</u>	<u>B.C.</u>	NATIONAL
Roads and Public Transportation	1.62	1.51	1.25	1.37	1.25	1.42
Television	1.43	0.94	0.98	1.41	1.25	1.17
Health/Medical	1.27	1.83	0.98	0.69	0.56	1.16
Telephone	0.87	1.33	1.00	0.93	1.36	1.09
Mail	0.65	0.62	0.99	1.29	1.50	0.94
Recreation and Sports Facilities	1.01	0.65	0.90	0.63	0.81	0.78
Security	0.63	0.88	0.69	0.69	0.64	0.72
Education	0.54	0.72	0.62	0.51	0.49	0.59
Electricity, Hydro	0.79	0.54	0.48	0.29	0.42	0.51
Newspaper	0.31	0.21	0.30	0.18	0.31	0.25
Radio Broadcasting	0.17	0.20	0.34	0.15	0.43	0.24
CB, Mobile Radio	0.12	0.11	0.15	0.29	0.06	0.16

Mean score for each service. The higher the score, the more necessary improvements are. The score was constructed by giving a score of 4 for the first mention, 3 for second, etc., and 0 for no mention.

DEMAND RESEARCH CONSULTANTS INCORPORATED

U BRE

n

TABLE 10

¢

INDEX OF PERCEIVED NEED FOR IMPROVEMENT

FOR EACH SERVICE1

SIZE OF C		
Less than 1000	1000 - 2499	<u>National</u>
1.41	1.48	1.42
1.15	1.30	1.17
1.11	1.49	1.16
1.15	0.65	1.09
0.96	0.85	0.94
0.76	0.92	0.78
0.74	0.62	0.72
0.59	0.61	0.59
0.51	0.48	0.51
0.24	0.34	0.25
0.23	0.28	0.24
0.16	0.10	0.16
	SIZE OF C Less than 1000 1.41 1.15 1.11 1.15 0.96 0.76 0.74 0.59 0.51 0.24 0.23 0.16	SIZE OF COMMUNITY Less than 1000 1000 - 2499 1.41 1.48 1.15 1.30 1.11 1.49 1.15 0.65 0.96 0.85 0.76 0.92 0.74 0.62 0.59 0.61 0.51 0.48 0.24 0.34 0.23 0.28 0.16 0.10

1

Mean score for each service. The higher the score, the more necessary improvements are. The score was constructed by giving a score of 4 for the first mention, 3 for second, etc., and 0 for no mention.



Ш

health/medical services, and recreation and sports facilities, received relatively higher average scores than was the case in the results for small communities.

and improve television Evidently the need to telephone services rates a high priority with the rural population. The relatively low ranking of CB/mobile radio services is due, in part, to the small user this service. However, might population for one hypothesize that it is likely that owners of CB/GRS or mobile radio equipment would place a higher priority on the need for imporvement in these services. This hypothesis was investigated at the national level only (due to the small user-population), and proved to be correct.

CB/mobile radio owners rated the need for in services higher than improvement these electricity/hydro services, newspaper services, and 11). Thus, radio broadcasting (see Table while CB/mobile radio services are the lowest priority for the rural population as a whole, improvements in these services are considered more important by present owners of this equipment.

It is also interesting to note that CB/mobile radio owners, placed a relatively higher priority on the need for improvement in telephone services, than did the

DEMAND RESEARCH CONSULTANTS INCORPORATED

TABLE 11

INDEX1 OF PERCEIVED NEED FOR IMPROVEMENT

FOR EACH SERVICE

FOR CB/MOBILE RADIO OWNERS

	National
Road and Public Transportation	1.37
Television	1.18
Health/Medical	0.99
Telephone	1.14
Mail	0.91
Recreation and Sports Facilities	0.86
Security	0.75
Education	0.61
Electricity/Hydro	0.48
Newspaper	0.22
Radio Broadcasting	0.31
CB/Mobile Radio	0.50

Mean score for each service. The higher the score, the more necessary improvements are. The score was constructed by giving a score of 4 for the first mention, 3 for second, etc., and 0 for no mention.

DEMAND RESEARCH CONSULTANTS INCORPORATED

U IRC

n

general population. In fact, among this group, telephone is just slightly behind television services in terms of relative importance.

2.3.2 Intensity of Need Relative to Telecommunication Services¹

Examining the relative intensity of need for improvement to telecommunication services in Canada, it is apparent that the services rank in the same order as when compared to the other services (as discussed in the previous section), that is, television ranks first, . telephone second, radio third and CB/mobile radio (see Table 12). fourth Across the regions, each service maintains the same rank with one exception; in the Prairies, CB/mobile radio was ranked slightly higher than radio broadcasting. Although television services rank first in each region, in the Atlantic region this service rated relatively higher than in the other regions while in British Columbia the reverse is In addition, in Quebec, television was rated at true. essentially the same level as telephone in terms of need for improvement.

1 Based upon responses to Question 2.

DEMAND RESEARCH CONSULTANTS INCORPORATED

- 32 -

TABLE 12

RELATIVE NEED FOR IMPROVEMENT IN

TELECOMMUNICATION SERVICES1

	REGION					
•	<u>Atlantic</u>	Quebec	<u>Ontario</u>	<u>Prairies</u>	<u>B.C.</u>	NATIONAL
Television	5.74	4.23	4.14	5.19	4.10	4.71
Telephone	2.66	4.21	3.61	3.04	3.99	3.50
Radio Broadcasting	1.16	1.48	1.66	0.87	1.65	1.34
CB, Mobile Radio	0.43	0.50	0.59	0.91	0.25	0.57

Mean score for each service. The higher the score, the more necessary improvements, are relative to the other services. These scores were derived from a 10 point allocation task dealing with only these four services.



U DRE

In both small and large communities, the telecommunications services each ranked in the same order as was the case at the national level (see Table However, in small communities, CB/Mobile radio 13). services were rated slightly higher than in large communities with respect to the need for improvement in this service. This is not surprising if one recalls that relatively more households in small communities own this type of equipment.

As was done in the previous section, the hypothesis that CB/mobile radio owners (at the national level) would be relatively more concerned with the need for improvement in these services, than would be population as a whole, was investigated. The results of this analysis indicate that this is the case. That is, CB/mobile radio owners did indicate a relatively higher priority for these services (see Table 14), than did all respondents. Indeed, this group of households ranked CB/mobile radio services third, and radio broadcasting services fourth, contrary to the ratings all rural households. Thus, while provided by television and telephone services still remain the services requiring the most improvement, CB/mobile radio service improvements are given a relatively higher priority by present users.

DEMAND RESEARCH CONSULTANTS INCORPORATED

TABLE 13

RELATIVE NEED FOR IMPROVEMENT IN

TELECOMMUNICATION SERVICES1

	SIZE OF COMMUNITY		×.
	Less than 1000	<u> 1000 - 2499</u>	National
Television	4.59	5.52	4.71
Telephone	3.61	2.68	3.50
Radio Broadcasting	1.33	1.39	1.34
CB, Mobile Radio	- 0.60	0.41	0.57

Mean score for each service. The higher the score, the more necessary improvements are, relative to the other services. These scores were derived from a 10 point allocation task dealing with only these four 1 services.



TABLE 14

RELATIVE NEED FOR IMPROVEMENT IN TELECOMMUNICATION SERVICES1 FOR CB/MOBILE RADIO OWNERS

	National
Television	4.25
Telephone	3.16
Radio Broadcasting	1.16

CB/Mobile Radio 1.43

Mean score for each service. The higher the score, the more necessary improvements, are relative to the other services. These scores were derived from a 10 point allocation task dealing with only these four services.

DEMAND RESEARCH CONSULTANTS INCORPORATED

DRC

2.3.3 Correlates of Intensity of Need for Improvement in CB or Mobile Radio Services

The association between the intensity of need for improvement in CB or mobile radio services and various household characteristics was investigated. This was carried out in order to profile those respondents who felt these services required improvement.

The **national** results indicate that as the intensity of need for improvement in these services increases, so does the likelihood that respondents will:

- **own CB/GRS equipment.** In relative terms, more of the respondents who indicated that CB or mobile radio services required improvement, than those who felt these services need no improvement, own CB equipment (35.5% vs 11.5%).
 - own mobile radio equipment. Similarly, a larger proportion of those who feel improvements are necessary, than those who do not, own mobile equipment (14.9% vs 3.5%).
- own both CB and mobile radio equipment. Relatively more of those who felt these services needed improvement, than those who did not, have both types of equipment (12.7% vs 2.5%).
- use their equipment for convenience. A larger proportion of these respondents, are motivated to use their equipment for convenience (47.1% vs 32.0%).
- have a higher household income. Comparing the same two groups of respondents, we find that more of those who feel improvements are necessary earn \$25,000 a year or more (30.8% vs 20.7%).
- be farmers or executives. In relative terms, more of the respondents who feel these services need improvement are farmers (15.9% vs 9.5%), or executives (5.8% vs 3.9%).

- 37 -

П

speak French most often at home. A relatively larger proportion of the respondents who considered these services to require improvement, than of those who felt they needed none, speak French most often (33.1% vs 27.9%).

In the Atlantic Region, it was found that as the need for improvement in CB and mobile radio services increased, so did the likelihood that respondents would:

- own CB/GRS equipment. Over twice as many of the respondents who feel these services need improvement, as those who do not, own CB/GRS equipment (27.4% vs 12.1%).
- own mobile radio equipment. A larger proportion of these respondents own mobile radio equipment (14.5% vs 3.3%).
- own both types of equipment. In relative terms, more of these households own CB/GRS and mobile radio equipment (12.9% vs 2.5%).
- not speak English most often at home. Comparatively fewer of these respondents speak English most often (86.0% vs 67.7%).

Those respondents in the Quebec Region who feel that CB/GRS and mobile radio services need improvement, are more likely to:

1

- **own CB/GRS equipment.** A larger proportion of the respondents who indicated that CB/GRS and mobile radio services need improvement, than those who do not, own CB/GRS equipment (22.9% vs 6.0%).
- own mobile radio equipment. Relatively more of these respondents own mobile equipment (12.5% vs 1.8%).

DEMAND RESEARCH CONSULTANTS INCORPORATED

U DRC

own both types of equipment. Proportionately more of these respondents own both CB/GRS and mobile radio equipment (10.8% vs 1.6%).

feel less strongly that telephone services require improvement.

The Ontario Region results indicate that as the need for improvement CB/GRS in and mobile radio services increases, so does the tendency for respondents to:

- **own CB/GRS equipment.** Relatively more of the respondents who feel improvements are necessary, than those who do not, own CB/GRS equipment (29.0% vs 13.7%).
- **own mobile radio equipment.** Similarly, a larger proportion of these respondents own mobile radio equipment (17.7% vs 4.7%).
- have both CB/GRS and mobile radio equipment. Comparatively more of these respondents own both types of equipment (14.5% vs 4.0%).
- consider their way of life to be rural.
- have more people in their home. A larger proportion of the respondents who feel CB/GRS and mobile radio services need improvement, than those who do not, have more than two people in their home (83.9% vs 61.1%).

Those respondents in the Prairie Region who feel that CB/GRS and mobile radio services require improvement, tend to:

- **own mobile radio equipment.** Similarly, a larger proportion of these respondents own mobile radio equipment (12.4% vs 2.7%).
- own both types of equipment. Relatively more of these respondents own both CB/GRS and mobile radio equipment (12.4% vs 1.3%).
- use their equipment mainly for emergencies and/or for convenience.
- feel that telephone service requires less improvement.
- are more physically isolated. While over half (61.9%) of these respondents are more physically isolated than is the average in the Prairie region, this is true for only 40.6% of those who feel these services need no improvement.
- have a higher household income.
- have more people in their home. A smaller proportion of these respondents have only one or two people in their home (19.6% vs 42.0%)

In the British Columbia Region, the results of this analysis indicate that as the intensity of need for improvement in CB/GRS and mobile radio services increases, so does the likelihood that respondents will:

own CB/GRS equipment. In relative terms, more of the respondents who felt improvements were necessary, than those who did not, own CB/GRS equipment (45.7% vs 12.4%).

DEMAND RESEARCH CONSULTANTS INCORPORATED

IRC

- own mobile radio equipment. Proportionately more of these respondents own mobile radio equipment (26.1% vs 7.5%).
- have both CB/GRS and mobile radio equipment.
 Comparatively more of these respondents own both types of equipment (13.0% vs 3.5%).
- use their equipment for convenience. A larger proportion of these respondents are motivated to use their equipment for convenience (44.4% vs 26.1%).
- not use their equipment for outdoor sports.
- consider their way of life to be urban. Relatively more of these respondents consider their way of life urban (32.6% vs 21.5%).

The results for **small communit**ies indicate that those respondents who feel service improvements are necessary for CB/GRS and mobile radio, tend to:

- own CB/GRS equipment. In relative terms, a larger percentage of the respondents who feel service improvements are necessary, than those who do not, own CB/GRS equipment (36.4% vs 11.6%).
- own mobile radio equipment. Proportionately more of these respondents own mobile radio equipment (15.2% vs 3.7%).
- own both CB/GRS and mobile radio equipment. Similarly, more of these respondents own both types of equipment (13.6% vs 2.6%).
- use their equipment for convenience. Relatively more of these respondents are motivated to use their equipment for convenience (47.9% vs 31.8%).
- feel less strongly that telephone services require improvement.

 speak French most often at home. Comparatively more of these respondents speak French most often (33.3% vs 26.7%).

DEMAND RESEARCH CONSULTANTS INCORPORATED

n

Respondents in large communities who placed more emphasis on the need for improvements in CB/GRS and Mobile radio services are more likely to:

own CB/GRS equipment.

- have a higher household income.
- have more household members. A relatively smaller proportion of the respondents who feel these services need improvement, than those who don't, have only one or two people in their home (13.8% vs 41.9%).

A similar exercise was undertaken, at the national level, for current CB/mobile radio service users in order to profile respondents in this group which felt these services required improvement. The results of this analysis indicate that, as the intensity of need for improvement in these services increases, so does the likelihood that respondents which own CB/mobile radio equipment will:

- have lived in their present home for a longer period of time.
- have a higher household income.
- be older. A larger proportion of the CB/mobile radio owners who geel these services require the most improvement, as opposed to those who feel no improvements are necessary, are over 44 years of age (57.0% vs 48.0%).
- use their equipment for convenience.
- be satisfied with their overall telephone service.
- feel less strongly that telephone service needs

improvement. Relatively more of these respondents
do not feel the phone service needs any improvement
(95.5% vs 37.4%).

speak English most often at home. A larger
proportion (92.0% vs 69.8%) of these respondents
speak English most often at home.

be men. Relatively more of these respondents are men (58.1% vs 45.9%).

Π

DEMAND RESEARCH CONSULTANTS INCORPORATED

2.4 Short Term Demand Forecasts

2.4.1 Combined Telephone-Mobile Radio Forecast1

Respondents in rural households were offered a new combined telephone and mobile radio service which would provide the following features:

> a service equivalent to a private line telephone service

 a telephone which could be used in a number of places, for instance, in a home or car

a basic monthly rate of \$4 per month

In order to use this new service, households would have to purchase some new equipment. Respondents were offered this equipment at one of three different prices (i.e. \$300, \$500, or \$700) and were asked if they would purchase the equipment within the next 12 months. Twenty percent of the rural households indicated that they would purchase the equipment for \$300, and the proportion dropped to 15% at the \$700 price level. These results are illustrated by the maximum likelihood estimate of demand in Graph 1. A conservative estimate of the demand curve is also presented in Graph 1 and,

1 Based upon responses to Question 28.



PRICE-DEMAND RELATIONSHIP FOR COMBINED TELEPHONE AND MOBILE RADIO SERVICE

(NATIONAL)



Maximum Likelihood Estimate Conservative Estimate

The estimated level of demand (i.e. the maximum likelihood estimate) is not expected to vary, in 68% of the cases, by more than + 1.5% from the indicated levels.

70

Percent o Household

n

although the conservative estimates are somewhat lower, the curve is similar to the maximum likelihood estimate.

Although the demand curve estimates for each region are generally around the same level as the national, the shape of the curves are dissimilar, with the possible exceptions of the Quebec and Ontario regions (see Graphs 2 to 6). Comparing the regions, the maximum likelihood estimate of the demand curve for each region is almost always significantly different from each of the other four regions!. Despite these differences among the regions, it does appear that approximately 15% of the rural households in each region are interested in this new concept. These results may indicate that only those respondents who currently own CB (i.e. 14.7% of the national sample) are interested in this service, and that these

	results may indicate that only those respondents who
	currently own CB (i.e. 14.7% of the national sample)
	are interested in this service, and that these
1	There are four exceptions:
	 the Atlantic region is not significantly different from Ontario at the \$300 price level
	• Quebec is not significantly different from Ontario at the \$700 price level
	. the Prairies region is not significantly different from British Columbia at the \$300 or \$700 price levels.

DEMAND RESEARCH CONSULTANTS INCORPORATED



PRICE-DEMAND RELATIONSHIP FOR COMBINED TELEPHONE AND MOBILE RADIO SERVICE

(ATLANTIC REGION)



•

Conservative Estimate

The estimated level of demand (i.e. the maximum likelihood estimate) is not expected to vary, in 68% of the cases, by more than + 2.7% from the indicated levels.

DEMAND RESEARCH CONSULTANTS INCORPORATED

- **1**

GRAPH 3



(QUEBEC REGION)



Maximum Likelihood Estimate Conservative Estimate

The estimated level of demand (i.e. the maximum likelihood estimate) is not expected to vary, in 68% of the cases, by more than + 2.9% from the indicated levels.

DEMAND RESEARCH CONSULTANTS INCORPORATED

PRICE-DEMAND RELATIONSHIP FOR COMBINED TELEPHONE AND MOBILE RADIO SERVICE

(ONTARIO REGION)



The estimated level of demand (i.e. the maximum likelihood estimate) is not expected to vary, in 68% of the cases, by more than + 2.8% from the indicated levels.



(PRAIRIES REGION)



Maximum Likelihood Estimate Conservative Estimate

The estimated level of demand (i.e. the maximum likelihood estimate) is not expected to vary, in 68% of the cases, by more than \pm 3.3% from the indicated levels.

DEMAND RESEARCH CONSULTANTS INCORPORATED

RE

П

PRICE-DEMAND RELATIONSHIP FOR COMBINED TELEPHONE AND MOBILE RADIO SERVICE

(BRITISH COLUMBIA REGION)



•-----

Maximum Likelihood Estimate Conservative Estimate

The estimated level of demand (i.e. the maximum likelihood estimate) is not expected to vary, in 68% of the cases, by more than + 3.5% from the indicated levels.



respondents are relatively unconcerned about the price the measured range). Alternatively, the (withing variations in the curves across the regions may indicate that, while interested in the service, respondents were unable to make a sample purchase The implication is that they were unable to decision. real value of such identify the а service to themselves.

Examining the demand curve estimates for small and large communities, it is evident that while the small community estimates similar to the national are estimates, those for large communities are not (see Graphs 7 and 8). The proportion of households in small communities who would purchase the equipment for this service is significantly larger than the proportion of households in large communities for each price level. In fact, the demand curve for large communities may indicate, that respondents who currently have the services, are interested in a combined and improved service regardless of the cost (within the presented On the other hand, the results could also range). suggest that respondents may not have fully grasped this new concept and were therefore unable to attach an Thus, one could make a appropriate cost to it.

DEMAND RESEARCH CONSULTANTS INCORPORATED

- 52 -

PRICE-DEMAND RELATIONSHIP FOR COMBINED TELEPHONE AND MOBILE RADIO SERVICE

(SMALL COMMUNITIES)



----- Maximum Li

Maximum Likelihood Estimate Conservative Estimate

The estimated level of demand (i.e. the maximum likelihood estimate) is not expected to vary, in 68% of the cases, by more than + 1.7% from the indicated levels.

DEMAND RESEARCH CONSULTANTS INCORPORATED



(LARGE COMMUNITIES)



Maximum Likelihood Estimate Conservative Estimate

The estimated level of demand (i.e. the maximum likelihood estimate) is not expected to vary, in 68% of the cases, by more than \pm 3.9% from the indicated levels.

DEMAND RESEARCH CONSULTANTS INCORPORATED

conclusion with respect to the approximate level of demand (e.g. approximately 20% of B.C. households would be interested in such a system), but the price levels are believed to be unreliable as it would seem, from the "excessively" inelastic demand curves, that respondents did not really know what such a system is worth to them.

2.4.2 Correlates

A profile of those respondents who would have a greater tendency to purchase the equipment necessary for the combined telephone and mobile radio service at each of the three different prices was developed. This was accomplished by relating the level of demand for the new service to a set of potential descriptor variables. This profiling exercise would provide us better understanding of the "different" with а consumers existing at each price. The analysis was only carried out at the national level.

As the likelihood that respondents will buy the necessary equipment for \$300 increases, so does the likelihood that respondents will:

- be more isolated in terms of communications.
 - presently pay a higher total monthly phone bill.

DEMAND RESEARCH CONSULTANTS INCORPORATED

- use their phone mainly for business reasons.
- currently own CB and/or General Radio Service (GRS) equipment. Relatively more of the respondents who would definitely buy the equipment, than those who would not, presently own CB and/or GRS equipment (31.8% versus 11.7%). Further to this, a larger proportion of respondents who presently own CB/GRS equipment, than those who do not, would definitely buy the new equipment (14.3% vs 5.8%).
- presently have mobile radio or mobile telephone equipment. Proportionately, more of these respondents have mobile equipment (11.6% versus 4.2%). Similarly, more current owners, than non-owners, would definitely buy this service (14.5% vs 6.7%).
- have a higher household income. A relatively larger proportion of the respondents who would certainly buy this equipment, than of those who would not, earn \$25,000 a year or more (40.7% versus 17.1%).
- have more people in their household. More of these respondents, compared to those who would not buy the equipment, have more than three people in their home (65.6% versus 42.1%).
- have more education.
- be younger. While over half (67.7%) of the respondents who would definitely buy the equipment are under 45 years of age, this is true of only 42.2% of those who would not.
- **be men.** The majority (64.6%) of these respondents (versus 45.8% of those who would not buy the equipment), are men.
- not be homemakers or retired. A relatively smaller proportion of these respondents are homemakers (22.0% versus 40.9%), or retired (5.1% versus 17.1%).
 - be farmers, unskilled labourers, or executives. In relative terms, more of the respondents who would definitely buy the equipment, than of those who would not, are farmers (23.2% versus 8.7%),

DEMAND RESEARCH CONSULTANTS INCORPORATED

n

unskilled labourers (12.9% versus 6.5%), or executives (11.0% versus 2.5%).

The more likely respondents are to purchase the new equipment when the price was \$500, the more these respondents tended to:

- presently be paying a higher basic phone rate.
- have paid a higher total monthly phone bill.
- use their telephone mainly for business reasons. A relatively larger proportion of the respondents who would definitely buy the equipment, than of those who would not, mentioned business reasons first (39.0% versus 17.5%).
- not use their phone for social reasons. In relative terms more of these respondents did not mention social reasons (20.1% versus 16.6%), or mentioned this last (27.7% versus 9.8%).
- presently own CB and/or General Radio Service (GRS) equipment. Comparatively more of the respondents who would definitely buy this equipment, than those who would not, currently own CB and/or GRS equipment (29.2% versus 10.3%). Additionally, a larger proportion of owners, than non-owners, would definitely buy this equipment (9.4% vs 3.6%).
- have more education.
- have a higher household income. Approximately twice as many of these respondents, as those who would not buy the equipment, earn \$25,000 a year or more (35.4% versus 17.8%).
- have more people in their household. A relatively larger proportion of these respondents have more than four people in their home (35.9% versus 19.2%).
- **be younger.** While most (71.2%) of the respondents who would definitely buy the equipment are under 45 years of age, less than half (44.1%) of those who would not are under 45.

At a price of \$700 for this new equipment, the results of this analysis indicate that as the likelihood that respondents would buy the equipment increases, so does the likelihood that the respondents will:

- be more physically isolated.
- pay a higher total monthly telephone bill.
- use their telephone mainly for business reasons. More than twice as many respondents who would definitely buy this equipment, as those who would not, mentioned business reasons first (53.2% versus 20.6%).
- not use their telephone because of health problems.
- presently own CB and/or General Radio Service (GRS) equipment. Relatively more of these households currently have CB and/or GRS equipment (37.4% versus 11.5%). A larger proportion of owners, than non-owners, would definitely buy the new equipment (8.8% vs 2.5%).
- currently own mobile radio or mobile telephone equipment. A comparatively larger proportion of these respondents presently have mobile equipment (24.5% versus 3.6%). In other words, more mobile radio owners, than non-owners, would definitely buy the equipment for this new service (16.2% vs 2.7%).
- consider their mobile equipment more important.
- have more education.
- have a higher household income. Relatively more of the respondents who would definitely buy this equipment, than of those who would not, earn \$25,000 a year, or more (42.1% versus 19.8%).
- be men. A comparatively larger percentage of these respondents, versus those who would not purchase the equipment, are men (58.1% versus 46.2%).

DEMAND RESEARCH CONSULTANTS INCORPORATED

U IRC

In addition to the profiles of potential buyers presented above, some further hypotheses were investigated in an attempt to obtain a better understanding of those respondents which are interested in this new service. First, only those respondents who currently own CB/mobile radio service equipment and would "definitely" purchase the new equipment (i.e., indicated 9 or 10 chances 10 this in of making purchase), were compared to those present owners who would not or were unlikely to make this purchase. Secondly, а similar comparison was made between respondents which do not presently own CB/mobile radio equipment. The comparisons were made according to the following variables:

- satisfaction with current telephone service
- occupation
- household income
- distance to nearest city
- relative priority of need for improvement in CB/mobile radio services versus that for telephone service (for the first pair only).

The results of these comparisons indicate that:

a) present owners of CB/mobile radio services who would definitely purchase the new equipment do not significantly differ from those owners who would not definitely make this purchase (regardless of the price), in terms of satisfaction with current telephone service and household income.

- b) for current CB/mobile radio service users, there is no significant relationship between the likelihood of making this purchase, and occupation (regardless of the price).
- with respect to distance from the nearest city, c) which would CB/mobile radio service users definitely buy this new equipment at a price of \$700, live significantly further from the nearest city, than do those who would not necessarily buy significant this equipment. (There is no difference between these groups at the \$300 and \$500 price levels).
- d) respondents who do not presently own CB/mobile radio equipment but who would definitely make this purchase, do not significantly differ from those who would not definitely buy the equipment in terms of distance to the nearest city.
- e) at the \$500 price level, non-owners who would definitely buy the new equipment are significantly more satisfied with their present overall phone service, than are those who would not make this purchase. (There is no significant difference at the \$300 and \$700 price levels).
- f) non-owners who would definitely buy the equipment necessary for the new service when the price is \$300, have significantly higher household incomes than do those who would not make this purchase. (There are no significant differences at the other price levels). For example, almost twice as many of those who would definitely buy the equipment, as those who would not, have a household income of at least \$25,000 a year (37.0% vs 17.7%).
- h) although, for non-owners, there is no significant relationship between occupation and the likelihood of buying this equipment at the \$500 and \$700 price levels, there is at the \$300 purchase cost. Almost three times as many non-owners who would definitely make this purchase, as those who would not, are farmers (26.8% vs 9.7%), or executives (8.3% vs 2.5%).

In conclusion, it is apparent that there are many similarities between the respondents who would purchase

DEMAND RESEARCH CONSULTANTS INCORPORATED

U JRC

this equipment at each of the three price levels. For example, each group presently pays more for their current telephone service, has CB and/or GRS equipment, is relatively more educated. and The differences the groups are less evident. between However, it appears that a larger proportion of those respondents who would pay \$700 for this equipment, than of those who would pay \$500, or \$300, earn \$25,000 a year or Also, relatively more of the respondents who more. would pay the highest price, compared to those who would pay less, presently own mobile equipment, and consider this more important than their CB or GRS equipment.

Comparing those who would definitely buy the new service to those who would not, we generally find that there are few differences. Some noteable exceptions are that CB/mobile radio owners who are definitely willing to pay \$700 for the new equipment live significantly further from the nearest city, and non-owners who would definitely buy the new equipment at a price of \$300 have higher incomes and are more likely to be farmers than are those who would not definitely buy the new system at these prices.

- 61 -

2.5 Long Term Demand Forecasts

2.5.1 Combined Telephone - Mobile Radio Service

The model chosen for the long term demand forecasts is that typically adopted when modelling the adoption and diffusion of innovations. The model¹ describes the life cycle of an innovation, including the number of individuals adopting the innovation in a given year, the number of years required for the adoption to peak, and the number of years required for all potential adopters to make their decision to adopt. In order to use this model, it was necessary to identify three factors:2

DEMAND RESEARCH CONSULTANTS INCORPORATED

IRC

n

¹ This model was earlier presented in greater detail. Refer to "Demand for Rural Communication Services in Canada - Focus Groups and Research Instruments." Final Report, Phase I, DOC (May 1979).

² The "contagion factor", which is directly proportional to the rate of adoption, was estimated from historical cable television companies data for (the rural "P" used was 0.8). contagion factor The potential market is a function of the number of rural households which presently have CB/GRS or mobile radio equipment and the proportion of respondents who do not have this type of equipment but indicated they would buy the new service (30.2%), the price level, and the level of first year sales. The first year sales were derived directly from the short term demand forecast (see 2.4). further information Section For on the derivation of these data, refer to "Study of the Demand for Communication Services in Rural Canada: Analysis of the Pilot Survey Results", DEMAND Research Consultants, (May 5, 1981).
- 1) the "contagion factor", which is directly related to the rate at which an innovation in communication is adopted,
- 2.) the number of potential adopters, and

- 63 -

3) the number of adoptions which will occur during the first year.

Having derived these data, long demand term forecasts were developed for a new combined telephone and mobile radio service.¹ One forecast was derived for each price level (i.e. \$300, \$500, and \$700) and the results are presented in Graph 9 and Table 15.

While examining the results of this forecast, and others included in this section, it should be noted that historical data for rural cable companies was used to estimate parameters of all models. As is normally the procedure, these data were selected to generate model parameters which would reflect this general. product class.

- 1 This service, which requires the purchase of new equipment, would provide the following features:

 - a service equivalent to a private line telephone; a telephone which could be used in a number of places such as in a home or car; and,
 - a basic monthly rate of \$4.

DEMAND RESEARCH CONSULTANTS INCORPORATED

П

GRAPH 9

LONG TERM DEMAND FORECASTS

FOR

COMBINED TELEPHONE/MOBILE RADIO SERVICE



TABLE 15

LONG TERM DEMAND FORECASTS FOR COMBINED TELEPHONE/MOBILE RADIO SERVICE

(National)

	Number of Rural Households Purchasing					
		(in Thousands)				
Year	<u>\$300</u>	\$500	\$700			
. 1 .	75.6	52.3	46.5			
2	101.4	75.3	68.3			
3	101.8	82.2	76.4			
4	76.4	66.6	63.3			
5	45.7	42.1	40.7			
6	23.7	22.6	22.0			
7	11.4	11.0	10.8			
8	5.3	5.2	5.1			
9	2.4	2.4	2.3			
10	1.1	1.1	1.1			
		·				
Total Households Adop after 9 years	pting 443.8	359.6	335.5			
Potential Market:	445.8	361.6	337.4			
Peak Sales:	107.0	83.9	77.6			
Years to Peak Sales:	2.1	2.3	2.4			



Examining the forecasts in Graph 9, it is evident that the greatest number of adoptions of this service would occur within the first few years, regardless of the price level. In fact, the majority (i.e. over 50%), of the potential adopters¹ will have purchased the necessary equipment within three years. The peak sales would occur after approximately 25 months when the cost is \$300, and after 28 and 29 months for the \$500 and \$700 price scenarios respectively.

In the previous discussion of the short term demand forecast (refer to Section 2.4.1), it was noted that a relatively small percentage (i.e. 20%) of the respondents would purchase the equipment required for this service, at a cost of \$300, within twelve months. These initial "adopters" would then become information providers to other potential adopters who are more reluctant. It is important to note that while these

DEMAND RESEARCH CONSULTANTS INCORPORATED

¹ The potential market for this service is comprised of households who would be willing to purchase this communications mobile equipment for the and interconnectability to the telephone network the system provides. On the other hand, the potential market in the telephone report (a more complete defined reference is given in the Introduction) is comprised of households who do not care about mobility but regard the system simply as a means of obtaining single party telephone service.

information providers indicated they would probably subscribe, it does not mean that they "definitely" would, but that they are "predisposed" towards this new service. As a result, these respondents are considered to be "carriers" which implies that while most would probably make this purchase, not all would. Therefore, the first year sales according to the long term forecast are not as high as those in the short term demand estimates. In this manner, most potential purchasers are exposed to the service within a few years. Hence, there is a sharp decline in the number of adoptions between the third and seventh years, as fewer members of the potential market remain. During the later years, only the "laggards" remain to purchase the equipment.

With respect to the other price levels, the same process occurs, but the potential market size decreases. Additionally, as the price increases, the potential adopters become somewhat more reluctant to make the purchase, so the peak sales occur later, and the slopes of the respective curves become less extreme.

Regardless of the price level, market saturation occurs after approximately nine years, although the cumulative sales differ. At a price of \$300,

essentially all potential adopters (i.e. 99.6% of potential market or 443,800 households) will have purchased this equipment after nine years. This adoption level represents 30.1% of all present rural households (i.e. 1,476,154). Within the same time frame, at a cost of \$500., 359,600 households (99.5% of the potential market) will have purchased the 66.7% is, a price increase of equipment. That represents a decrease of only 19.0% in the number of adopters. Additionally, after nine years, only 0.6% (or 1900 households) of the potential market remain when the cost is \$700. In this case, a price increase of 233% (over the \$300 price level), diminishes the number of subscribers by only 24.4%.

To conclude, more than half of the "potential adopters" of the combined telephone and mobile radio service would purchase the necessary equipment within three years, despite the price, and within nine years the market would essentially be saturated.

- 68 -

III. CONCLUSIONS

While examining the results of this study, it is important to bear in mind that there have been no previous studies of this nature to which these results may be compared. As a result, it is generally difficult to qualify the findings. However, a number of interesting conclusions may be derived and are as follows:

- Over 230,000 rural households make use of CB/GRS or mobile equipment. Household penetration varies from a high of 22% in the Prairies to a low of 9% in Quebec.
- 2. Owners of CB/GRS equipment do not appear to be very different from mobile radio owners. Examining the profiles of both of these groups did not bring to light any major differences in terms of household characteristics. Additionally, the motivational patterns between the two groups are similar.
- 3. Very few significant demographic and attitudinal differences exist between those who would definitely purchase the new equipment and those

DEMAND RESEARCH CONSULTANTS INCORPORATED

who would not for both owner and non-owners of CB/mobile radio equipment.

- For the rural population as a whole there is a 4. low perceived need for improvement in CB/mobile In fact, CB/mobile radio ranked radio services. twelfth in importance relative to eleven other However, community services. when one only considers the user population for this service, its rank increases ninth in relative to importance.
- 5. Generally, a new telecommunication innovation is adopted relatively quickly. A long term demand forecast, developed for the new combined telephone-mobile radio service, indicated that at least 50% of the households in the potential market would adopt this service within a short time period (i.e., three years).
- 6. For the new combined telephone and mobile radio service, it may be concluded that there is a demand for this service among a particular segment of the population (i.e. approximately 15% of rural households). First year potential sales

DEMAND RESEARCH CONSULTANTS INCORPORATED

of the equipment necessary for this new service offering combined with a monthly rental fee of \$4.00 could amount to approximately \$1941,2,3 million. In this instance, total potential sales following a nine year period would amount to an estimated \$279 million for equipment offered at a \$300 purchase cost and an additional monthly rental charge of \$4.00. On the other hand, at a \$700 acquisition price and equal rental fee, the total estimated revenue over this same period is \$341 million.

- 1 These estimates are expressed in today's dollar value. That is, the "present value" of money over the period of time of interest has not been accounted for.
- ² These estimates are provided through a projection of the level of demand presented in section 2.4 (short term demand) and section 2.5 (long term demand) to the population data presented in table A-2.
- 3 It should be remembered that the long term forecast could be affected by several factors: the adoption rate, level of first year sales or number of opinion leaders, and the total potential market. Sensitivity analysis involving a manipulation of some or all of these variables was not conducted. The estimates provided are maximum likelihood estimates, that is, "most likely" estimates.



: . .

·

· · ·

APPENDIX A METHODOLOGY

-.

. • •

DEMAND RESEARCH CONSULTANTS INCORPORATED



APPENDIX A

METHODOLOGY

A.1 Genesis

Within the context of Phase II of the Rural Demand Study, the overall objective of the demand project is: "to survey the needs of rural domestic suscribers for existing and proposed communication services and to forecast short term and long term demand for these services". To this end, this project was staged in three steps:

- Selection of a measurement strategy. The present authors, under the auspices of the University of Ottawa, were commissioned to develop a strategy for the measurement of the needs and demand of rural people with respect to telecommunication services. A review of the literature was carried out and focus group interviews were subsequently conducted across Canada in order to provide basic information required for the design of the survey questionnaire².
- Development and test of the survey design. DEMAND Research Consultants was commissioned to design the final questionnaire and to carry out the analysis required to test the questionnaires and the survey design; Canadian Facts was commissioned to develop the sampling design and to conduct the pretest and pilot field work. These activities culminated in a

² Camprieu, R. (de) and Bourgeois, J.C., "Demand for Rural Communication Services in Canada: Focus Groups and Research Instruments", University of Ottawa, Ottawa, (December 1979).



Camprieu, R. (de) and Bourgeois, J.C., "Demand for Rural Communication Services in Canada: Literature Review", University of Ottawa, Ottawa, (January 1979).

pilot survey whose results have been analyzed in two reports1,2.

 Full scale survey and analysis. Canadian Facts was commissioned to conduct the field work and DEMAND Research Consultants was commissioned to undertake the analysis.

This part of the report deals with the methodological aspects relevant to the whole residential survey (covering three communication services: telephone, television, mobile radio service). The purpose is to give the reader the basic information necessary to assess the validity and the reliability of the need analysis and demand forecasts which have been presented.

Section A.2 discusses the need and forecasting models underlying the analysis. Section A.3 outlines the survey method used to actually make the measurements. Section A.4 provides an operational definition of "rural" and of "residential subscriber" and summarizes the procedure implemented to draw a representative sample of that population. Finally, illustrates section A.5 some basic population dispersion characteristics and compares the sample to sampling frame along five demographic the present in its characteristics order to In addition, the weighing scheme representativeness. used in the analysis conducted at the national level is explained.

Π

Bourgeois, J.C., and Camprieu, R. (de), "Study of the Demand for Communication Services in Rural Canada: Analysis of the Pilot Survey Results", DEMAND Research Consultants, Ottawa, (May 1981).

O'Hara, S. "Study of the Demand for Communication Services in Rural Canada: Pilot Survey Field Report", Canadian Facts, Ottawa, (October 1980).

A.2 Need and Forecasting Models

Some of the concepts implied by the objectives do not lend themselves to straightforward measurement, because they involve subjective, non-observable notions (e.g. needs, motivations, satisfaction, demand). In such situations, the desired information must be inferred, that is obtained indirectly from other pieces of related information more easily measured. To do this, the analyst must rely on some technique, model or theory which has been proven valid. The rationale for selecting the techniques, models and theories involved in the present study has already been discussed in a previous report¹. Two techniques and one model will be briefly presented here.

A.2.1 Conjoint Measurement

One of the objectives of this study is to "identify which aspects of telephone (and television) service are most needed." Telephone service, for instance, comprises several attributes (e.g. number of parties on the line, basic monthly charge, size of free call area). Respondents could have been asked to indicate "how important to them" each of these attributes was. But, on the basis of information gathered during the focus groups, there was a serious doubt as to whether repondents could actually provide reliable answers to this type of question. Therefore, it was decided to rely on conjoint measurement, a different approach² at measuring respondents' preferences for the various aspects of a multiattribute object (i.e. service).

Conjoint measurement is a technique developed by psychometricians to measure people's perceptions and preferences. As the name suggests, conjoint measurement is concerned with the joint effect of two or more independent variables on the ordering of a

I "Demand for Rural Communication Services in Canada: Focus Groups and Research Instruments", op. cit., pp. 48-74.

² That is, different from the "how important to them" approach just mentioned.

dependent variable. For example, one's preference for various types of telephone services may depend on the joint influence of such variables as the number of parties sharing a line, the size of the free calling area, or the basic monthly charge.

The conjoint measurement technique starts with the respondent rank-ordering (a measure of preference) various telephone service "packages". For example, one package could include: a private line, a large free calling area and an \$18.00 basic monthly charge; another package could include: a two-party line, a small free calling area and a \$6.00 basic monthly charge. With this rank-ordering as input, conjoint measurement performs the rather remarkable job of decomposing the original preferences into separate and compatible utility scales by which the original preferences can be reconstituted. Two valuable pieces of information can be obtained from this decomposition:

- an accurate estimate of the relative importance of the various components of telephone service (number of parties on line, size of free call area, basic monthly charge), and
- 2) an indication of how sensitive respondents would be to a change in the level of the various attributes (for example, how respondents would react to an increase (decrease) in monthly charge from, say, \$6 to \$12, or \$6 to \$20, etc.).

Together these two pieces of information will indicate what respondents want in the way of telephone service.

The main drawback of the conjoint measurement task rests with the rather large number of choices the respondent has to make, which can result in fatique and ultimately low reliability. This eventuality was investigated at both the pretest and the pilot stages of the survey. The results of the conjoint measurements were found both internally and externally consistent.¹

DEMAND RESEARCH CONSULTANTS INCORPORATED

Π

Bourgeois, J.C. and Camprieu, R. (de), "Study of the Demand for Communication Services in Rural Canada: Analysis of Pilot Survey Results", DEMAND Research Consultants Inc., Ottawa, (May 1981), pp. 26-31, 50-55.

A.2.2 Simulated Choice Scenarios

Following a review of the available sources of secondary information1 and after consultations with authorities from the Department of Communications, a survey of buying intentions emerged as the best approach to forecast "short term" demand in the specific context of this study.² Buying intentions provide reliable estimates of demand if properly measured. A "simulated choice scenario" approach was used to that effect. It consists in having respondents make a choice decision in the context of a simulated, but realistic, purchase situation; one of three scenarios (high price, medium price, low price) was administered to each respondent for each new service The information obtained with the investigated. technique can be used to infer short term (one year time horizon) demand curves. Demand curves derived from the scenarios administered in the course of the pilot survey were found internally and externally consistent³. Furthermore, during a meeting where the results of the pilot survey were presented, attendees from the Department of Communications reported evidence (i.e. information which they had a knowledge of or had on hand) congruent with the short term demand forecasts⁴.

A.2.3 Diffusion Model

The Lawton and Lawton model, chosen for the long term demand forecasts, is grounded in the diffusion theory tradition⁵; its roots are in the mathematical

- I "Demand for Rural Communication Services: Literature Review", op. cit.
- ² "Demand for Rural Communication Services: Focus Groups and Research Instrument" op. cit., 50-54, 69-71.
- ³ "Study of the Demand for Communication Services in Rural Canada: Analysis of Pilot Survey Results", op. cit., 32-40, 55-74.
- 4 May 19, 1981, Department of Communications, Ottawa.
- ⁵ The model is presented in detail in "Demand for Rural Communication Services in Canada: Focus Group and Research Instruments" op. cit., 55-63.

models of epidemologists studying the spread of diseases and of chemists investigating the nature of chemical reactions. The model has been used to successfully forecast the diffusion of cable TV services as well as a host of products and services.

The model describes the entire life cycle of an innovation: number of individuals adopting the innovation in a given year, the number of years required for the adoption to peak, and the number of years required for all potential adopters to make their decision to adopt.

It requires only three input parameters:

- a measure of contagion which can be derived from analyses of selected time series;
- the number of first year adopters, provided by the short term forecast;
- 3) the number of potential adopters which will be defined as a percentage of the total number of rural households in Canada.

The model was tested for its appropriateness to the present study with several data sets! and was deemed suitable to long term demand forecasting.

A.3 Survey Method and Instrument

The data for the survey was collected through personal interviews. The choice of this method was justified by the nature of some of the questions (e.g. conjoint measurement) and the length of the questionnaire. The overall measurement strategy was designed to minimize the incidence of two sources of errors:

¹ "Study of the Demand for Communications Services in Rural Canada: Analysis of Pilot Survey Results", op. cit., 100-118.

Π

- errors due to the non-representativeness of the sample; and
- 2) errors occuring during the measurement process.

The first source of error will be considered in the next two sections dealing with sampling issues. This section focuses on the measurement process itself. Several actions were taken to insure that the survey would provide valid information:

- Rural people's knowledge of various telecommunication related concepts was assessed during the focus group phase.
- The questionnaire items were arranged in a sequence allowing respondents to gain familiarity with the subject matter before the most crucial questions were asked (buying intentions with respect to new service).
- Care was taken to minimize potential biases for some questions requiring respondents to process information (e.g. conjoint measurement, simulated choice scenarios). For example, visual aids were designed for several questions to assist both the interviewee and the interviewer (a sample of these are reproduced as Figures A-1 and A-2). Skip patterns were carefully designed to minimize the length of the interview.
- Scales that have been found reliable in previous research were retained (e.g. "constant sum scale" used to measure the relative strength of the need for improvement in communication services).
- The order of items for multi-item questions was systematically rotated. A rotational pattern necessitating nine questionnaire versions was designed (see Table A-1).
- Prior to the pilot survey, the English and the French questionnaires had been pre-tested for respondent and interviewer understanding of instructions and questions.

DEMAND RESEARCH CONSULTANTS INCORPORATED

n

SAMPLE OF VISUAL AIDS USED IN THE CONJOINT TASKS



- -with better programming than that currently
- available

P4

-at a \$6 monthly charge.



available

-with the same program-

ming as that currently

-at an \$18 monthly charge.

DEMAND RESEARCH CONSULTANTS INCORPORATED

U DRC

П

SAMPLE OF VISUAL AIDS USED IN THE CONJOINT TASK



DRC N

DEMAND RESEARCH CONSULTANTS INCORPORATED

TABLE A-1

Į

DEFINITION OF THE VERSION FOR EACH QUESTION RESIDENTIAL SURVEY

Constant Sum Scale Q 2	Telephone Satisfaction Scale Q 6	Telephone Scenarlo Q 13	TV Satisfaction Scale Q 17	TV Scenario (cable) Q 21	TV Scenario (satelite) Q 22	Telephone/TV Scenario Q 23	Hoblie/Telephoae Scenario Q.28
Telephone A C8 Radio TV	a b c d e f g h i j k l m n	Low Price (\$10)	a b c d f g h i j	Low Price (\$6)	Low Price (\$400)	Low Price (\$15)	Low Price (\$300)
TV B Radio C8 Telephone	g h j k l m a b c d e f n	Medium Price (\$18)	e f g h I a b c d J	Medium Price (\$12)	Medium Price (\$600)	Medium Price (\$25)	Medium Price (\$500)
Radio C TV Telephone C8	m I K J I h g f e d c b a n	High Price (\$25)	i h g f e d c b a j	High Price (\$20)	High Price (\$800)	High Price (\$35)	High Price (\$700)

- Finally, a pilot study was conducted to verify that possible sources of measurement errors had been effectively controlled.l Several changes, including price levels in the simulated choice scenarios, were subsequently made.

At the outset of this process the questionnaire, appearing in Appendix B, was deemed to be a valid instrument to gather the pieces of information required by the project. The content of the questionnaire is briefly presented below:

- Section A was designed to position the need for improvement in telecommunication services in rural areas relative to other services. Section B relates to telephone service, Section C to television service, Section D to mobile radio service and Section E to general information.
- Questions 6 and 17 are aimed at discovering to what extent respondents are satisfied with various aspects of the telephone and TV service they currently receive.
- Questions 12 and 20 were used to provide the minimum data required to perform a conjoint measurement analysis.
- Questions 13, 21, 22, 23, 28 correspond to the various simulated choice scenarios designed to measure rural respondents' buying intentions with respect to improved services (i.e. comparable to that available in urban areas). Three price levels (high, medium, low) were used for each scenario (see Table A-1).
- The other questions are self-explanatory.

Administration procedures have also been carefully specified to minimize respondent errors, interviewer

I "Study of the Demand for Communication Services in Rural Canada: Analysis of Pilot Survey Results", op. cit. errors and to handle the "not at home" problem. A detailed account is given in the field report.¹

A.4 Sampling

Three steps are involved in probability sampling:

- define the population and set up a list of population units (sampling frame);
- determine the number of units to be selected (sample size) so that accuracy and reliability requirements are satisfied;
- 3) establish a procedure for actually drawing sample units from the sampling frame. Each step will be discussed in this section.

A.4.1 Sampling Frame

Before developing a sampling frame, it is necessary to precisely define the population to be surveyed. Rural households are involved in this project; it is therefore necessary to have an operational definition of "rural" and to establish a procedure for developing the frame. This aspect of the survey was conducted by Steve Brown and Keith Richardson and is reported in detail in a companion report².

The sampling frame that was developed was composed of census Enumeration Areas (EA's). The EA's retained in the sampling frame had a population density of greater than 0.8 persons per square mile and were located outside the boundaries of:

- O'Hara, S., "Study of the Demand for Communication Services in Rural Canada - Residential Survey", Canadian Facts, Ottawa, (1981).
- Brown, Steve and Richardson, Keith, "Sampling Frames for the Rural Residential and Business Demand Surveys", Department of Communications, Ottawa, (May 1981).

DEMAND RESEARCH CONSULTANTS INCORPORATED

I

- a) Census Metropolitan Areas (CMA's);
- b) Cities, towns and villages (CSD's) and Census Agglomerations (CA's) with population size over 2,499 and global density greater than 999 persons/sq. mile.

EA's with no private households and EA's that correspond to Indian Reserves were excluded.

Of the 35,154 EA's that were defined for the 1976 census, 11,785 met the criteria implied by the definition of rural and were retained to compose the sampling frame. A total of 1,476,154 households were living in these rural EA's. Table A-2 provides a provincial breakdown of the number of households in rural Canada and Table A-3 provides a regional breakdown of the number of households in rural Canada by community size.1

The frame was stratified by subprovincial region (smaller area within the provinces), and community size (that is, communities with a population of less than 1000, and communities of 1000 to 2499). The frame was stratified in this manner to provide even coverage of the rural portions of each of the five regions ' (Atlantic, Quebec, Ontario, Prairies, and B.C.). Within each region two replicated samples of EAs were selected based on probability proportionate to size, i.e. the number of households per EA. This design was used in order to provide a basis for obtaining close estimates of the standard error applicable to statistics derived from the survey².

- Rural households were identified by computer selection from the 1976 national census data which resulted in the creation of five files SG 1, 2, 4, 5 and 6. Households in file SG6 were not included in the field survey although the characteristics of households in this file are sufficiently close to the aggregate that the survey results can be considered representative of this group also.
- O'Hara, S., "Study of the Demand for Communication Services in Rural Canada - Residential Survey", Canadian Facts, Ottawa, (1981), p.10.



TABLE A-2

RESIDENTIAL SAMPLING FRAME

RURAL HOUSEHOLDS1

ATLANTIC Newfoundland Prince Edward Is Nova Scotia New Brunswick	52,546 21,336 86,107 84,572	244,561
QUEBEC		327,684
ONTARIO		362,754
PRAIRIES Manitoba Saskatchewan Alberta	81,339 129,666 126,305	337,310
BRITISH COLUMBIA		134,448
RURAL CANADA		1,406,757

Source: Brown, S. and Richardson, K., "Sampling Frames for the Rural Residential and Business Demand Surveys", Department of Communications, Ottawa, (May 1981), p. 18

1 These figures exclude those households in EA's which were included in the SG6 file.

U DRE

Π

TABLE A-3

RESIDENTIAL SAMPLING FRAME

HOUSEHOLDS (1976)1

Region	Comm Large	unity Size Small
Atlantic	28,834	215,727
Quebec	51,634	276,050
Ontario	46,462	316,292
Prairies	47,535	289,775
British Columbia	19,545	114,903
TOTAL	194,010	1,212,747

1,406,757

These figures exclude those households in EA's which were included in the SG6 file. 1



. 1

Π

A.4.2 Sample Size

An accuracy of ± 5 % at 95% level of confidence was required for estimates at the regional level. This implies a sample size of 400 completed interviews per region, or a national sample of 2,000 completed interviews.

A.4.3 Sampling Procedure

were replicated samples of EAs selected Two proportionately to the number of households per EA. Then, within each of the 729 EAs so selected, a location was selected at random. Interviewers were location instructed to select households at this pre-specified procedure1. according to Only а households which could be identified as primary residences were selected; interviews were conducted with the male or female head of household, on an alternate basis.

A.5 Sample Characteristics and Representativeness

A.5.1 Population Dispersion Characteristics

Population dispersion is a key factor in the provision of communications services. In this section a set of graphs illustrate characteristics derived from the sample. Figures A-3 to A-18 illustrate the distribution of the sample with respect to distance to the nearest city and nearest neighbour as derived from the answers to Question 34 a) and g) (nationally and by region and community size; distribution and cumulative).

1 The procedure is described in more detail in O'Hara, S. "Study of the Demand for Communication Services in Rural Canada - Residential Survey", Canadian Facts, Ottawa, (1981).

JRC JRC

N

SAMPLE DISTRIBUTION

OF DISTANCE TO NEAREST CITY (National)



SAMPLE DISTRIBUTION

OF

DISTANCE TO NEAREST NEIGHBOUR

(National)



• FIGURE A-5

SAMPLE DISTRIBUTION

OF

DISTANCE TO NEAREST CITY

(Atlantic Region)



.

SAMPLE DISTRIBUTION

OF

DISTANCE TO NEAREST NEIGHBOUR

(Atlantic Region)



SAMPLE DISTRIBUTION

OF

DISTANCE TO NEAREST CITY

(Quebec Region)



SAMPLE DISTRIBUTION

OF

DISTANCE TO NEAREST NEIGHBOUR

(Quebec Region)



SAMPLE DISTRIBUTION

OF

DISTANCE TO NEAREST CITY

(Ontario Region)



2

SAMPLE DISTRIBUTION

OF

DISTANCE TO NEAREST NEIGHBOUR

(Ontario Region)





SAMPLE DISTRIBUTION

OF

DISTANCE TO NEAREST CITY

(Prairie Region)



· · · ·

SAMPLE DISTRIBUTION

OF

DISTANCE TO NEAREST NEIGHBOUR

(Prairie Region)


SAMPLE DISTRIBUTION

OF

DISTANCE TO NEAREST CITY

(British Columbia Region)



SAMPLE DISTRIBUTION

OF

DISTANCE TO NEAREST NEIGHBOUR

(British Columbia Region)



SAMPLE DISTRIBUTION

OF

DISTANCE TO NEAREST CITY

(SMALL COMMUNITIES)



SAMPLE DISTRIBUTION

OF

DISTANCE TO NEAREST NEIGHBOUR





SAMPLE DISTRIBUTION

OF

DISTANCE TO NEAREST CITY



.

SAMPLE DISTRIBUTION

OF

DISTANCE TO NEAREST NEIGHBOUR





As would be expected there is considerable regional variation in population distribution (see Figures A6, A8, A10, A12, A14). On a national basis two thirds of the sample households were located within 100 yards from their nearest neighbour (Figure A4). In the Prairie region however where overall population density is lowest in rural Canada, only one third of the sample households were within 100 yards of their nearest neighbour. Similarly the Prairies households are farthest from the nearest city except for the Atlantic Region.

A.5.2 Sample Characteristics

The final data base consisted of 2,667 respondents. Although numerous measures were included in the survey instrument, five demographic measures were compared to Statistics Canada data which is based on the 1976 Census. This enabled the representativeness of the sample along the following five dimensions to be evaluated:

- i) tenureii) type of dwelling
- iii) household size
- iv) language
 - v) marital status

The comparison of the Statistics Canada information to the survey results¹ (see Table A-4) suggests that sample is generally well balanced along these the dimensions, and that the sampling procedure was carried out in a reliable fashion. However, some discrepancies are worth noting. For example, while the survey reports 69% to speak English, Statistics Canada reports 62%. Although this might at first appear to be a large discrepancy, it is explained quite easily. The survey measured the language spoken most often at home while Statistics Canada in their 1976 Census year measured mother tongue. The difference is obvious and explains why more people would report speaking English at home. In addition, the comparisons indicate that people who are married and live in the Prairie region were oversampled, as were people in single or semi-detached houses in the Prairies and B.C.

1 The survey data is unweighted except at the National level, and the Statistics Canada data excludes the SG6 file.



TABLE A-4 SAMPLE CHARACTERISTICS

	Atlantic		Queł	жс	Onta	rio	Prair	ies	B.C	•	Nati	onal		
	Frame	Survey2	Frame	Survey2	Frame	Survey2	Frame	Survey2	Frame	Survey ²	Frame	Survey ³		
Total Households	(244,500)	(551)	(327,640)	(585)	(362,845)	(507)	(337,475)	(549)	(134,440)	(475)	(1,406,950)	(2,047)		
	5	\$	7	\$	\$	\$	x	×	76	K	8	7.		
Tenure														
Own	89	92	81	87	83	86	84	91	79	84	83	88		
Rent	11	8	19	13	17	14	16	10	21	16	17	12		
	z	\$	¥	z	x	¥.	z	×.	ţ.	5	7	z		
Type of Dwelling														
Single/Seml-detached	87	95	81	90	90	95	8 6	97	75	88	85	94		
Row	t	-	1	2	*	1	1	-	2	-	1	1		
Duplex/Triplex	2	1	6	6	2	1	1	1	1	2	·· 2	2		
Apartment	2	*	5	*	4	1	3	*	4	1	4	*		
All Other ⁴	8	3	7	2	5	3	10	2	18	10	8	3		
Total Families ⁵	(218,355)	(516)	(291,590)	(558)	(310,755)	(470)	(275,660)	(509)	(111,600)	(445)	(1,207,960)	(1,916)		
	\$	\$	\$	5	x	5	X	x	X	%	76	76		
Household Size														
2 persons	30	27	29	27	35	31	35	33	37	43	33	31		
3 persons	21	21	20	22	19	19	19	19	19	16	20	20		
4 persons	20	25	21	24	22	27	21	25	23	22	21	25		
5 persons	13	11	13	14	13	15	13	14	12	14	13	14		
6 persons	7	11	8	7	7	6	7	6	5	4	. 7	7		
7 persons	4	3	4	4	3	1	3	1	2	t	3	2		
8 persons	2	2	3	2	1	*	1	1	1	*	2	1		
9 or more	3	2	3	1	1	*	1	1	*	*	2	1		

* Less than 0.5%

1 Statistics Canada data based on the 1976 Census (excludes SG6)

1

2 Unweighted

3 Weighted

4 Statistics Canada data includes "moveable" dwellings even if on foundations.

⁵ Base for Statistics Canada data is Total Families (excluding one person households). Therefore, survey data has been calculated on households with 2 or more persons.

.

TABLE A-4 (cont'd)

SAMPLE CHARACTERISTICS

	Atlantic		Que	bec	Onta	arlo	Prai	rles	B-	C.	Nati	onal
	Frame	Survey	Frame	Survey2	Frame	Survey2	Frame	Survey2	Frame	Survey2	Frame	Survey
Language	(932,865)	(551)	(1,249,595) (585)	(1,220,880)	(507)	(1,122,965) (549)	(428,090)	(475)	(4,954,395)	(2,047)
	X	¥	ž	¥	\$	X	X	x	X	z	\$	x
English	81	84	7	5	85	92	75	94	86	96	. 62	69
French	18	16	92	95	7	4	5	2	2	1	30	28
Other	1	0	1	0	6	4	19	4	10	2	7	2
Not Stated	1	· 1	1	0	1	*	1	1	2	1	1	*
Marital Status	(244,595)	(551)	(327,490)	(585)	(362,830)	(507)	(337,275)	(549)	(134,475)	(475)	(1,406,665)	(2,047)
	X	¥	*	x	×	z	· \$	x	z	¥	×	\$
Marrled ⁴	79	84	82	88	80	84	77	87	78	85	79	86
Separated	2	2	2	t	3	1	2	2	4	2	. 2	1
Wldowed	12	9	9	6	11	8	11	7	7	4	10	7
Divorced	1	1	1	*	2	1	1	1	3	2	2	1
Single	6	5	6	5	' 6	6	9	5	8	6	7	5

* Less than 0.5%

1 Statistics Canada data based on the 1976 Census (excludes SG6)

۲

2 Unweighted

³ Weighted

4 Survey data includes "Common Law"

A.5.3 Weighting Scheme

As previously explained in section A.4.1 (Sampling Frame), the frame was stratified to provide even coverage of the rural portions of each of the five regions (Atlantic, Quebec, Ontario, Prairies, and B.C.). In so doing, the resultant sample was not distributed according to the actual proportion of rural households in each region (e.g. rural households in the Atlantic region and in B.C. were oversampled). In order to correct for the disproportionate regional representation, the total national sample was weighted (i.e. from 2667 respondents to 2047). In down addition, the data presented for small and large rural communities was weighted down such that it would represent all regions. The regional data was not weighted as it proved to be representative in terms of the proportions of small and large communities within each region.

As a result there are, in effect, three different total sample sizes:

- a) the national data base (2047 respondents) which is representative of the population size of both community sizes and the five regions.
- b) the regional data base (2667 respondents distributed as follows: Atlantic region, 551 respondents; Quebec, 585 respondents; Ontario, 507 respondents; Prairies, 549 respondents; and B.C., 475 respondents) is representative of both small and large community sizes within each region.
- c) the community data base (2057 respondents distributed as follows: small, 1787 respondents; and large, 270 respondents) is representative of the population size across the five regions for each community size.

It is important to remember that no one type of respondent has been weighted up, that is, inflated or given more weight. Where the sample was weighted, it was always weighted down (i.e. the actual number of respondents sampled was 2,667).

DEMAND RESEARCH CONSULTANTS INCORPORATED

RC

·

.

.

.

APPENDIX B

GLOSSARY OF TECHNICAL TERMS

. .

•

. .

-

, , .



APPENDIX B

GLOSSARY OF TECHNICAL TERMS

The definitions or discussions presented below are not comprehensive; only the aspects relevant to the analysis reported here have been retained.

- Frequency distribution: The frequency distribution of a given questionnaire item merely describes how the sample answered the question.

The "shape" of a frequency distribution is of particular interest to the researcher; besides indicating how the measurement went, this shape has important analytical implications. For instance, certain statistical analyses (e.g. correlation, regression) usually assume that the shape of the distribution exhibits certain characteristics (e.g. unimodality, normality, etc.). Several statistics are commonly used to characterise the shape of a frequency distribution:

- measures of central tendency (mean, mode, median)
- measures of dispersion or spread about the mean (variance, standard deviation)
- measure of symmetry (skewness)
- measure of relative flatness (kurtosis)

Crosstabulation: A crosstabulation is a joint frequency distribution of cases according to two or more classifactory variables. These joint frequency distributions can be statistically analyzed by certain tests of significance, e.g. the chi-square statistic, to determine whether or not a relationship exists between them.



- association: Hypothesis testing Measures of usually involves an investigation of whether the answers to one question (e.g. purchase intentions) are related to the answers of one or several other questions (e.g. degree of satisfaction, intensity need). Several of statistical of measures association are available because some of them regression, correlation) can only be used (e.g. the variables involved exhibit certain when distributional and scaling characteristics. When characteristics satisfied, these are not "non-parametric" measures of association are used (e.g. Cramer's V, Contingency Coefficient, Lambda).
- Correlation coefficients: They measure the degree (or strength) of statistical association between two variables. They range from -1 to +1; the sign of the coefficient indicates the direction of the relationship (inverse or positive); the absolute a "0" value indicates the degree of association: indicates an absence of statistical association, that the two variables vary which Means independently of each other; a "1" indicates a perfect statistical association, which means that the variation in one variable parallels exactly the variation in the other variable. The Pearson coefficient is used for interval-scaled variables coefficient is used for while the Spearman ordinal-scaled (rank ordered) variables.
- Level of significance: This concept arises when random samples are used to infer the existence of test of relationships in the population. Α significance is used to learn the probability that the relationship observed in the sample could have by chance. The probability of the happened observed relationship occuring by chance is equal to the proportion of every possible sample in which the relationship between two variables is as strong or stronger than in the observed sample. It has become convention in social science to accept as statistically significant relationships which have a probability of occuring by chance 5 percent of the time or less (i.e. 5%), that is, in no The significance more than 5 out of 100 samples. tests used in this report include the 2 , the significance test for the correlation coefficient, Fisher test (for the coefficient of and the determination R^2).

DEMAND RESEARCH CONSULTANTS INCORPORATED

n

- Standard error: The standard error statistic indicates the potential degree of discrepancy between the sample mean and the unknown population mean. If we were to draw an infinite number of equal-sized samples from a given population, the means of these samples would be normally distributed around the true population mean. The standard deviation of this distribution is called the standard error. About 66% of the sample means would be contained in the interval defined by the population mean \pm one standard error.
- Factor analysis: This is a technique that can be used to reduce a set of intercorrelated variables into a smaller set of new variables (called factors) which are truly independent (uncorrelated).

U BRC

Π

APPENDIX C

QUESTIONNAIRE

-

U D<u>R</u>C

Π

HOUSEHOLD QUESTIONNAIRE

LOCATION NUMBER:	7/10		FOR OFFICE	USE ONLY	FILE	REP.
HOUSEHOLD NUMBER:	<u> </u>	12-1	13- 14-	15- 16- 17-	18-	19-

ASK TO SPEAK TO THE HEAD OF HOUSEHOLD.

Hello, I am ________ of Canadian Facts, a market research company. We are conducting a survey on behalf of the Government of Canada (HANO LETTER OF INTRODUCTION). We would appreciate your co-operation.

Α.

Is this your primary residence, that is, do you live in this home for six months or more of the year?

YES	NO	RECORO BELOW AND
		ENO INTERVIEW

B. (IF YES TO A ABOVE, INTERVIEW MALE HEAD OF HOUSEHOLD)

	TRIP:	<u>1</u>		2		3	
	OATE:						
NO ONE AT HOME		0-1	21	-1		-1	
NOT A PRIMARY RESIDENCE		2	•••••	2	•••••	2	
NO MALE HEAD OF HOUSEHOLD		3	•••••	3	•••••	3	
INITIAL REFUSAL	N REFUSAL)	_ 4	•••••	4	•••••	4	
RESPONDENT NOT AT HOME		5		5	•••••	5	
RESPONOENT REFUSAL	IN REFUSAL)	_ 6	•••••	6	•••••	6	
TERMINATION)	. 7	•••••	7	•••••	7	
COMPLETION	• • • • • • • • • • • • • • • •	. 8	•••••	8	•••••	8	



, 3RG

HCUSI CON	HOLD QUESTI	OUNAIRE STUDY		
LOCATION NUMBER: 7/10		FOR OFFICE	E USE ONLY	FILE REP.
HOUSEHOLD NUMBER:	12-2	13- 14-	15- 16- 17	- 18- 19-
ASK TO SPEAK TO THE HEAD OF HOUSE	10LD.			
Hello, I am We are conducting a survey on beha INTRDDUCTION). We would appreciat A. Is this your primary reside	of Canadi alf of the G te your co-o ence, that I	an Facts, a overnment o peration. s, do you l	market reseau f Canada (HANI ive in this ho	ch company.) LETTER OF
The year YES	🗆	NO	C RECORD BI	LOW AND
B. (IF YES TO A ABOVE, INTERVI	EV FEMALE H	EAD OF HOUSE	HOLD)	
	TRIP:	<u>1</u>	2	3
	DATE:			
NO ONE AT HOME	•••••	20-1	21-1	22-1
NOT A PRIMARY RESIDENCE	• • • • • • • • • • • • •		2	2
NO FEMALE HEAD OF HOUSEHOLD)	3	3	3
INITIAL REFUSAL	IN REFUSAL)	4	4	4
RESPONDENT NOT AT HOME		5	5	5
RESPONDENT REFUSAL	AIN REFUSAL)	6	6	6
TERMINATION)	7	7	7
COMPLETION	•••••	8	8	8
				23/76

DEMAND RESEARCH CONSULTANTS INCORPORATED

U DRC M

1-a)

(HAND CARD A, HOLD DECK A)

Please read this card and tell me all of the services you strongly feel must be improved in your area.

(FOR EACH SERVICE MENTIONED (<u>UP TO 6</u>), REMOVE THE CORRESPONDING CARD FROM DECK A. WHEN RESPONDENT HAS SELECTED UP TO 6 SERVICES, TAKE BACK CARD A AND HAND RESPONDENT THE DECK OF CARDS HE/SHE HAS SELECTED.)

Now looking at the services you have selected, which one do you feel most needs to be improved in your area? (REMOVE CARD, CIRCLE CODE 1 BELOW BESIDE. SERVICE MENTIONED.)

-c)

-ъ)

And which is your second choice for improvement in your area? (REMOVE CARD, CIRCLE CODE 2 BELOW BESIDE SERVICE MENTIONED.)

What is your next choice? (RECORD BELOW UNDER THIRD)

(REPEAT UNTIL ALL CARDS HAVE BEEN RECORDED IN ORDER SELECTED BY RESPONDENT)

	1-b)	1-c))							
	NEED T	OBE	MPRO	OVED:		_				
	MOST	SECO	<u>D</u>	THIR	D F	DURT	<u>H</u> FI	FTH	<u>S1</u>	XTH
Electricity, Hydro Services	7-1	2	••	. 3	••••	4	••••	5	•••	6
Health/Medical Services	8-1	2	••	. 3	••••	4	••••	5	•••	6
CB, Mobile radio Services	9-1	2	• • •	. 3	••••	4	••••	5	•••	6
Recreation and Sports facilities	10-1	2	••	. 3	• • • •	4	••••	5	•••	6
Mail services	11-1	2	••	. 3	• • • •	4	••••	5	•••	6
Telephone Services	12-1	2	••	. 3	••••	4	••••	5	•••	6
Roads and public transportation	13-1	2		. 3	••••	4	• • • • •	5	•••	6
Education Services	14-1	2	••	. 3	••••	4	••••	5	•••	6
Television Services	15-1	2	••	. 3	••••	4	••••	5	•••	6
Security Services (police, fire)	16-1	2	•••	. 3	••••	4		5	•••	6
Newspaper Services	17-1	2	•••	. 3	••••	4	••••	5	•••	6
Radio Broadcasting Services	18-1	2	••	. 3	••••	4	••••	5	•••	6
NO IMPROVEMENT NEEDED		0								

BIN 82038



TETLER A (Continued)

.

I am going to give you a list of four telecommunication services. Suppose that you had 10 points to allocate for improvement to these services in your area. The more points you give to a service the more you feel it must be improved, the less points you give the less you feel it must be improved. You can allocate the 10 points to one or all the services, but remember that the total must add up to 10. (HAND TO RESPONDENT, RESPONDENT RECORDS)

		NO.	OF POINTS	
Telephone servi	ces			
CB or mobile ra	dio services	· · · · · · · · · · · · · · · · · · ·		
Radio broadcast	ing services	····· ··· ···		
Television ser	vices	·····		
OTAL MUST ADD UP TO 1	0	TOTAL =	10	19/21
NO IMPROVEMENT	NEEDED			22/24
IN ANY OF THESE	SERVICES	0		25/27
				28/30

.

DEMAND RESEARCH CONSULTANTS INCORPORATED

BIN 82038

U DRC

Π

SECTION B

(-a) How many different telephone numbers are in use in your home?



Are any of these telephone numbers business numbers?

NO 2

4-a)

-Ъ)

(1F "ONE" TO 3-a) <u>and</u> "YES" TO 3-b), GO TO Q.14-a).) What is your residential telephone mainly used for in your home? (DO NOT RFAD LIST) (CIRCLE CODE 1 BESIDE FIRST USE MENTIONED)

-b)

Anything else? (CIRCLE CODE 2 BESIDE SECOND MENTION. PROBE, CONTINUE UNTIL RESPONDENT HAS MENTIONED ALL OF HIS/HER USES.)

	4-a)	4-ь)					
	TELEPHON	E IS MA	INLY USEL) FOR:			
	FIRST	SECOND	THIRD	FOURTH	FIFTH	SIXTH	SEVENTH
	MENTION	MENTION	MENTION	MENTION	MENTION	MENTION	MENTION
BUSINESS	33-1.	2.	3	. 4 .		. 6 .	7
HEALTH PROBLEMS	34-1.	2.	3	. 4 .	5	. 6	. 7
CONVENIENCE, TIME SAVING "FFICIENCY (e.g. enqui- ries, appointments, etc)	;, , 35-1	2 .	3	. 4 .	5	. 6 .	7
FEEL ISOLATED, MIGHT HAVE TO CALL FOR HELP	36-1.	2.	. 3 .	. 4 .	5	. 6	7
SOCIAL REASONS (e.g. ca) ling friends, social activities, etc.)	37-1.	2.	3	. 4 .	. 5 .	. 6 .	7
FAMILY REASONS	38-1.	2.	з.	4	5	6	7
SECURITY (fire, police, burglars, etc.) OTHER (SPECIPY)	39-1.	2.	3.	4	5	6	7
O TO QUESTION 6							

5-a)

(IF NO TELEPHONE IN HOUSEHOLD, ASK:) Would you tell me why you do not have a phone? (DO NOT READ LIST) (CIRCLE CODE 1 FOR FIRST MENTION.)

-ь)

And are there any other reasons why you do not have a phone in your home? (CIRCLE CODE 2 POR SECOND MENTION, CODE 3 POR THIRD MENTION)

5-a) 5-b)
REASONS FOR LACK OF PHONE:
FIRST SECOND THIRD
MENTION MENTION
TOO EXPENSIVE
TELEPHONE ON ORDER/ WAI-
TING FOR INSTALLATION 41-1 2 3
RECENTLY MOVED TO HOUSE 42-1 2 3
CANNOT GET THE TYPE OF
SERVICE L WANT 43-1 2 3
UNOBTAINABLE, CAN'T
GET LT 44-1 2 3
SERVICE NOT AVAILABLE . 45-1 2 3
NO NEED FOR ONE46-1 2 3
OTHER (SPECIFY)
CO TO OUFSTION 13

BIN B2038



(HAND CARD B)

Please look at this scale and tell me how satisfied your household is with each of the following aspects of your present telephone service. (RFAD FACH ITEM AND RECORD ANSWER BEFORE READING THE NEXT ONE.) (START READING AT THE "X" AND CONTINUE FOR ALL STATEMENTS)

							VERY		NOT
			VERY	SATIS-	DI:	SSA-	DISSA-	DON'T	APPLI-
		SA	TISFIED	FIED	TI	SFIED	TISFIED	KNOW	CABLE
X	a)	Speed of repair service?	.47 -1	. 2.	••••	3	4	5	6
	b)	Reliability of service, i.e., few		• .			÷		
		breakdowns?	43-1	. 2 .	••••	3	4	. 5	6
	c)	Speed of instal- lation service?	49 -1	. 2 .	••••	3	4	. 5	6
	d)	Operator service?	50 -1	. 2 .	••••	3	4	5	6
	e)	Number of parties on your line?	51-1	. 2 .		3	4	5	6
	f)	Size of area within which you can call free, i.e., without long distance	50 - 1			-	, .	ŗ	
	g)	Ability to call,	52-1	• Z ·	• • • • •	3	4	. 5	6
		essential services such as police,	60.0			_		_	,
		nospical, etc.:	53-1		• • • • •	د	4	•••••••••••••••••••••••••••••••••••••••	6
	h)	Overall clarity of communication	54-1	. 2		3	4	5.	6
	i)	Billing service?	55 -1	. 2	•••••	3	4	5 .	6
	1)	Basic monthly charge (not inclu- ding long distance		·				_	
		calls)/	56-1	. 2	• • • • •	3	4	5 .	6
	k)	Cost of long distance calls?	57 -1	. 2	• • • • •	3	4	5.	6
	1)	Cost of installa- tion service?	58-1	- 2	••••	3	4	5.	6
	m)	Availability of line when you want it?	59-1	. 2	• • • • • •	3	4	5.	6
	n)	Your telephone service in general?	60 - 1	. 2	••••	3	4	5	••• 6

BIN 82038

DEMAND RESEARCH CONSULTANTS INCORPORATED

u Dre

Π

6.

/-a) What type of residential telephone service do you pay for? Is it a ... (READ LIST)?

	Private line61 I CO TO Q.8-a)
	Two party line 2
•	Four party line 3
	More than 4 party line 4

-b) Including yourself, how many parties are actually on your line at the present time?

8-a) For how many years have you had a (REPEAT TYPE OF SERVICE MENTIONED IN Q.7-a))?

LESS THAN 1 YEAR .. D

-b) Did you have to pay more than \$50 to have your telephone installed?

YES 67 -1

(SPECIFY)

NO 2 CO TO Q.9

68/70

-c) How much did it cost?

9.

.....

DUP. 1/4 5-3 DUP. 6

71/74

Now I am going to read a list of community facilities and services. Please tell me if you have to make a long distance call from your home in order to telephone (READ LIST)?

	LONG	DISTANCE C	ALL	REQUIRED	<u>':</u>
	YES		NO	<u>D</u>	ON'T KNOW
The nearest hospital	7-1	••••	2	• • • • • • • • •	. 3
The nearest doctor	8-1	••••	2	••••••	. 3
The nearest dentist	9-1	••••	2.	•••••	. 3
The nearest elementary school	10-1	••••	2	•••••	. 3
The nearest secondary school	11-1	•••••	2	• • • • • • • • •	. 3
The place where you work	l2-1	••••••	2	•••••	. 3
The nearest fire department	13-1	•••••••	2	•••••	. 3
The nearest police station	L4-1	•••••	2	•••••	. 3
The nearest grocery store	12-1	•••••	2	•••••	. 3
The nearest service station	16-1	•••••	2	•••••	. 3
Municipal offices	17-1	•••••	2		. 3

BIN 82038

, and Na Na Na Suction 3 (Continued)

1 1-4) Have there been any major improvements in your telephone service since it was first installed?

YES 18-1 NO 2 CO TO Q.11

-b) (IF YES IN Q.10-a)) Did you yourself ask for this improvement, or did the telephone company carry out the improvement on its own?

Asked for improvement19-1

Company carried out on its own 2

-c) How long ago did this improvement take place?



11-a) On the average, how much is your total monthly phone bill?

				\$ _(WRITE	IN)	24/26
RESPONDENT	CHECKED	PHONE	BILL(S):	YES	27	-1	
		-		NO	••••	2	
		•					×

-b) Excluding charges for long distance calls and tax, how much is the basic monthly charge for your telephone?

\$

RESPONDENT CHECKED PHONE BILL(S): YES ... 30-1

NO 2

-c) Does your monthly phone bill include charges for any of the following optional equipment? (READ LIST)

	YES		NO	
Extension telephones	31-1	••••	۵	
Pushbutton dials	2	••••	۵	
Coloured or decorator telephones	3		a	
Other items (SPECIFY)				

BIN B203

12.

с

Suppose that you have just moved to a different place; you have the choice between two, and only two, types of telephone service. For each of the fullowing situations, could you indicate which type of service you would buy?

(SHUFFLE DECK AND HAND TO RESPONDENT. HAVE RESPONDENT TELL YOU WHICH CARD HE/SHE IS LOOKING AT (T1 TO T17) AND CHECK \checkmark BOX, THEN RECORD RESPONDENT'S CHOICE (P1 TO P9) FOR EACH CARD.)

		DESCRIPTION	CRIPTION				
		MONTHLY	CALLING				
CARD:	LINE	RATE	AREA	CHOICE:			
™ []>	Private	\$6	Same	P132-1			
	Private	\$10	Larger	P2 2			
T2 [].	4 Party	\$6	Same -	P733-1			
/	2 Party	\$10	Same	P5 2			
тз 🛛	4 Party	\$10	Same	P834-1			
- /	4 Party	\$18	Larger	P9 2			
τ4 ···· □>	2 Party	\$10	Same	P535-1			
	Private	\$18	Same	P3 2			
τ5 ···· □	4 Party	\$6	Same	P736-1			
	Private	\$18	Same	P3 2			
т6 🛛	4 Party	\$18	Larger	P937-1			
- /	Private	\$18	Same	P3 2			
T7 D	4 Party	\$18	Larger	P938-1			
	4 Party	\$6	Same	P7 2			
тв п	Private	\$6	Same	Pl39-1			
	2 Party	\$6	Larger	P4 2			
т9 🛛	Private	\$18	Same	P3 40-1			
	2 Party	\$6	Larger	P4 2			
T10 []	2 Party	\$6	Larger	P441-1			
	Private	\$10	Larger	P2 2			
mi o	2 Party	\$18	Same	P642-1			
-	4 Party	\$18	Larger	P9 2			
τ12 []	4 Party	\$18	Larger	P943-1			
	2 Party	\$10	Same	P5 2			
т13 🛛	Private	\$10	Larger	P244-1			
	4 Party	\$6	Same	P7 2			
T14 []	2 Party	\$18	Same	P645-1			
	4 Party	\$6	Same	P7 2			
T15 0>	4 Party	\$10	Same	P846-1			
	2 Party	\$18	Same	P6 2			
T16 D>	Private	\$18	Same	P347-1			
	4 Party	\$10	Same	P8 2			
T17 ···· D>	4 Party	\$18	Larger	P948-1			
	Private	\$6	Same	Pl 2			

BIN B2038



13.

Recent breakthroughs in telephone technology make it possible to offer you a telephone service comparable to that available in large cities; that is, anyone could get a <u>private line</u> and enjoy a <u>large free calling</u> <u>area</u> (that is, people in surrounding communities and essential services could be called without long distance charges).

- 8 -

(HAND CARD C AND READ:)

Subscribing to this new telephone service would give you:

a private line

a larger free calling area (so that people in surrounding communities and essential services could be called without long distance charges).

Choice situation A:

(READ STATEMENT)

Suppose that this new improved telephone service is available to you as early as next month, and that the basic monthly charge (that is, not including long distance calls) is <u>\$10 per month</u>, how likely would you be to buy this service within the next 12 months?

(HAND RESPONDENT SCALE CARD AND CIRCLE ANSWER BELOW)

RESPONDENT'S CHOICE:

Certain or almost certain (9 or 10 chances in 10)49-	-1
Good possibility (7 or 8 chances in 10)	2
Fairly good possibility (4, 5 or 6 chances in 10)	3
Fair possibility (2 or 3 chances in 10)	4
No chance or almost no chance (0 or 1 chance in 10)	5

BIN B2038

DEMAND RESEARCH CONSULTANTS INCORPORATED

IRC

n

Recent breakthroughs in telephone technology make it possible to offer you a telephone service comparable to that available in large cities; that is, anyone could get a <u>private line</u> and enjoy a <u>large free calling</u> <u>area</u> (that is, people in surrounding communities and essential services could be called without long distance charges).

(HAND CARD C AND READ:)

ومالامتلاك والأراد الرو

• •

Subscribing to this new telephone service would give you:

a private line

a larger free calling area (so that people in surrounding communities and essential services could be called without long distance charges).

•

Choice situation B:

(READ STATEMENT)

Suppose that this new improved telephone service is available to you as early as next month, and that the basic monthly charge (that is, not including long distance calls) is \$18 per month, how likely would you be to buy this service within the next 12 months?

(HAND RESPONDENT SCALE CARD AND CIRCLE ANSWER BELOW)

RESPONDENT'S CHOICE:

Certain or almost certain (9 or 10 chances in 10)49-	-1
Good possibility (7 or 8 chances in 10)	2
Fairly good possibility (4, 5 or 6 chances in 10)	3
Fair possibility (2 or 3 chances in 10)	4
No chance or almost no chance (0 or 1 chance in 10)	5

BIN B2038

· -



Recent breakthroughs in telephone technology make it possible to offer you a telephone service comparable to that available in large cities; that is, anyone could get a <u>private line</u> and enjoy a <u>large free calling</u> <u>area</u> (that is, people in surrounding communities and essential services could be called without long distance charges).

(HAND CARD C AND READ:)

Subscribing to this new telephone service would give you:

a private line

a larger free calling area (so that people in surrounding communities and essential services could be called without long distance charges).

Choice situation C:

(READ STATEMENT)

Suppose that this new improved telephone service is available to you as early as next month, and that the basic monthly charge (that is, not including long distance calls) is $\frac{25 \text{ per month}}{25 \text{ per month}}$, how likely would you be to buy this service within the next 12 months?

(HAND RESPONDENT SCALE CARD AND CIRCLE ANSWER BELOW)

RESPONDENT'S CHOICE:

Certain or almost certain (9 or 10 chances in 10)49-1
Good possibility (7 or 8 chances in 10) 2
Fairly good possibility (4, 5 or 6 chances in 10) 3
Fair possibility (2 or 3 chances in 10) 4
No chance or almost no chance (0 or 1 chance in 10) 5

BIN 82038

DEMAND RESEARCH CONSULTANTS INCORPORATED

n

14-1) How many colour television sets are in use in your nome: (ALLOAD DELOW)

-5 i

-5)

And how many black and white television sets are in use in your home? (RECORD BELOW)

	14-a)		14-b)				
	COLOU	R .	BLACK	ANT) WI	IITE	
NONE	50- 0	••••	• • • • •	51 -	0		
ONE		• • • •	• • • • •	۰ſ	1		
TWO	2	••••	• • • • •	.	2		
THREE OR MORE	3	• • • •	• • • • •	•	3		
	IF	ONE	OR MO	RE,			
	GO	TOQ	.16				

15-a) (IF NO TV IN HOME, ASK:) Why don't you use a television set in your home? (DO NOT READ LIST. CIRCLE CODE 1 FOR FIRST MENTION.)

Any other reason? (CIRCLE CODE 2 BELOW FOR SECOND MENTION, ETC. PROBE, CODE UNLY FIRST THREE MENTIONS.)

1	L5-a)	15-ь)	
Ā	REASONS FOR	NOT WATCH	ING TV:
F	TIRST	SECOND	THIRD
4	ENTION	MENTION	MENTION
-			
DO NOT WATCH TV/NOT			
INTERESTED	52-1	. 2	3
TOO EXPENSIVE TO BUY TV	53-1	. 2	3
RECEPTION EQUIPMENT			
(ANTENNA, TOWER, ETC.)			
TOO EXPENSIVE	54-1	. 2	3
POOR RECEPTION	55-1	. 2	3
NO RECEPTION	56-1	. 2	3
NO STATION IN		•	
OWN LANGUAGE	57-1	2	3
CANNOT WATCH/HEAR			
(BLIND, DEAF, ETC.)	58-1	. 2 . 	3
OTHER (SPECIFY)		·	··· ··
GO TO QUESTION 21			

16-a) (IF ONE OR MORE TV IN USE IN HOME, ASK:) What is your TV mainly used for in your home? (DO NOT READ LIST. CIRCLE CODE 1 FOR FIRST MENTION.)

-b)

Anything else? (CIRCLE CODE 2 FOR SECOND MENTION, ETC. PROBE, CODE ONLY FIRST THREE MENTIONS.)

	16-a)	16-ь)	
•	MAIN USES	FOR TV:	
	FIRST	SECOND	THIRD
	MENTION	MENTION	MENTION
EDUCATION (FOR CHILDREN)	.59-1	2	3
EDUCATION (FOR ADULTS)	.60-1	2	3
THE NEWS	.61-1	2	3
INFORMATION (news, talk shows,			
documentaries, etc.)	.62-1	2	3
ENTERTAINMENT (recreation, sports,			
movies, variety, game shows, etc.)	.63-1	2	3
TO KEEP ME COMPANY UNEN ALONE	64-1	2	2
TO REEF ME COMPANY WHEN ALONE	.04-1	2	••• 3
TO KILL/ PASS TIME	.65-1	2	3
HANDICAPPED/CANNOT GET OUT	.66-1	2	3
KEEPS CHILDREN QUIET	.67-1	2	3
DO NOT WATCH	.68-1	2	3
OTHER (SPECIFY)			
-			·

BIN 82038



DUP. 6-

17. (HAND CARD TVB)

Please look at this scale and tell me how satisfied your household is with each of the following aspects of your present TV service. (READ EACH ITEM AND RECORD ANSWER BEFORE READING THE NEXT ONE.) (START READING AT THE "X" AND CONTINUE FOR ALL STATEMENTS)

		VERY			VERY	NOT
		SATIS-	SATIS-	DISSA-	DISSA-	DON'T APPLI-
		FIED	FIED	TISFIED	TISFIED	KNOW CABLE
x -a)	Overall quality of					
	picture on most					
	channels?	7-1	. 2	3	4	. 5 6
-b)	Overall quality of					
-,	sound on most					
	channels?	8-1	. 2	3	4	. 5 6
-c)	Content of national					
	programming?	9-1	. 2	3	4	. 5 6
-d)	Amount of local programming	10-1	. 2	3	4	. 5 6
-e)	The number of French					
	Canadian channels you					
	receive?	11-1	. 2	3	4	. 5 6
-f)	The number of English					
	Canadian channels you	•				
	receive?	12-1	. 2	3	4	. 5 6
-g)	The number of American					
-	channels you receive?	13-1	. 2	3	4	. 5 6
-h)	The cost of the reception					
	equipment you require?	14-1	. 2	3	4	. 5 6
-i)	The reliability of your					
	reception equipment?	15-1	. 2	3	4	. 5 6
-j)	Your television service		` .			
	in general?	16-1	. 2			5 6

BIN 82038

U DRC

Π

SECTION C (Continued)

18-a) How many American stations can you get on your TV set(s)? (RECORD BELOW)

-b) On how many of these (NO. OF AMERICAN STATIONS) do you generally get good reception? (RECORD BELOW)

-c) And on how many do you generally get poor reception? (RECORD BELOW)

- -d) How many Canadian stations, with English programs, can you get on your TV set(s)? (RECORD BELOW)
- -e) And on how many of these (<u>NO. OF ENCLISH STATIONS</u>) would you say that you generally get good reception? (RECORD BELOW)
- -f) And on how many do you generally get poor reception? (RECORD BELOW)
- -g) Finally, how many Canadian stations, with French programs, can you get on your TV set(s)? (RECORD BELOW)
- -h) On how many of these (NO. OF FRENCH STATIONS) do you generally get good reception? (RECORD BELOW)

-i) And on how many do you generally get poor reception? (RECORD BELOW)

	<u>-a), -b), -c)</u>	<u>-d), -e), -f)</u>	$\frac{-g}{-h}, -h$
,	AMERICAN STATIONS	CANADIAN STATIONS	CANADIAN STATIONS
TOTAL NO	17/18	23/24	29/30
RECEPTION: GOOD	19/20	25/26	31/32
···· POOR	21/22	27/28	33/34
DO NOT WATCH	35–1	2	3

19-a) Has there been any major improvement. in your area. with respect to

overall television service?

-b) (IF YES IN Q.19-a)) How long ago did that improvement take place?

NO.	OF	MONTHS	:	(SPECIFY)	_ 37/38
NO.	OF	YEARS	:		39/40
				(SPECIFY)	

YES

NO

-c) Do you have any of the following TV equipment for receiving TV programs? (RFAD LIST)

including rabbit ears	41-1	• • • • • • • • • • •	2
Tower		••••	2
Rotor		•••••	2
Booster		•••••	2

-d) When did you buy this equipment? _____ years 45/46

-e) (IF YES TO ONE OR MORE IN 19-c))

How much has this equipment cost you in total, including any repairs you may have made?

\$_____ 47/49 (SPECIFY)

BIN 82038



20. Again, suppose that you have just more to a different place, you have the choice between two, and only two, types of TV service. For each of the following situations, could you indicate which type of service you would buy? (SHUFFLE DECK AND HAND TO RESPONDENT. HAVE RESPONDENT TELL YOU WHICH CARD HF/SHE IS LOOKING AT (TV-1 TO TV-23) AND CHECK ✓ BOX. THEN RECORD RESPONDENT'S CHOICE (P1 TO P9) FOR EACH CARD.)

DESCRIPTION								
CARD:			CHANNELS	RECEPTION	PROGRAM- MING	MONTHLY RATE	CHOICE:	· · ·
TV-1	0	\longrightarrow	2 2	Fair Excellent	Same Same	\$6 \$12	P150-1 P2 2	-
TV-2	0	\longrightarrow	6 4	Fair Excellent	Better Better	\$12 \$6	P851-1 P4 2	
TV-3	0	>	6 6	Fair Excellent	Better Same	\$12 \$20	P852-1 P9 2	
TV-4	0	\longrightarrow	4 2	Fair Fair	Same Better	\$12 \$20	P553-1 P3 2	
ŢV-5	0	\longrightarrow	2 4	Fair Fair	Better Same	\$20 \$20	P354-1 P6 2	
TV-6	0	\rightarrow	6 2	Fair Fair	Same Better	\$6 \$20	P755-1 P3 2	
TV-7	0	\longrightarrow	6 2	Excellent Fair	Same Better	\$20 \$20	P9 56-1 P3 2	
TV-8	0	\longrightarrow	2 2	Excellent Fair	Same Better	\$12 \$20	P257-1 P3 2	
TV-9	0	\rightarrow	2 2	Fair Fair	Better Same	\$20 \$6	P358-1 P1 2	
TV-10	0	\longrightarrow	4 6	Excellent Fair	Better Same	\$6 \$6	P459-1 P7 2	
TV-11	0	\longrightarrow	2 4	Fair Fair	Same Same	\$6 \$20	P160-1 P6 2	
TV-12	0	\longrightarrow	6 2	Fair Excellent	Better Same	\$12 \$12	P861-1 P2 2	
TV-13	0	\rightarrow	6 6	Fair Fair	Same Better	\$6 \$12	P762-1 P8 2	
TV-14	0	\longrightarrow	6 6	Excellent Fair	Same Same	\$20 \$6	P963-1 P7 2	
TV-15	0	\rightarrow	4 2	Fair Fair	Same Same	\$12 \$6	P564-1 P1 2	
TV-16	0	\longrightarrow	4 6	Excellent Excellent	Better Same	\$6 \$ 2 0	P465-1 P9 2	
TV-17	0	\rightarrow	2 6	Fair Fair	Same Better	\$6 \$12	P166-1 P8 2	
TV-18	0	\longrightarrow	6 4	Excellent Fair	Same Same	\$20 \$12	P967-1 P5 2	
TV-19	0	\rightarrow	2 6	Excellent Fair	Same Same	\$12 \$6	P268-1 P7 2	-
TV-20	0	\longrightarrow	2 6	Excellent Excellent	Same Same	\$12 \$20	P269-1 P9 2	
TV-21	0	\longrightarrow	2 4	Excellent Fair	Same Same	\$12 \$12	P270-1 P5 2	
TV-22	0	\rightarrow	4 2	Fair Excellent	Same	\$20 \$12	P671-1 P2 2	
TV-23	0	\longrightarrow	6 2	Excellent Fair	Same Same	\$20 \$6	P972-1 P1 2 B2038	73/74

DEMAND RESEARCH CONSULTANTS INCORPORATED

UBRE

Π

::.

Percent breakthroughs in television broadcasting technology make it pussible to offer you a television service comparable to that available in large cities; that is, anyone could get at least six different channels, and the reception on each channel would be excellent.

.

(HAND CARD TV C AND READ)

Subscribing to this new television service would give you:

- reception of at least six different channels in your own language (English or French)
- excellent reception on each channel
- same type of programming as you receive now

Choice situation A:

(READ STATEMENT)

Suppose that this new improved television service is available to you as early as next month, and costs $\frac{5}{6}$ per month; how likely would you be to buy this service within the next 12 months?

(HAND RESPONDENT SCALE CARD AND CIRCLE ANSWER BELOW)

RESPONDENT'S CHOICE:

Certain or almost certain (9 or 10 chances in 10) 7-	-1
Good possibility (7 or 8 chances in 10)	2
Fairly good possibility (4, 5 or 6 chances in 10)	3
Fair possibility (2 or 3 chances in 10)	4
No chance or almost no chance (0 or 1 chance in 10)	5

BIN B2038

9RG

B

21. Recent breakthroughs in television broadcasting technology make it possible to offer you a television service comparable to that available in large cities; that is, anyone could get at least six different channels, and the reception on each channel would be excellent.

(HAND CARD TV C AND READ)

Subscribing to this new television service would give you:

- reception of at least six different channels in your own language (English or French)
- excellent reception on each channel
- same type of programming as you receive now

Choice situation B:

(READ STATEMENT)

Suppose that this new improved television service is available to you as early as next month, and costs $\frac{12 \text{ per month}}{12 \text{ month}}$; how likely would you be to huy this service within the next 12 months?

(HAND RESPONDENT SCALE CARD AND CIRCLE ANSWER BELOW)

RESPONDENT'S CHOICE:

Certain or almost certain (9 or 10 chances in 10) 7	-1
Good possibility (7 or 8 chances in 10)	2
Fairly good possibility (4, 5 or 6 chances in 10)	3
Fair possibility (2 or 3 chances in 10)	4
No chance or almost no chance (0 or 1 chance in 10)	5

BIN B2038

DEMAND RESEARCH CONSULTANTS INCORPORATED

n

21.

Recent breakthroughs in television broadcasting technology make it possible to offer you a television service comparable to that available in large cities; that is, anyone could get at least six different channels, and the reception on each channel would be excellent.

(HAND CARD TV C AND READ)

Subscribing to this new television service would give you:

- reception of at least six different channels in your own language (English or French)
- excellent reception on each channel
- same type of programming as you receive now

Choice situation C:

(READ STATEMENT)

Suppose that this new improved television service is available to you as early as next month, and costs \$20 per month; how likely would you be to buy this mervice within the next 12 months?

(HAND RESPONDENT SCALE CARD AND CIRCLE ANSWER BELOW)

RESPONDENT'S CHOICE:

Certain or almost certain (9 or 10 chances in 10) 7	-1
Good possibility (7 or 8 chances in 10)	2
Fairly good possibility (4, 5 or 6 chances in 10)	3
Fair possibility (2 or 3 chances in 10)	4
No chance or almost no chance (0 or 1 chance in 10)	5

BIN 82038

• • •

Secent breakthroughs in television broadcasting technology make it possible to offer you a television service comparable to that available in large cities; that is, anyone could get at least six different channels, and the reception on each channel would be excellent.

(HAND CARD TV D AND READ)

Subscribing to this new television service would give you:

- reception of at least six different channels in-your own language (English or French)
- excellent reception on each channel
- same type of programming as you receive now

SHOW PICTURE I

Choice situation A:

(READ STATEMENT)

Now, suppose that this same improved television service is available through a different technology which would require you to buy (cash or credit) a special reception unit costing \$400. This unit would replace <u>all</u> of your existing reception equipment, including antenna, booster, rotor, etc. how likely would you be to buy this service within the next 12 months?

(HAND RESPONDENT SCALE CARD AND CIRCLE ANSWER BELOW)

RESPONDENT'S CHOICE:

Certain or almost certain (9 or 16 chances in 10) 8-1 Good possibility (7 or 8 chances in 10) 2 Fairly good possibility (4, 5 or 6 chances in 10) 3 Fair possibility (2 or 3 chances in 10) 4 No chance or almost no chance (0 or 1 chance in 10) ... 5

BIN B2038

DEMAND RESEARCH CONSULTANTS INCORPORATED

n

22.

Recent breakthroughs in television broadcasting technology make it possible to offer you a television service comparable to that available in large cities; that is, anyone could get at least six different channels, and the reception on each channel would be excellent.

(HAND CARD TV D AND READ)

Subscribing to this new television service would give you:

- reception of at least six different channels in your own language (English or French)
- excellent reception on each channel
- same type of programming as you receive now

SHOW PICTURE I

Choice situation B:

(READ STATEMENT)

Now, suppose that this same improved television service is available through a different technology which would require you to buy (cash or credit) a special reception unit costing <u>\$600</u>. This unit would replace <u>all</u> of your existing reception equipment, including antenna, booster, rotor, etc. how likely would you be to buy this service within the next 12 months?

(HAND RESPONDENT SCALE CARD AND CIRCLE ANSWER BELOW)

RESPONDENT'S CHOICE:

Certain or almost certain (9 or 10 chances in 10)	8-1	
Good possibility (7 or 8 chances in 10)	2	
Fairly good possibility (4, 5 or 6 chances in 10)	3	
Fair possibility (2 or 3 chances in 10)	4 ·	
No chance or almost no chance (0 or 1 chance in 10)	5	

BIN B2038




C

22.

Recent breakthroughs in television broadcasting technology make it possible to offer you a television service comparable to that available in large cities; that is, anyone could get at least six different channels, and the reception on each channel would be excellent.

(HAND CARD TV D AND READ)

Subscribing to this new television service would give you:

- reception of at least six different channels in your own language (English or French)
- excellent reception on each channel
- same type of programming as you receive now

SHOW PICTURE I

Choice situation C:

(READ STATEMENT)

Now, suppose that this same improved television service is available through a different technology which would require you to buy (cash or credit) a special reception unit costing \$800. This unit would replace <u>all</u> of your existing reception equipment, including antenna, booster, rotor, etc. how likely would you be to buy this service within the next 12 months?

(HAND RESPONDENT SCALE CARD AND CIRCLE ANSWER BELOW)

RESPONDENT'S CHOICE:

Certain or almost certain (9 or 10 chances in 10) 8-1 Good possibility (7 or 8 chances in 10) 2 'Fairly good possibility (4, 5 or 6 chances in 10) 3 Fair possibility (2 or 3 chances in 10) 4 No chance or almost no chance (0 or 1 chance in 10) ... 5

BIN B2038

DEMAND RESEARCH CONSULTANTS INCORPORATED

RC

Π

A

23.

Another recent television and telephone technology makes it possible to offer you a combined television and telephone service. That is, you could get at least six different channels with excellent reception on each channel, as well as a private line and a large free calling area where you could call without long distance charges, people in surrounding communities and essential services.

(HAND CARD TV E AND READ)

Subscribing to this new combined television and telephone service would give you:

for television:

- reception of at least six different channels in your own language (English or French)
- excellent reception on each channel
- same type of programming as you receive now

for telephone:

- private line
- a larger free calling area (people in surrounding area and essential services could be called free)

Choice situation A:

(READ STATEMENT)

Suppose that this new combined Telephone/Television service is available to you as early as next month and costs <u>\$15</u> per month; how likely would you be to buy this service within the next 12 months?

(HAND RESPONDENT SCALE CARD AND CIRCLE ANSWER BELOW)

RESPONDENT'S CHOICE:

Certain or almost certain (9 or 10 chances in 10) 9-	1
Good possibility (7 or 8 chances in 10)	2
Fairly good possibility (4, 5 or 6 chances in 10)	3
Fair possibility (2 or 3 chances in 10)	4
No chance or almost no chance (0 or 1 chance in 10)	5



в

23. Another recent television and telephone technology makes it possible to offer you a combined television and telephone service. That is, you could get at least six different channels with excellent reception on each channel, as well as a private line and a large free calling area where you could call without long distance charges, people in surrounding communities and essential services.

(HAND CARD TV 5 AND READ)

Subscribing to this new combined television and telephone service would give you:

for television:

- reception of at least six different channels in your own language (English or French)
- excellent reception on each channel
- same type of programming as you receive now

for telephone:

- private line
- a larger free calling area (people in surrounding area and essential services could be called free)

Choice situation B:

(READ STATEMENT)

Suppose that this new combined Telephone/Television service is available to you as early as next month and costs \$25 per month; how likely would you be to buy this service within the next 12 months?

(HAND RESPONDENT SCALE CARD AND CIRCLE ANSWER BELOW)

RESPONDENT'S CHOICE:

Certain or almost certain (9 or 10 chances in 10) 9	- 1
Good possibility (7 or 8 chances in 10)	2
Fairly good possibility (4, 5 or 6 chances in 10)	3
Fair possibility (2 or 3 chances in 10)	4
No chance or almost no chance (0 or 1 chance in 10)	5

BIN B2038

RC

n

c

23.

Another recent television and telephone technology makes it possible to offer you a combined television and telephone service. That is, you could get at least six different channels with excellent reception on each channel, as well as a private line and a large free calling area where you could call without long distance charges, people in surrounding communities and essential services.

(HAND CARD TV E AND READ)

Subscribing to this new combined television and telephone service would give you:

for television:

- reception of at least six different channels in your own language (English or French)
- excellent reception on each channel
- same type of programming as you receive now

for telephone:

- private line
- a larger free calling area (people in surrounding area and essential services could be called free)

Choice situation C:

(READ STATEMENT)

Suppose that this new combined Telephone/Television service is available to you as early as next month and costs \$35 per month; how likely would you be to buy this service within the next 12 months?

(HAND RESPONDENT SCALE CARD AND CIRCLE ANSWER BELOW)

RESPONDENT'S CHOICE:

Certain or almost certain (9 or 10 chances in 10) 9-	- 1
Good possibility (7 or 8 chances in 10)	2
Fairly good possibility (4, 5 or 6 chances in 10)	3
Fair possibility (2 or 3 chances in 10)	4
No chance or almost no chance (0 or 1 chance in 10)	5



SECTION D

24. Does anyone in your household, including yourself, have any CB and/or General Radio Service (GRS) equipment?

> YES10-1 NO2

25. And do you or anyone in this house have any mobile radio or mobile telephone equipment?

> > .

IF NO TO BOTH Q.24 AND Q. 25, GO TO Q.28.

26. Which type of equipment would you say is most important to this household, CB or mobile radio?

CB		1
MOB	ILE RADIO	2
DON	T KNOW	3

27-a) What is your (MOST IMPORTANT IN 0.26) mainly used for? (DO NOT READ LIST) (CODE 1 FOR FIRST MENTION) (CODE 2 FOR SECOND MENTION, ETC.)

-b) Anything else? (PROBE, CODE THE FIRST 3 RESPONSES IN ORDER MENTIONED)

	<u>27-a)</u>	27-ъ)	
	MAIN USES:		
•	FIRST	SECOND	THIRD
	MENTION	MENTION	MENTION
	100011000		
BUSINESS	13-1	2	3
EMERGENCY	14-1	2 ·	3
SECURITY	15-1	2	3
FUN/HOBBY/LIKE TO TALK WITH PEOPLE	16-1	2	3
CONVENIENCE	17-1	2	3
OUTDOOR SPORTS	18-1		3
NOT USING IT (AT PRESENT)	19-1	2	3
OTHER (SPECIFY)			

BIN 82038

DEMAND RESEARCH CONSULTANTS INCORPORATED

U RC

Π

 $\overline{}$

28.

A recent technology makes it possible to replace your present telephone service with a service which combines telephone and mobile radio benefits. In other words, the new service can be used either as a mobile 2-way radio or as a portable telephone. To get this new service, one set of new equipment SHOW PICTURE 2 would be needed for each mobile telephone you require.

- 17 -

(HAND CARD R AND READ)

Buying the special equipment to replace your present telephone set would give you:

- a service equivalent to a private line telephone service
- a telephone which can be used in a number of places; for instance, in your home or car
- basic monthly rate of \$4 per month

Choice situation A:

(READ STATEMENT)

Suppose that one set of new combined mobile radio-mobile telephone equipment is available to you as early as next month and costs $\frac{$300}{}$; how likely would you be to buy this service within the next 12 months?

(HAND RESPONDENT SCALE CARD AND CIRCLE ANSWER BELOW)

RESPONDENT'S CHOICE:

Certain or almost certain (9 or 10 chances in 10)20	-1
Good possibility (7 or 8 chances in 10)	2
Fairly good possibility (4, 5 or 6 chances in 10)	3
Fair possibility (2 or 3 chances in 10)	4
No chance or almost no chance (0 or 1 chance in 10)	5

BIN 82038



DEMAND RESEARCH CONSULTANTS INCORPORATED

- 17 -

в

(HAND CARD R AND READ;

Buying the special equipment to replace your present telephone set would give you:

- a service equivalent to a private line telephone service
- a telephone which can be used in a number of places; for instance, in your home or car
- basic monthly rate of \$4 per month

Choice situation B:

(READ STATEMENT)

Suppose that one set of new combined mobile radio-mobile telephone equipment is available to you as early as next month and costs \$500; how likely would you be to buy this service within the next 12 months?

(HAND RESPONDENT SCALE CARD AND CIRCLE ANSWER BELOW)

RESPONDENT'S CHOICE:

Certain or almost certain (9 or 10 chances in 10)20-1	L
Good possibility (7 or 8 chances in 10)	2
Fairly good possibility (4, 5 or 6 chances in 10)	3
Fair possibility (2 or 3 chances in 10)	4
No chance or almost no chance (0 or 1 chance in 10)	5

SECTION D (Continued)

С

28.

A recent technology makes it possible to replace your present telephone service with a service which combines telephone and mobile radio benefits. In other words, the new service can be used either as a mobile 2-way radio or as a <u>portable telephone</u>. To get this new service, one set of new equipment SHOW PICTURE 2 would be needed for each mobile telephone you require.

(HAND CARL & AND READ)

Buying the special equipment to replace your present telephone set would give you:

- a service equivalent to a private line telephone service
- a telephone which can be used in a number of places; for instance, in your home or car
- basic monthly rate of \$4 per month

Choice situation C:

(READ STATEMENT)

Suppose that one set of new combined mobile radio-mobile telephone equipment \cdots available to you as early as next month and costs $\frac{5700}{100}$; how likely would you be to buy this service within the next 12 months?

(HAND RESPONDENT SCALE CARD AND CIRCLE ANSWER BELOW)

RESPONDENT'S CHOICE:

Certain or almost certain (9 or 10 chances in 10)20-	-1
Good possibility (7 or 8 chances in 10)	2
Fairly good possibility (4, 5 or 6 chances in 10)	3
Fair possibility (2 or 3 chances in 10)	4
No chance or almost no chance (0 or 1 chance in 10)	5



SECTION E

And now	just a few questions to help us in classifying your answers.
29.	For how many years have you lived in this home?
•	NO. OF YEARS: 21/22 (SPECIFY)
	•
30.	Do you: (READ LIST)?
	Own this home?23-1
	Rent this home? 2
31-a)	Do you consider this home to be <u>located</u> in a rural area or an urban area?
	URBAN24-1
	RURAL 2
	OTHER (SPECIFY)
-b)	And is your way of life more urban or more rural?
	URBAN 25-1
	RURAL 2
	OTHER (SPECIFY)
32.	Would you say that this home is part of a community that is a town, a village, a settlement, etc., or that this home is isolated?
	ISOLATED

33 (IF IN COMMUNITY AT Q.32)

st e en

Approximately how many people live in this community?

NO. OF PEOPLE: _____ 27/30

BIN 82038

URG

N

Į

.

34. (HAND CARD E-1)

Please look at this card and tell me how far this home is from: (READ LIST AND RECORD)

		Under 100 yards	Over 100 yards -less than 1 mile	1 mile -less than 1 mile	1 mile -less than 1 mile	l mile -less than 5 miles	5 miles -less than 10 miles	10 miles -less than 30 miles	30 miles -less than 60 miles	60 or more miles
a)	Your nearest neighbour	31 -1	2	3	4	5	6	7	8	9
ь)	the nearest grocery store	32 -1	2	3	4	5	6	7	8	9
c)	the nearest elementary school	33-1		3	4	5	6	7	8	9
d)	the local police detachment	34 -1	2	3	4	5	6	7	8	9
e)	the local fire department	35-1	2		4	5	6	7	8	9
f)	the nearest hospital	36-1	2	3	4		6	7	8	9
g)	the nearest city	37-1.	2	3	4	5	6	7	8	9
	(WRITE IN NAME)									

BIN 82038

П

DEMAND RESEARCH CONSULTANTS INCORPORATED

35.

How many people including yourself, live in this household who are:

			NO. OF PEOPLE
Under 5 y	ears of age .	•••••	38
5 to 14 .	•••••••••••	•••••	•• 39
15 to 24	•••••••••••	• • • • • • • • • • • •	40
25 to 44	•••••		41
45 to 54	••••••		• • • • • • • • • • • • • • • • • • • •
55 to 64	••••••	• • • • • • • • • • • • •	••43
65 and ov	er		
		TOTAL	= 45/46

I

36. So th

So there are ______ people living in this household? (TOTAL NO. IN HOUSEHOLD)

(CORRECT TOTAL IF REQUIRED)

37. What is your occupation?

I	IN 47-
(TYPE OF JOB)	(TYPE OF COMPANY)
RETIRED 48 -1	
UNEMPLOYED 2	
HOMEMAKER	· · ·
(IF EMPLOYED OUTSIDE THE HOME, ASK:)	Is that full-time or part-time?
FULL-T	IME

PART-TIME 2

38-a) What is your marital status?

MARRIED	50-1	
SINGLE (NEVER MARRIED).	2	
SEPARATED	3	GO TO
WIDOWED	4	Q.39
DIVORCED	5	

-b) What is the occupation of your spouse?

	IN 51
(TYPE OF JOB)	(TYPE OF COMPANY)
RETIRED	
UNEMPLOYED 2	
HOMEMAKER	
(IF EMPLOYED OUTSIDE THE HOME, ASK:) Is that full - time or part-time?
FULL-	TIME
PART	TIME 2

BIN 82038

DEMAND RESEARCH CONSULTANTS INCORPORATED

U BRG

Π

	PUBLIC/ELEMENTARY (GRADES 1 TO 8; QUEBEC, GRADES 1 TO 7)54-1		2
	SECONDARY/HIGH SCHOOL (GRADES 9 TO 13; QUEBEC, GRADES 8 TO 12)	· • • • • • • • • • •	4
	TECHNICAL/SENIOR COLLEGE (ABOVE GRADES 12		
	OR 13; QUEBEC, CEGEP) 5	••••	6
	UNIVERSITY 7	• • • • • • • • • • •	8
	POST-GRADUATE	•••••	0
	NO FORMAL SCHOOLING		
	REFUSED		· · · · · · · · · · · · · · · · · · ·
		÷ • • • • • • • • • • • • • • • • • • •	••••
(HAND	CARD E-2) And in which age group are you?		
	A. 18 TO 24		
	B. 25 TO 34 2		
	C. 35 TO 44 3		
	D. 45 TO 54		
	F. 55 OR OVER S		
	KEFUSED		

41.

. ..

Sec. 18

40.

39.

(HAND CARD E-3) And what was the total household income from all sources before taxes during 1979? Just tell me which letter coincides with your income group?

L	
M	2
N	
0	
P	5
Q	6
R	
S	
Ť	
U	0
v	
W	2

42.

What language is spoken most often in this household?

ENGLISH 59-1	
FRENCH 2	
OTHER (SPECIFY)	

Type of dwelling: (OBSERVE, DO NOT ASK)

:

SINGLE OR SEMI-DETACHED HOUSE 60-1
ROW HOUSES 2
DUPLEX, TRIPLEX, QUADRUPLEX
SUITE OVER STORE, ETC 4
APARTMENT (5 TO 7 UNITS) 5
APARTMENT (8 TO 19 UNITS) 6
APARTMENT (20 OR MORE UNITS) 7
ROOM(S), PART OF HOME 8
OTHER (CIRCLE CODE AND SPECIFY)

BIN 82038

9

COMPLETED

SOME



ASK TO SEE THE PHONE BILL IF NOT VOLUNTEERED. RECORD NAME OF PHONE COMPANY.

BASIC MONTHLY CHARGE: ________61/63
TOTAL MONTHLY CHARGE: ________64/66
RECORD NAME OF PHONE COMPANY: ________6768FINISH TIME: ___: 7071-

DEBRIEFING

In this survey we have described a number of possible service options. These options may not be available in this area in the near future. They have been included for illustrative purposes only.

NAME :		
ADDRESS:	· .	
CITY:	TELEPHONE NO.	
DATE:	INTERVIEWER:	72-

DEMAND RESEARCH CONSULTANTS INCORPORATED

RE

П





