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INTEREST IN
VENTURING IN
MINNESOTA

by

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Interest in Venturing in Minnesota

A Technical Report¹

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Background Introduction

Venturing is a critical feature of the creation of wealth in any society. In this technical report venturing is defined primarily as starting a new business although elements of venturing are also involved in the expansion of existing businesses and in the turnaround of existing businesses that are in trouble. Broad based participation in venturing reduces the dependence on any one single business or industry. It also increases the likelihood that an area will be alert to changes in economic opportunities and new ideas. Maybe most importantly, broad based venturing means that a large number of individuals have opportunities to participate in economic decisions of a society as well as the rewards from economic activity. In the same way that voting represents the level of participation in the political structure, the level of venturing represents the level of participation in the economic structure. While the process of starting a new business involves risk, it starts with an interest in venturing. Social contexts of regions and societies influence the risks of starting a business and the distribution of interest in doing so. We see the distribution of interest in venturing as a basic resource of a region or society, reflecting both the social values and context of an area and serving as a basic resource for economic development.

This technical report is a preliminary examination of the level of interest in venturing, who is interested, and what business they are interested in starting. The preliminary study, although limited in

the number of background variables available, is a first look at the level of interest in venturing across the state of Minnesota and especially in the Northeastern region of the state. Data on 1,204 adults in a probability sample of Minnesota households were gathered by phone interview in the fall and winter of 1987/88. A similar supplementary sample of 202 adults from the Northeastern region were interviewed in addition to permit more detailed estimates of level of interest in that region. Further information about the survey is presented in the Appendix.

The primary focus of this study was an assessment of the incidence and prevalence of interest in starting a new business in the State of Minnesota with particular emphasis on Northeast Minnesota. For the state as a whole, the incidence of interest in starting a new business at the time of the survey was 13.2 percent or about 400,000 people (see footnote to Table 2). As shown in table 1 this varies from 16.7 percent in the Metro Area (256,000 people) to 9.7 percent for Greater Minnesota (145,000 people). Nearly 13 percent of the adults in the Northeast region (29,000) expressed an interest in starting a new business.

Prevalence here is defined as the percentage of adults who have started one or more businesses and/or are currently interested in starting a business and/or are self-employed. For the state as a whole 43.4 percent (1.3 million) people have had some involvement in venturing. The percentage for the Twin Cities area is 39.7 percent (608,000 people), for greater Minnesota it is 47.3 percent (707,000

people) and for the Northeast region 40.7 percent (113,000 people). These are probably low estimates because we do not have detailed information about the number of people who once were self-employed but are not currently self-employed (i.e. currently retired).

In addition to incidence and prevalence, the study also examined the type of business selected by respondents with an interest in starting a business. The interest in starting a business was examined by geographical region and the demographic characteristics of the respondents. Also the responses were examined by the week in which they were obtained. This latter analysis sheds some light on whether the interest in starting a business is a static or dynamic phenomenon. Presently, a follow up study of the original respondents is being conducted to allow tracking of interest in starting a business over time.

Data

Results for the study are presented in two tables, below.

Tables 1 and 2 approximately here

Table 1 presents estimates of the level of interest in venturing by selected background variables for the state as a whole, for the Twin Cities Metro Area, for Greater Minnesota (excluding the Metro Area) and for the Northeast region of Minnesota (including data on the Northeast from both the main sample and the oversample). Future

reports will analyze relationships between combinations of these variables in more detail. To assess whether or not differences in interest could be due to chance, table 1 shows the probability values associated with the chi square test for each of the four samples, for each variable. Traditionally, if these values are larger than .05, the differences shown are considered likely to be due to chance factors in sampling. The chi square test is computed using a table that includes interest versus no interest by categories of the selected background variable.

Table 2 indicates the kind of business envisioned by respondents who said they were interested in starting a business. This table shows that there are regional differences. For the state as a whole the predominant interest is in starting service and retail businesses. Fewer respondents (8.8%) indicate an interest in starting manufacturing businesses. This phenomenon has significant implications for the development of the Minnesota economy. The extended footnote to tables 1 and 2 indicates that on the average, adults in Greater Minnesota have experience in starting more businesses than is true for the Metro Area.

Gender. As shown in table 1 interest in starting a business differs significantly across gender for the state as a whole and the three geographical areas shown. For the state as a whole, males show twice the interest (18 percent) shown by females (9 percent). Females in the Metro Area show more interest in starting a business than is true of the other areas. Further, there is a smaller

difference in level of interest between males and females in the Metro Area than is true of other areas shown. The gender imbalance in interest in venturing is more pronounced in the outstate areas.

Age. There are significant differences in interest across age groups for the state as a whole and all regions. The greatest interest in venturing is shown by people between the ages of 18 and 44, with the peak interest in the 25 to 34 group. There appears to be a significantly higher interest among those born after 1943 and especially among the group born in 1953 to 1962. Greater Minnesota in contrast to the Twin Cities, shows less interest across younger age groups i.e. 54 and less, but slightly more interest in the older age brackets. Northeast Minnesota stands out in the level of interest among those in the 35 and older bracket. This latter finding perhaps represents the consequence of outmigration of younger people in the wake of the downturn of the mining industry over the last few years.

With the exception of Northeast Minnesota, it appears that people who experienced the depression of the 1930's indicate less interest in going into business at the time of the survey.

Racial Self-Identity. Overall, non-white respondents expressed considerably more interest in going into business (23 percent) than whites (13 percent). The differences are statistically significant for the state as a whole and for the Metro Area, but not for Greater Minnesota, including Northeast Minnesota. The very small sample

size prevents further analysis, but further research on interest in venturing among minorities is needed. The strong difference may suggest the importance of cultural factors in expressed interest in venturing.

Education. Overall, interest in venturing appears to be highest among those with some post-high school education. The main exception to this pattern is the high interest of those with less than high school education for the state as a whole and for the Metro Area. Particularly noteworthy is the higher level of interest expressed by people with graduate and professional degrees in Greater Minnesota and especially in the Northeast region. Interest among technical school graduates in the Northeast region is also quite high.

These findings underscore the importance of post-secondary education for interest in venturing in Greater Minnesota. The role of the technical school education in Northeast Minnesota is particularly noteworthy.

Work status. There are significant differences in interest across work status categories for the state and its regions. Regardless of region, retirement appears to mean disappearance of interest in further venturing. Retired people express almost no interest in starting a business. The highest levels of interest can be found among students in the Metro Area (38 percent), students in the state as a whole (21 percent), the unemployed in the Northeast region (20

percent), and part time workers in the Metro Area (20 percent).

Occupation. The differences in interest across occupational categories are not statistically significant for the state as a whole or any of the regions. Apparently, work status is more important in differentiating levels of interest in starting a business than the kind of occupation held among those who are employed.

Marital status. Except for the Northeast region, family status like work status significantly differentiates levels of interest. The highest levels of interest are found among single individuals, overall and within regions. The variability in level of interest among broken family categories across regions bares further study with adequate sample sizes. It appears that interest among married persons is substantially higher in the Metro area compared with Greater Minnesota. The linkage of work and family with interest in venturing is a complex phenomenon deserving further study.

Income. The weak and varied relationship of income and level of interest in starting a business is significant only for the overall state sample and not for the regional subsamples shown in table 1. This suggests that the gross level of family income does not systematically influence level of interest in starting a new business.

Employment status. In all samples the self employed have a greater

interest in starting a new business. This is especially true for the Twin Cities area where 31 percent of the self employed indicated an interest versus 14 percent of those not self employed.

People who responded to the survey were asked if they had a paying job the week prior to the survey. Those who said they did not, were asked whether they considered themselves unemployed. In all samples those who considered themselves unemployed expressed greater interest in venturing, but this was statistically significant only for the Northeast region. Structural unemployment in Northeast Minnesota may be offset to some degree by the interest in venturing among the unemployed.

Interview week. A significant stock market 'crash' occurred during the first week of the interview process. We were concerned that this historic event might color interest in venturing measured in the survey, although we had no hypothesis about its direction. Data in table 1 show a high level of interest in starting a new business during the first week of interviews (although these were from the metro area), the fourth week and the eleventh week for the state as a whole. The level of interest is significantly related to interview week only for Greater Minnesota and the state as a whole. There is some evidence to suggest that the crash resulted in a short term increase in interest in venturing (with possible monthly reverberations).

Table 2 shows the kinds of businesses of interest to those who said

they were interested in starting a new business. There is a notable interest in retail in Greater Minnesota, especially the Northeast region. There is a further contrast between Greater Minnesota and Northeast Minnesota in that there is higher interest in consumer service in Greater Minnesota and higher interest in business service in Northeast Minnesota. Among all four areas, the highest interest in construction and manufacturing occurs in Greater Minnesota (13.8%) and the lowest occurs in the Northeast region (8.4%). That is also true for agriculture, forest and fishing production (11.0% vs 0%). The highest level of interest in health, education and social service ventures is in Northeast Minnesota (11.3%).

Discussion and Conclusions

Comparative data on incidence and prevalence of interest in venturing is not available for other states or nations, thus it is difficult to evaluate whether the levels of interest shown in our study are unusually high or low. Nevertheless, both the percent and absolute number of incidence and prevalence for the state as a whole and the regions shows widespread, interest and, thus, high potential for business and economic development. At the same time, interest in starting a new business varies by region, and is influenced by demographic characteristics of respondents. Most notable is the rural-urban difference (i.e. the metropolitan area appears to support higher interest both in percentage and frequency terms). On the other hand, the interest in venturing in all areas appears to exceed the capacity to bring new ventures into being. Considered as a market survey, this study suggests substantial potential for

business development across the State of Minnesota.

A number of demographic factors appear to influence the level of interest in starting a new business. Most notably the strongest interest is expressed by males born after 1943 (especially those born in 1953 to 1962), those with post secondary education and the self-employed. It also appears that income level is a weak and inconsistent factor. Of special interest is the relationship between minority status, marital status, employment status and interest in venturing. These relationships need further study. It also appears that interest in venturing is a somewhat dynamic phenomenon as evidenced by an examination of interview week.

At the time of the survey, those who were interested in venturing were mostly interested in creating retail and service businesses. The consequences of somewhat lower interest in manufacturing, especially in Northeast Minnesota, should receive further attention. Finally, our study suggests that further investigation ought to be conducted into the high level of interest in venturing among minorities and the potential implied by the low level of interest among women (and perhaps among retired people as well).

At the policy level this study raises a number of critical issues. There appears to be substantial interest in starting businesses in all regions of the State of Minnesota. Policy makers need to consider how they can encourage and sustain people's interest in starting businesses. Further, they need to pay particular attention

to policies and programs that can increase the probability that interest can be converted into successful ventures.

Table 1

PERCENT OF RESPONDENTS WHO REPORTED THEY WERE SERIOUSLY THINKING ABOUT STARTING A NEW BUSINESS, BY SELECTED VARIABLES FOR MINNESOTA REGIONS, 1987*

Selected Variables		Twin Cities Metro Area	Greater Minnesota	Northeast Region	State Total
Overall percent seriously thinking of starting a new business		16.7 (607)	9.7 (594)	12.6 (296)	13.2 (1201)
Gender of respondent	Male	21.5 (253)	15.3 (277)	18.5 (134)	18.3 (530)
	Female	13.2 (354)	4.8 (317)	7.8 (162)	9.2 (671)
	chi square: p=	.01	.00	.01	.00
Age	18-24 yrs	21.3 (102)	15.9 (57)	15.7 (35)	19.4 (159)
	25-34 yrs	26.2 (156)	16.2 (137)	15.3 (56)	21.5 (293)
	35-44 yrs	19.9 (159)	14.5 (118)	18.9 (62)	17.6 (277)
	45-54 yrs	6.6 (77)	5.2 (106)	17.1 (56)	5.8 (183)
	55-64 yrs	1.9 (54)	3.3 (77)	5.6 (36)	2.7 (132)
	65+ years	.0 (51)	1.1 (93)	.0 (47)	.7 (144)
	chi square: p=	.00	.00	.03	.00
Racial Self-Identity	White	15.6 (578)	9.8 (567)	11.8 (278)	12.7 (1144)
	Black	48.0 (13)	-- (0)	.0 (1)	48.0 (13)
	Indian	.0 (2)	28.6 (4)	.0 (2)	20.0 (5)
	Hispanic	.0 (1)	-- (0)	50.0 (2)	.0 (1)
	Other	34.5 (15)	4.4 (23)	21.1 (10)	16.2 (37)
	chi square: p=	.01	.34	.44	.01
Education	Less than highschool	50.0 (8)	4.5 (22)	7.1 (14)	16.7 (30)
	Some highschool	3.7 (27)	6.6 (53)	.0 (19)	5.6 (81)
	Highschool graduate	12.6 (176)	5.0 (222)	4.8 (105)	8.4 (397)
	Some Technical	12.1 (29)	15.8 (29)	10.5 (10)	13.9 (58)
	Technical graduate	12.0 (25)	14.6 (41)	31.7 (21)	13.6 (67)
	Some college	24.8 (152)	10.0 (116)	14.1 (72)	18.5 (268)
	College graduate	17.1 (150)	17.2 (88)	23.5 (41)	17.2 (238)
	Grad/Prof degree	10.3 (39)	20.0 (23)	27.6 (15)	13.8 (62)
chi square: p=	.00	.01	.00	.00	
Work Status	Working full time	17.8 (349)	13.7 (284)	17.9 (132)	15.9 (633)
	Working part time	19.9 (104)	8.3 (97)	13.2 (46)	14.3 (201)
	Homemaker	11.6 (43)	7.8 (45)	.0 (22)	9.7 (89)
	Unemployed	16.3 (40)	9.6 (52)	20.3 (35)	12.5 (93)
	Student	37.8 (19)	2.9 (17)	6.7 (8)	21.1 (36)
	Retired	.0 (51)	1.1 (94)	.0 (51)	.7 (145)
	chi square: p=	.00	.01	.01	.00

Table 1, continued

<u>Selected Variables</u>		<u>Twin Cities Metro Area</u>	<u>Greater Minnesota</u>	<u>Northeast Region</u>	<u>State Total</u>
Occupation	Manager and Professional	16.6 (122)	13.5 (75)	23.7 (38)	15.4 (196)
	Technical, Sales, Administrator	16.0 (180)	13.1 (111)	13.7 (63)	14.9 (291)
	Service	25.7 (51)	11.6 (56)	13.5 (37)	18.3 (107)
	Farming, Fishing, Forestry	.0 (3)	14.7 (38)	30.8 (7)	13.7 (40)
	Crafts, Repair	22.8 (51)	12.2 (49)	18.8 (16)	17.6 (100)
	Operatives	22.2 (41)	8.7 (46)	11.8 (17)	15.0 (87)
	chi square: p=	.50	.97	.65	.95
Marital Status	Married	15.1 (364)	8.2 (449)	12.0 (202)	11.3 (814)
	Single	23.3 (182)	20.6 (95)	17.0 (56)	22.4 (277)
	Divorced	7.7 (26)	.0 (15)	23.3 (15)	4.9 (41)
	Separated	28.6 (7)	.0 (4)	.0 (3)	18.2 (11)
	Widowed	.0 (27)	3.9 (26)	.0 (19)	1.9 (52)
chi square: p=	.01	.00	.23	.00	
Income	Under \$5000	44.4 (9)	2.5 (20)	3.7 (14)	15.5 (29)
	5000- 9999	10.2 (30)	4.8 (42)	.0 (22)	7.0 (72)
	10000-14999	2.0 (26)	6.2 (65)	22.5 (36)	5.0 (91)
	15000-19999	15.2 (46)	10.3 (73)	15.3 (30)	12.2 (120)
	20000-24999	10.3 (44)	9.3 (43)	16.3 (22)	9.8 (87)
	25000-29999	14.7 (72)	7.1 (78)	9.1 (39)	10.7 (150)
	30000-34999	16.5 (67)	13.4 (56)	11.5 (26)	15.1 (124)
	35000-39999	16.5 (70)	15.8 (51)	4.8 (21)	16.3 (121)
	40000-49999	24.0 (50)	16.7 (45)	14.6 (24)	20.5 (96)
	50000-59999	18.4 (49)	8.0 (25)	19.0 (11)	14.9 (75)
	60000 and up	20.8 (85)	13.2 (19)	38.5 (13)	19.4 (104)
chi square: p=	.15	.47	.08	.04	
Self Employed	Yes	30.6 (86)	11.6 (148)	19.8 (46)	18.6 (234)
	No	14.4 (522)	9.0 (446)	11.3 (250)	11.9 (968)
	chi square: p=	.00	.45	.18	.01
Consider self unemployed	Yes	16.3 (40)	9.6 (52)	20.3 (35)	12.5 (93)
	No	10.6 (114)	3.5 (158)	0.6 (87)	6.5 (273)
	chi square: p=	.50	.16	.00	.10

Table 1, continued

<u>Selected Variables</u>		<u>Twin Cities Metro Area</u>	<u>Greater Minnesota</u>	<u>Northeast Region</u>	<u>State Total</u>
Interview week	10/18-10/24	25.1 (86)	--	--	25.1 (86)
	10/25-10/31	12.5 (165)	--	--	12.5 (165)
	11/1 -11/7	14.6 (169)	--	--	14.6 (169)
	11/8 -11/14	25.7 (69)	12.7 (40)	--	20.9 (108)
	11/15-11/21	17.5 (32)	3.4 (89)	11.1 (9)	7.1 (121)
	11/22-11/28	.0 (9)	8.3 (110)	.0 (12)	7.6 (119)
	11/29-12/5	.0 (6)	10.0 (110)	.0 (19)	9.6 (116)
	12/6 -12/12	.0 (2)	13.1 (92)	11.9 (21)	12.9 (94)
	12/13-12/19	.0 (4)	8.0 (57)	17.9 (14)	7.4 (61)
	12/20-12/26	29.0 (16)	10.3 (88)	.0 (5)	13.1 (104)
	12/27- 1/2	14.8 (27)	46.7 (8)	.0 (18)	21.7 (35)
	1/3 - 1/9	10.7 (14)	--	14.8 (99)	10.7 (14)
	1/10- 1/16	10.5 (10)	--	14.5 (55)	10.5 (10)
	1/17- 1/23	--	--	19.5 (44)	
chi square: p=	.13	.01	.30	.00	

Table 2

PERCENTAGE DISTRIBUTION OF INDUSTRY CATEGORY OF PROPOSED NEW BUSINESS
AMONG RESPONDENTS WHO ARE SERIOUSLY CONSIDERING STARTING A NEW BUSINESS, FOR
RESPONDENTS IN MINNESOTA REGIONS, 1987*

<u>Selected Variables</u>	<u>Twin Cities Metro Area</u>	<u>Greater Minnesota</u>	<u>Northeast Region</u>	<u>State Total</u>
Agriculture, Forrest, Fishing:				
Production	1.1	11.0	.0	4.7
Service	1.6	6.4	5.6	3.4
Construction	4.3	4.6	2.8	4.4
Manufacturing	8.5	9.2	5.6	8.8
Transportation, Communication	9.0	.0	2.8	5.7
Wholesale	2.1	3.7	5.6	2.7
Business Service	21.3	7.3	21.1	16.2
Retail	21.8	33.9	35.2	26.3
Consumer Service	26.6	18.3	9.9	23.6
Health, Education, Social Service	3.7	5.5	11.3	4.4
	100.0	100.0	100.0	100.0
	(95)	(55)	(36)	(150)

Note: There is a statistically significant difference across the three groups (without overlap in sample) in main sample ($p=.01$). Percentages for the Northeast column above include all Northeast cases, however.

Footnote to Tables 1 and 2

* Data are from a phoned interview with a probability sample of Minnesota households in which an adult, 18 or over, was interviewed. This sample has been weighted to represent the distribution of individual adults in the State. The survey was conducted by the Minnesota Center for Survey Research, University of Minnesota, Twin Cities, between October, 1987 and January, 1988. An over-sample of the Northeast region was obtained as well. Metropolitan data are from the 7-county Twin Cities area. Greater Minnesota includes a representative sample of all other regions in the State, including the proportionate number from the Northeastern region. The Northeastern region includes all cases from that region, combining general sample and over-sample cases. The overall State figures come from the State representative sample, excluding the special oversample from the Northeast region. Chi square tests of significance are computed within a region rather than across the samples, since the Northeast column also includes some cases from that area which are proportionately in the Greater Minnesota column. The base of percents is indicated as well. The non-response rate on this question is 0.25 percent and these three cases are omitted in computations above. The question asked was: "Are you seriously thinking about starting a new business, either alone or with someone else? Responses were recorded as "yes" or "no".

<u>Selected Variables</u>	<u>Twin Cities Metro Area</u>	<u>Greater Minnesota</u>	<u>Northeast Region</u>	<u>State Total</u>
Total Number of Cases	608	596	296	1204
How many businesses have you started?	.42	.52	.51	.47
mean	.91	.93	.91	.92
std dev				
Estimated number of adults interested in starting a new business (thousands)	256	145	29	400
Estimated percent of adults who have had some involvement in venturing (defined as having started 1+ businesses, currently self-employed, or interested in starting a new business now (or any combination of the above)	39.7	47.3	40.7	43.4
Estimated Number of adults who have had some involvement in venturing (thousands)	608	707	113	1,314

Appendix

Survey Methodology and Background

- A. Main State Sample
- B. Northeast Region Oversample

The 1987 Minnesota Fall Survey was conducted by the Minnesota Center for Survey Research, University of Minnesota (2122 Riverside Avenue, Minneapolis, MN 55454). Rossana Rae Armson prepared the following technical report on the methodology of that study (Jan. 29, 1988) which is reported with permission in this appendix.

The data for this study have two parts, the first part was MCSR's regular Fall Survey of a probability sample of Minnesota households. Added to this was an extended sample of households from the Northeast region, drawn by the same methodology. Appendix A presents data from the main state sample, comparing outcomes on a number of demographic characteristics with State Census data. Since similar procedures were used in the Northeastern region oversample, it is not separately evaluated against census data although a demographic description of the sample is presented in Appendix B.

A. Main State Sample

CHAPTER 1

1987 MINNESOTA FALL SURVEY: TECHNICAL REPORT

OVERVIEW

The 1987 Minnesota Fall Survey (MFS) was the fifth annual omnibus survey of adults, age 18 and over, who reside in Minnesota. Data collection was conducted from October 1987 through January 1988 by the Minnesota Center for Survey Research (MCSR) at the University of Minnesota. MFS is an "omnibus" survey, where individual organizations define and pay for those questions which are of special interest to them. The topics in this year's survey included quality of life, environment, shopping habits, business, taxpaying, and telephone services.

A total of 1,204 telephone interviews were completed for MFS'87. The overall response rate was 71%. This compares favorably with other omnibus social surveys which generally have response rates of 70% to 75%.

The survey sample consisted of households selected randomly from all Minnesota telephone exchanges. Selection procedures guaranteed that every telephone household in the state had an equal chance to be included in the survey, and that once the household was sampled every adult had an equal chance to be included.

Since the individuals who participated in MFS'87 were randomly selected from the population of Minnesota, the survey results can be generalized to the entire state. These generalizations can be made either to households or to individuals, depending upon whether the weighted or unweighted data file is the source of the percentages. The questionnaire and results presented in Chapter 4 of this report are based on the weighted computer data file and all percentages presented here generalize to individuals.

The margin of error for a simple random sample of the size of the Minnesota Fall Survey may be as high as plus or minus three percent, depending upon the distribution of sample responses. This sampling error presumes the conventional 95% degree of desired confidence, which is equivalent to a "significance level" of .05. This means that in a sample of 1,204 households there is a 95% chance or better that if all households in Minnesota were surveyed, the results would not differ from the MFS'87 findings by more than three percentage points.

CHAPTER 1: METHODS AND PROCEDURES**OBJECTIVES**

The Minnesota Fall Survey (MFS) has four basic objectives. The first and most important of these is to get useful and technically sound information on the characteristics, attitudes, and behaviors of Minnesota residents for local decision-makers. MFS is an "omnibus" survey, where individual organizations define and pay for those questions which are of special interest to them. Such information is potentially relevant to a multitude of needs, including market analysis, needs assessment, project evaluation, and organizational planning.

The second objective is to develop an ongoing social monitoring capability for the state of Minnesota. Because the survey has been an annual event since 1984, it provides the means to maintain an updated statewide database and to monitor change in this database over the course of time.

The third objective is to provide students at the University of Minnesota with an opportunity to participate in a professional survey operation. This training experience greatly enhances the methodological skills of such students, which also enlarges and enriches the pool of social researchers ultimately available to other projects in the community.

The fourth objective is to develop and refine methods for conducting social surveys. The most advanced methods and techniques are utilized in MCSR surveys, but attention is given to explorations that improve upon existing research methods.

PARTICIPATING ORGANIZATIONS

Organizations providing financial support for MFS '87 were: Center for Urban and Regional Affairs at the University of Minnesota, Minnesota Department of Public Service, Minnesota Department of Revenue, Minnesota Department of Trade and Economic Development, and the Natural Resources Research Institute at the University of Minnesota-Duluth.

The topics in this year's survey included quality of life, environment, shopping habits, business, taxpaying, and telephone services.

SAMPLING DESIGN

The survey sample consisted of households selected randomly from all Minnesota telephone exchanges. The random digit telephone sample was acquired from Survey Sampling, Inc. of Westport, Connecticut. Evidence of the integrity of the sampling frame and the survey procedures is given in a later section of this chapter (Evaluation of the Sample).

Selection of respondents occurred in two stages: first a household was randomly selected, and then a person was randomly selected for interviewing from within the household. The selection of a person within the household

was done using the Most Recent Birthday Selection Method, a sample of which appears in the introduction (See Appendix E: Administrative Forms). These selection procedures guaranteed that every telephone household in the state had an equal chance to be included in the survey, and that once the household was sampled every adult had an equal chance to be included.

MFS'87 was conducted at the same time as a separate Twin Cities Area Survey (TCAS'87). Because of this, the 600 metropolitan area residents who were interviewed for this statewide survey also completed an additional set of questions that were for TCAS'87. The average survey length for these 600 metropolitan area residents was 23 minutes and included questions on three additional topics, compared to a 15 minute average survey length for residents of Greater Minnesota. Results and a technical report are available separately for TCAS'87.

Finally, an additional 200 people were interviewed in District 3 (the Arrowhead Region of northeast Minnesota). These people were asked only the questions on quality of life, business, and demographics. Results and a technical report are also available separately for this District 3 Oversample.

INTERVIEWING

MFS'87 was the fifth annual omnibus survey of adults, age 18 and over, who reside in Minnesota. Data collection was conducted from October 1987 through January 1988 by the Minnesota Center for Survey Research (MCSR) at the University of Minnesota.

Interviewer Recruitment

Six of the 25 interviewers who participated in MFS'87 were recruited from a pool of interviewers with prior MCSR experience. All of the interviewers were students at the University of Minnesota.

Training of Interviewers

New applicants for interviewing positions are hired only after completing a personal interview with the interviewing manager. Training of interviewers was conducted in three phases. In the first phase, new interviewers were required to attend an initial training session during which they were given basic instructions in survey interviewing.

For the second phase of training, all interviewers attended a session covering survey procedures and policies, and review of the actual interview schedule. In addition, they were provided with standard protocols for dealing with anticipated questions about the survey and possible reasons for refusing to participate. Before beginning actual interviewing, all new interviewers were required to conduct: (1) a practice interview with a supervisor or other MCSR staff member, and (2) a pilot interview with a randomly selected survey respondent, which was critiqued immediately.

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For the final phase of training, all interviewers attended a supplementary session on specific techniques for converting potential refusals into completed interviews.

In addition, all interviewers were required to sign a statement of professional ethics, which contained explicit guidelines about appropriate interviewing behavior and the confidentiality of all respondent information. A copy of this statement is included in Appendix E.

Supervision

The interviews were conducted by telephone from a central phone bank at the Minnesota Center for Survey Research. This interviewing was conducted on six days each week, including weekend, evening, and weekday interviewing. Every work shift was managed by a supervisor whose responsibilities included distributing new phone numbers and scheduled appointments, monitoring interviewers at work, and reviewing completed interview schedules for errors and omissions.

In addition to the informal monitoring which was done by supervisors, there was a formal monitoring system in operation. This formal monitoring system utilized an experienced interviewer, who listened to interviews being conducted, completed evaluation forms, and provided immediate feedback on how to improve interviewing quality. During the first week of the project, all of the interviewers and a total of eight percent of the completed interviews were formally monitored to ensure satisfactory interview quality. Interviewers whose performance was not acceptable were re-evaluated on subsequent shifts. If their performance did not improve, their employment was terminated.

Operations

Numbers to be called were recorded on callback records (see Appendix E for forms), and these were distributed to interviewers at the beginning of each shift. The disposition of each attempt to complete an interview was recorded on these callback records. Each telephone number in the sample continued to be called until there were 10 "no answer" dispositions on 10 different shifts.

On the back of every callback record were two forms for recording relevant information about refusals and appointments. The refusal form included entries for the respondents' reasons for declining to participate in the study, the arguments used by the interviewer to encourage participation, and the point at which the termination occurred. The appointment form required specifying the date and time of the scheduled appointment, the name of the targeted respondent if selected, and whether the appointment was firm, probable, or "a shot-in-the-dark."

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All completed interview schedules were turned in to the supervisor for review immediately after the conclusion of the interview. They were then assigned a unique ID number, the phone number was recorded on the master list, and the interview schedule was filed for coding and data entry. All other callback records were returned to the supervisor at the end of the shift. For each call made, interviewers recorded the date, time, and disposition of the call as well as their unique interviewer number. Copies of the callback records and explanations for all possible disposition codes are included in Appendix E.

MANAGEMENT OF DATA**Coding and Quality Control**

Completed instruments were reviewed immediately by shift supervisors for missed questions, errors in branching, and insufficient detail in open-ended responses. Errors detected in this fashion were returned to the interviewer for correction. Following shift supervisor review, survey instruments were sent to coder/editors for a more detailed and rigorous examination. Coder/editors prepared completed instruments for data entry by: (1) coding administrative variables on the contact record; (2) making certain that every question on the schedule was answered properly; (3) assuring that branching had been followed; and (4) coding open-ended responses. Again, errors which required further clarification were returned to interviewers to call back the respondent.

As many questions as possible were pre-coded. The actual coding work was done by six coder/editors who had completed the same training as the interviewers. These coder/editors were given one hour of instruction in coding procedures, followed by one hour of close supervision in coding actual interviews.

Data Entry

Shortly after interviewing began, completed questionnaires were key entered onto a data tape. Data entry and cleaning were continuous during the data collection phase and, as a result of this, a computer file of 1,204 completed interviews was available for preliminary analysis within a few weeks after the last interviews had been collected and coded.

Data Cleaning

Once a complete file of 1,204 interviews was constructed, it was examined systematically to remove data entry errors. Data cleaning involved use of a computer program to evaluate each case for (1) variables with values out of range and (2) inappropriate branching on screening and filter questions. In addition, the file was examined manually to identify cases with paradoxical or inappropriate responses.

EVALUATION OF THE SAMPLE

Completion Status

A total of 1,204 telephone interviews were completed for MFS'87 (Table 1). An additional 423 individuals refused to participate, 35 were eliminated because of physical or language problems, and 37 were still active when interviewing was terminated. The remainder of the sample was categorized as follows: 214 of the telephone numbers in the sample were business numbers, 597 were not working numbers, 126 were no answers on each of 10 attempted contacts, and no eligible respondent was available in 27 cases. The overall response rate for MFS'87 was 71%. This compares favorably with other omnibus social surveys which generally have response rates of 70% to 75%.

TABLE 1

FINAL STATUS OF INTERVIEWING FOR MFS'87

<u>Status</u>	<u>Number (Percent)</u>	
Completion	1,204	(45%)
Refusal	423	(16%)
Physical or Language Problem	35	(1%)
Active	37	(1%)
Not Home Phone	214	(8%)
Not Working Number	597	(22%)
No Answer (on 10 attempts)	126	(5%)
Eliminated	27	(1%)
	-----	-----
TOTALS	2,663	(99%)

RESPONSE RATE * 71%

*Response rate was calculated by the following formula:

$$\text{response rate} = \frac{\text{completions}}{\text{potential interviews}}$$

(Potential interviews were defined as all instances where contact was made with the selected household, and were represented by the sum of the first four categories in Table 1.)

Representativeness

The accuracy of MFS'87 can be evaluated by comparing selected characteristics of the survey respondents with 1980 data from the U.S. Census and other more recent estimates. The geographic representation of the sample is compared to actual household distribution in the state of Minnesota (Tables 2 and 3). In addition to these geographic comparisons, reasonably accurate comparisons are possible with gender and age (Tables 4 and 5). The Census comparison for gender has been corrected for age, so that all percentages are based on the population 18 and over.

The percentage of households in each of the state development districts and regions was very close to the household distribution reported by the Census and the State Demographer (Table 2 and Table 3, respectively).

TABLE 2

DISTRICT OF RESIDENCE COMPARISON OF MFS'87 AND CENSUS DATA
(Household Units)

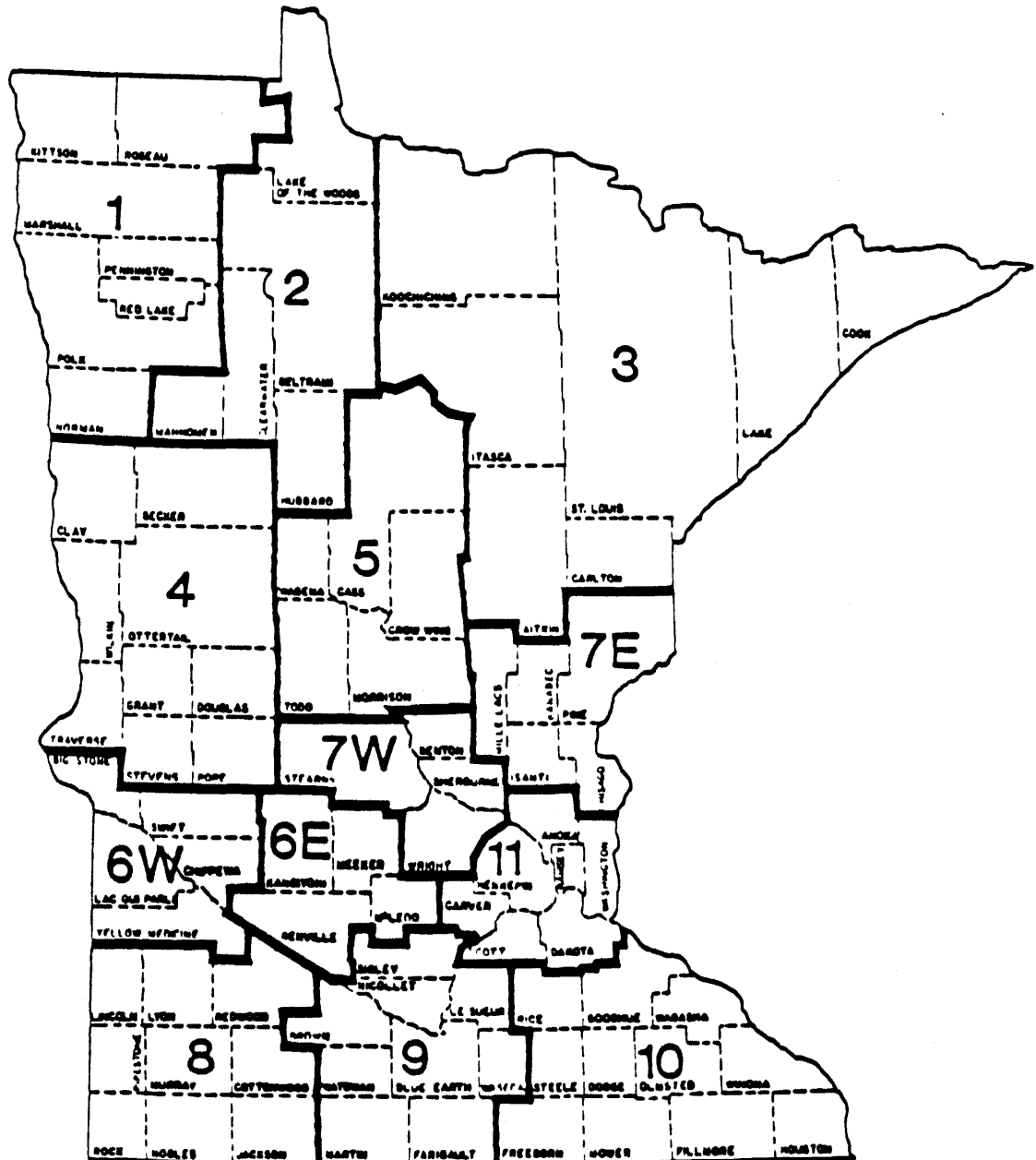
	<u>MFS'87</u>	<u>1980 Census</u>	<u>1986 Estimates *</u>
DISTRICT 1	2%	2%	2%
DISTRICT 2	2%	1%	2%
DISTRICT 3	8%	9%	7%
DISTRICT 4	5%	5%	5%
DISTRICT 5	3%	3%	3%
DISTRICT 6E	2%	3%	3%
DISTRICT 6W	1%	2%	1%
DISTRICT 7E	3%	2%	3%
DISTRICT 7W	7%	5%	5%
DISTRICT 8	3%	3%	3%
DISTRICT 9	5%	5%	5%
DISTRICT 10	11%	10%	10%
DISTRICT 11	49%	50%	51%
TOTAL	----- 101% (1,204)	----- 100% (1,445,000)	----- 100% (1,519,000)

* Source: State Demographer, Minnesota State Planning Agency

Figure 1, on the following page, shows the Minnesota counties represented by each district.

FIGURE 1

MINNESOTA DEVELOPMENT REGIONS



CHAPTER 1: METHODS AND PROCEDURES

TABLE 3

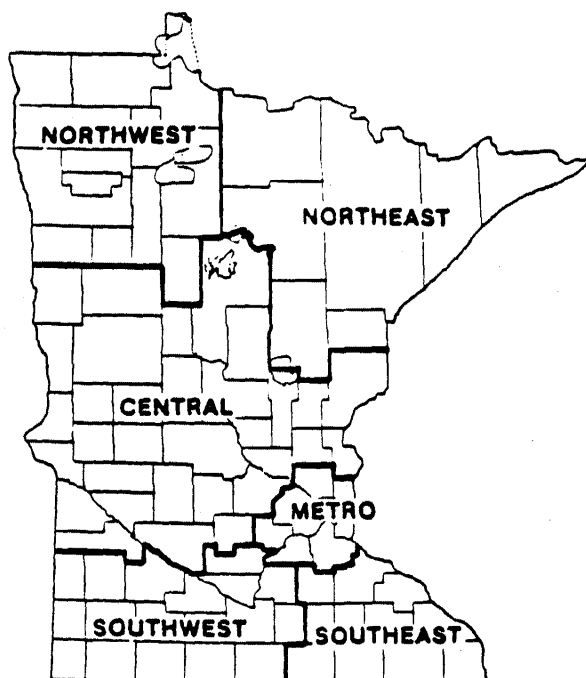
REGION OF RESIDENCE COMPARISON OF MFS '87 AND CENSUS DATA
(Household Units)

	<u>MFS '87</u>	<u>1980 Census</u>	<u>1986 Estimates *</u>
Northwest	4%	3%	4%
Northeast	8%	9%	7%
Central	20%	20%	20%
Southwest	8%	8%	8%
Southeast	11%	10%	10%
Metro	49%	50%	51%
TOTAL	----- 100% (1,204)	----- 100% (1,445,000)	----- 100% (1,519,000)

* Source: State Demographer, Minnesota State Planning Agency

Figure 2, below, shows the Minnesota counties represented by each region.

FIGURE 2



CHAPTER 1: METHODS AND PROCEDURES

TABLE 4

GENDER COMPARISON OF MFS'87 AND CENSUS DATA

	<u>MFS'87</u>	1980 <u>Census</u>	1985 <u>Estimates</u> *
Male	44%	48%	48%
Female	56%	52%	52%
	-----	-----	-----
TOTAL	100%	100%	100%
	(1,204)	(2,907,813)	(3,082,270)

* Source: State Demographer, Minnesota State Planning Agency

The distribution of respondents by gender (Table 4) was different from that reported by the Census and the State Demographer. More women were interviewed for MFS'87 than would have been expected from the 1980 and 1985 figures. In addition, the proportion of MFS'87 respondents in various age categories does differ slightly from the Census percentages. However, these deviations in age categories decrease in magnitude when comparing MFS'87 to the 1985 estimates.

Using these tables to evaluate the degree to which the MFS'87 sample matches the census profile of individuals living in Minnesota shows that it is generally an adequate representation of Minnesota residents.

TABLE 5

AGE COMPARISON OF MFS'87 AND CENSUS DATA

	<u>MFS'87</u>	1980 <u>Census</u>	1985 <u>Estimates</u> *
18-24	13%	19%	17%
25-34	25%	23%	24%
35-44	23%	16%	18%
45-54	15%	13%	12%
55-64	11%	12%	12%
65 +	12%	17%	17%
	-----	-----	-----
TOTALS	99%	100%	100%
	(1,190)	(2,907,813)	(3,082,270)

* Source: State Demographer, Minnesota State Planning Agency

Generalizability of Results

Since the individuals who participated in MFS'87 were randomly selected from the population of Minnesota, the survey results can be generalized to the entire state. These generalizations can be made either to households, using the unweighted data file, or to individuals, using the weighted data file as the source of the percentages.

The questionnaire and results presented in Chapter 4 of this report are based on the weighted computer data file and all percentages presented here generalize to individuals. Each percentage point in MFS'87 represents approximately 30,823 individuals, since there are an estimated 3,082,270 adults in Minnesota.

SAMPLING ERROR

The margin of error for a simple random sample of the size of the Minnesota Fall Survey may be as high as plus or minus three percent, depending upon the distribution of sample responses. This sampling error presumes the conventional 95% degree of desired confidence, which is equivalent to a "significance level" of .05. This means that in a sample of 1,204 households there is a 95% chance or better that if all households in Minnesota were surveyed, the results would not differ from the MFS'87 findings by more than three percentage points.

The distribution of sample responses is represented by the proportion of people responding to any question with a particular answer. For example, if you have a sample size of 1,200 and a question with only two answer alternatives, suppose that 60% of the respondents answer "Yes" and 40% say "No." The sampling error in this case would be 2.8. (Using Table 6 below, the sampling error is equal to 2.8 when the size of the sample equals 1,200 and the distribution of sample responses equals 60.) That is, each percentage has a range of plus or minus 2.8%. However, using the same example, but with 10% of the respondents saying "Yes" and 90% saying "No," the sampling error is only 1.7%.

TABLE 6
SAMPLING ERROR (IN PERCENTS) BY
DISTRIBUTION OF QUESTION RESPONSES AND SAMPLE SIZE
Size of Sample (N)

	1200	1000	800	600	400	200
Distribution of Question Responses (percent)						
50/50	2.9	3.1	3.5	4.0	4.9	6.9
60/40	2.8	3.0	3.4	3.9	4.8	6.8
70/30	2.6	2.8	3.2	3.7	4.5	6.4
80/20	2.3	2.5	2.8	3.2	3.9	5.5
90/10	1.7	1.9	2.1	2.4	2.9	4.2

The importance of sample size in estimating sampling error also needs to be mentioned since many of the organizations using the MFS'87 data will be interested in subgroups, and not always the total sample of over 1,200 completed interviews. Essentially, as the size of the sample decreases, there is a corresponding increase in the estimated sampling error. For example, for a subset of 200 persons the estimated error may be as high as plus or minus seven percent.

As in all public opinion surveys, the results are also subject to other types of error associated with telephone data collection procedures. One general type of error is sampling error, and includes the systematic exclusion of households without telephones. The other general type of error is non-sampling error, and includes such things as question wording and question order.

CHAPTER 2

DEMOGRAPHIC PROFILE OF THE SAMPLE

The purpose of this chapter is to briefly describe the MFS'87 sample according to its demographic characteristics. In addition to variables which are reported here as raw survey results, certain variables have been constructed for the convenience of the user, such as household income and household work status. The definitions for the construction of these variables can be found in Appendix C. The first seven variables describe characteristics of the respondent, while the remaining variables are characteristics of the household.

<u>VARIABLE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
AGEMD	Age of respondent, grouped	14
RACE	Race of respondent	14
GENDER	Gender of respondent	14
EDUC	Education of respondent	15
WKSTATUS	Work status of respondent	15
OCCGRP	Occupational work group of respondent	15
MARSTAT	Marital status of respondent	16
HHCOMP	Household composition	16
HHSIZE	Household size	16
NADULTS	Number of adults in household	17
NKIDS	Number of children in household	17
INCOME	Household income	17
HHWKSTAT	Household work status	18
HHOCCGRP	Household occupational group	18
DDREGION	Development district region	18
GEOREGN	Geographical region of Minnesota	19
METRO	Greater Minnesota or Twin Cities	19
WGHT	Case-weighting factor	19

CHAPTER 2: DEMOGRAPHIC PROFILE OF THE SAMPLE

AGEMD AGE OF RESPONDENT, GROUPED

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
18 - 24	1.00	159	13.2	13.4	13.4
25 - 34	2.00	294	24.4	24.7	38.0
35 - 44	3.00	277	23.0	23.3	61.3
45 - 54	4.00	185	15.3	15.5	76.9
55 - 64	5.00	132	10.9	11.1	87.9
65 AND OLDER	6.00	144	11.9	12.1	100.0
	99.00	14	1.2	MISSING	
	TOTAL	1204	100.0	100.0	

Valid Cases 1190 Missing Cases 14

RACE RACE OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
WHITE	1.00	1147	95.3	95.3	95.3
BLACK	2.00	13	1.0	1.0	96.4
INDIAN	3.00	5	.4	.4	96.8
HISPANIC	4.00	1	.1	.1	96.9
OTHER	5.00	37	3.1	3.1	100.0
	9.00	1	.1	MISSING	
	TOTAL	1204	100.0	100.0	

Valid Cases 1203 Missing Cases 1

GENDER GENDER OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MALE	1.00	532	44.2	44.2	44.2
FEMALE	2.00	672	55.8	55.8	100.0
	TOTAL	1204	100.0	100.0	

Valid Cases 1204 Missing Cases 0

CHAPTER 2: DEMOGRAPHIC PROFILE OF THE SAMPLE

EDUC EDUCATION OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
LESS THAN HIGH SCHL	1.00	30	2.5	2.5	2.5
SOME HIGH SCHOOL	2.00	81	6.7	6.7	9.2
HIGH SCHOOL GRADUATE	3.00	400	33.2	33.2	42.5
SOME TECHNICAL SCHL	4.00	58	4.8	4.8	47.3
TECHNICAL SCHL GRAD	5.00	67	5.5	5.5	52.8
SOME COLLEGE	6.00	268	22.2	22.3	75.1
COLLEGE GRADUATE	7.00	238	19.8	19.8	94.8
GRAD OR PROF. DEGREE	8.00	62	5.2	5.2	100.0
	0.0	1	.0	MISSING	
TOTAL		1204	100.0	100.0	

Valid Cases 1203 Missing Cases 1

WKSTATUS WORK STATUS OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
WORKED FULL TIME	1.00	635	52.7	53.0	53.0
WORKED PART TIME	2.00	201	16.7	16.8	69.8
UNEMPLOYED	3.00	93	7.7	7.7	77.5
STUDENT	4.00	36	3.0	3.0	80.5
RETIRED	5.00	145	12.0	12.1	92.6
HOMEMAKER	6.00	89	7.4	7.4	100.0
	9.00	6	.5	MISSING	
TOTAL		1204	100.0	100.0	

Valid Cases 1198 Missing Cases 6

OCCGRP OCCUPATIONAL WORK GROUP OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MANAGE, PROF	1.00	196	16.3	23.8	23.8
TECH, SALES, ADMINISTR	2.00	291	24.2	35.3	59.0
SERVICE	3.00	107	8.9	13.0	72.1
FARM, FISH, FOREST	4.00	40	3.4	4.9	77.0
CRAFT, REPAIR	5.00	103	8.5	12.5	89.4
OPERATIVES, LABORERS	6.00	87	7.2	10.6	100.0
	9.00	379	31.5	MISSING	
TOTAL		1204	100.0	100.0	

Valid Cases 825 Missing Cases 379

CHAPTER 2: DEMOGRAPHIC PROFILE OF THE SAMPLE

MARSTAT MARITAL STATUS OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MARRIED	1.00	816	67.7	68.1	68.1
SINGLE	2.00	277	23.0	23.2	91.3
DIVORCED	3.00	41	3.4	3.4	94.7
SEPARATED	4.00	11	.9	.9	95.6
WIDOWED	5.00	52	4.4	4.4	100.0
	0.0	7	.5	MISSING	
		-----	-----	-----	
TOTAL		1204	100.0	100.0	

Valid Cases 1197 Missing Cases 7

HHCOMP HOUSEHOLD COMPOSITION

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MARRIED, KIDS	1.00	428	35.5	35.7	35.7
MARRIED, NO KIDS	2.00	388	32.2	32.4	68.1
SINGLE PARENT	3.00	96	8.0	8.0	76.1
SINGLE, NO KIDS	4.00	285	23.7	23.9	100.0
	9.00	7	.6	MISSING	
		-----	-----	-----	
TOTAL		1204	100.0	100.0	

Valid Cases 1197 Missing Cases 7

HHSIZE HOUSEHOLD SIZE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
ONE PERSON	1.00	103	8.5	8.6	8.6
TWO PEOPLE	2.00	394	32.8	32.9	41.4
3 OR 4 PEOPLE	3.00	498	41.3	41.5	82.9
5 OR MORE PEOPLE	4.00	205	17.1	17.1	100.0
	9.00	4	.3	MISSING	
		-----	-----	-----	
TOTAL		1204	100.0	100.0	

Valid Cases 1200 Missing Cases 4

CHAPTER 2: DEMOGRAPHIC PROFILE OF THE SAMPLE

NADULTS NUMBER OF ADULTS IN HOUSEHOLD

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1.00	135	11.2	11.2	11.2
	2.00	775	64.3	64.3	75.5
	3.00	173	14.3	14.3	89.9
4+ ADULTS	4.00	122	10.1	10.1	100.0
		-----	-----	-----	
	TOTAL	1204	100.0	100.0	
Valid Cases	1204	Missing Cases	0		

NKIDS NUMBER OF CHILDREN IN HOUSEHOLD

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0.0	678	56.3	56.3	56.3
	1.00	199	16.5	16.6	72.9
	2.00	190	15.8	15.8	88.7
	3.00	93	7.8	7.8	96.4
	4.00	24	2.0	2.0	98.4
	5.00	10	.8	.8	99.3
	6.00	8	.6	.6	99.9
	7.00	1	.1	.1	100.0
	99.00	1	.0	MISSING	
		-----	-----	-----	
	TOTAL	1204	100.0	100.0	
Valid Cases	1203	Missing Cases	1		

INCOME HOUSEHOLD INCOME

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
UNDER 5,000	5.00	29	2.4	2.7	2.7
5 TO 10,000	10.00	72	6.0	6.7	9.5
10 TO 15,000	15.00	91	7.5	8.5	17.9
15 TO 20,000	20.00	122	10.1	11.4	29.3
20 TO 25,000	25.00	88	7.3	8.2	37.5
25 TO 30,000	30.00	150	12.5	14.0	51.5
30 TO 35,000	35.00	124	10.3	11.5	63.1
35 TO 40,000	40.00	121	10.1	11.3	74.4
40 TO 50,000	50.00	96	8.0	8.9	83.3
50 TO 60,000	60.00	75	6.2	7.0	90.3
MORE THAN 60,000	61.00	104	8.6	9.7	100.0
	99.00	133	11.1	MISSING	
		-----	-----	-----	
	TOTAL	1204	100.0	100.0	
Valid Cases	1071	Missing Cases	133		

CHAPTER 2: DEMOGRAPHIC PROFILE OF THE SAMPLE

HHWKSTAT HOUSEHOLD WORK STATUS

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
WORKED FULL TIME	1.00	426	35.4	81.4	81.4
WORKED PART TIME	2.00	24	2.0	4.6	86.0
UNEMPLOYED	3.00	23	1.9	4.3	90.4
STUDENT	4.00	2	.2	.4	90.8
RETIRED	5.00	46	3.8	8.8	99.5
HOMEMAKER	6.00	3	.2	.5	100.0
	9.00	680	56.5	MISSING	
	TOTAL	1204	100.0	100.0	

Valid Cases 524 Missing Cases 680

HHOCCGRP HOUSEHOLD OCCUPATIONAL WORK GROUP

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MANAGE, PROF	1.00	234	19.4	26.8	26.8
TECH, SALES, ADMINISTRATIVE SERVICE	2.00	228	19.0	26.2	53.0
FARM, FISH, FOREST	3.00	77	6.4	8.8	61.8
CRAFT, REPAIR	4.00	48	4.0	5.5	67.2
OPERATIVES, LABORERS	5.00	172	14.3	19.7	86.9
	6.00	114	9.5	13.1	100.0
	9.00	331	27.5	MISSING	
	TOTAL	1204	100.0	100.0	

Valid Cases 873 Missing Cases 331

DDREGION DEVELOPMENT DISTRICT REGION

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
DISTRICT 1	1.00	24	2.0	2.0	2.0
DISTRICT 2	2.00	21	1.8	1.8	3.7
DISTRICT 3	3.00	98	8.2	8.2	11.9
DISTRICT 4	4.00	65	5.4	5.4	17.3
DISTRICT 5	5.00	32	2.6	2.6	19.9
DISTRICT 6E	6.00	19	1.6	1.6	21.5
DISTRICT 6W	7.00	14	1.1	1.1	22.6
DISTRICT 7E	8.00	30	2.5	2.5	25.1
DISTRICT 7W	9.00	86	7.1	7.1	32.2
DISTRICT 8	10.00	32	2.7	2.7	34.9
DISTRICT 9	11.00	51	4.2	4.2	39.1
DISTRICT 10	12.00	125	10.4	10.4	49.5
DISTRICT 11	13.00	608	50.5	50.5	100.0
	TOTAL	1204	100.0	100.0	

Valid Cases 1204 Missing Cases 0

GEOREGN GEOGRAPHIC REGION OF MINNESOTA

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
NORTHWEST	1.00	45	3.7	3.7	3.7
NORTHEAST	2.00	98	8.2	8.2	11.9
CENTRAL	3.00	245	20.3	20.3	32.2
SOUTHWEST	4.00	83	6.9	6.9	39.1
SOUTHEAST	5.00	125	10.4	10.4	49.5
METRO	6.00	608	50.5	50.5	100.0
		-----	-----	-----	
	TOTAL	1204	100.0	100.0	

Valid Cases 1204 Missing Cases 0

METRO GREATER MINNESOTA OR TWIN CITIES AREA

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
GREATER MINNESOTA	1.00	596	49.5	49.5	49.5
TWIN CITIES AREA	2.00	608	50.5	50.5	100.0
		-----	-----	-----	
	TOTAL	1204	100.0	100.0	

Valid Cases 1204 Missing Cases 0

WGHT CASE-WEIGHTING FACTOR

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	.50	135	11.2	11.2	11.2
	1.01	775	64.3	64.3	75.5
	1.51	173	14.3	14.3	89.9
	2.02	85	7.0	7.0	96.9
	2.52	23	1.9	1.9	98.8
	3.03	3	.3	.3	99.0
	3.53	4	.3	.3	99.3
	4.04	8	.7	.7	100.0
		-----	-----	-----	
	TOTAL	1204	100.0	100.0	

Valid Cases 1204 Missing Cases 0

CHAPTER 3

INSTRUCTIONS FOR USING THE QUESTIONNAIRE AND RESULTS

OBJECTIVES

The questionnaire and results (Chapter 4 of this report) for a survey data file serve three basic functions: (1) a record of the exact wording and order of the survey questions; (2) a report of the responses to those questions; and (3) documentation of the variable names, which are necessary to access the computer data file. The questionnaire and results section of this report is a copy of the interview schedule with the frequency distributions and percentages added to those questions which were pre-coded or closed-ended. Appendix A shows the responses to open-ended questions, while Appendix B shows the responses to continuous variables, such as year of birth. Appendix C shows the definitions for constructed variables which make many of these responses more useful, e.g. age group. The distributions for these constructed variables are presented in Chapter 2 of this report: Demographic Profile of the Sample. Appendix D contains the frequency counts for administrative variables, such as interview length. Finally, Appendix E contains copies of the administrative forms used for this survey.

INTERPRETING THE QUESTIONNAIRE RESULTS

Chapter 4 of this report contains a replica of the 1987 Minnesota Fall Survey questionnaire. To this replica, two pieces of information have been added: question labels, and the response frequencies and percentages for each question. The questionnaire and response frequencies will be of major interest to most readers. The question labels, or variable labels, are useful documentation for those who wish to use a computer and the SPSS software package for more detailed analysis.

The questionnaire is an exact replica. This is important in order to know how questions were phrased, in what order they were asked, and when it was proper to skip certain questions. Interviewers were instructed to read these questions verbatim and to avoid giving their interpretations or opinions in any way. Two types of markings which appear on the survey form were not indicated to respondents: instructions to the interviewers which are shown in parentheses, and section and survey labels which are shown in bold type.

To the right of each question is printed a list of permissible answers and a code number for each answer. The interviewer was instructed to circle the code number of the answer given by the respondent. A new questionnaire was used for each interview and was marked to show the answers of each respondent. Question A10 in the survey provides a good example of this coding scheme. If a respondent felt that they were "worse off" financially than they were a year ago, the "2" would be circled on that questionnaire.

Open-ended and continuous questions were coded in different ways and the responses to those questions are shown in Appendices A and B. The responses to open-ended questions were written verbatim on the questionnaire and later classified into categories by a specially trained coder who wrote category numbers into the answer spaces for those questions. These responses are summarized in Appendix A. Questions with continuous distributions, where many discrete answers are possible, are shown with open spaces in the answer column of the question. Interviewers simply wrote in numbers like zip code and year of birth. The responses to those questions are presented in Appendix B.

Missing Value Nomenclature

For all types of questions, two to three types of "missing" response categories exist: don't know, refused to answer, and not applicable. The first two categories are self-explanatory and are always options for respondents. Not applicable is an option where answering a given question is conditional, or in other words, where a given question was asked only of certain respondents. Standard codes are associated throughout with each missing value category: 8, 9, and 0. Where the answer is multiple digit, so is the standard code.

	Number of Digits in Code			
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>
DK (Don't Know)	8	88	888	8888
RA (Refused)	9	99	999	9999
NA (Not Applicable)	0	00	000	0000

Response Frequencies

The responses summed for all 1,204 respondents are shown in the last two columns to the right of each question. The first of these columns shows the number (frequency) of people in each response category: these should sum to 1,204, with some rounding error. The second number is the percentage response rate, adjusted to exclude the missing response categories.

For most analytical purposes, people will want these adjusted percentages. They were computed and presented here to meet that need. These adjusted percentages are less appropriate when used as a public opinion poll, for showing public support for policies. For example, if 15 percent of the respondents did not answer a question, but 55 percent of those who did answer supported a particular position, it is inappropriate to argue that the issue has majority support. In this example, only 47 percent of all people would actually be supportive. For policy choices, it may be more appropriate to show the percentage distribution of all 1,204 respondents.

CHAPTER 3: INSTRUCTIONS FOR USING THE QUESTIONNAIRE AND RESULTS

Analysts should beware of using these adjusted percentages. Where the number of people not responding is large, the adjusted percentages will misrepresent public sentiment. Contact MCSR if you have any doubt which percentages to use.

One final comment: the frequencies shown here are "weighted" by the number of adults in the household as explained below. This technique introduces some rounding errors, so that the sum of the frequencies for a given question may not equal 1,204 exactly.

OPEN-ENDED QUESTIONS

The results from the open-ended questions on the survey, such as the questions on the most important problems facing people in Minnesota today, are presented in Appendix A.

VERBATIM RESPONSES

MCSR maintains records of verbatim responses. For open-ended questions, this record is in the questionnaires themselves and is relatively inaccessible. However, a separate listing of responses is created and maintained for any question answer which falls outside a permissible list and is coded as "other". For example, a Socialist would fall outside the normal political list of Republican, Democrat, or Independent and would be coded as "other". Such a list for any question is available from the MCSR office upon request.

CONTINUOUS VARIABLES

The results from questions which have continuous responses are presented in Appendix B.

CONSTRUCTED VARIABLES

Appendix C contains the operational definitions of the constructed variables for the convenience of the data file user. The distribution of these variables is presented in Chapter 2 of this report: Demographic Profile of the Sample. These constructed variables are contained in the SPSS data file along with all of the original variables.

ADMINISTRATIVE VARIABLES

The results from survey administration items, such as date of completion and interviewer ID, are presented in Appendix D.

WEIGHTING OF DATA

The responses presented in the codebook and appendices have been weighted based upon the total number of adults living in the household. Because telephone surveys tend to oversample people who live in single-individual households, these individuals were downweighted by about 50% and all others upweighted accordingly to more accurately represent the distribution of adult members in households in the population of the state. Weighted response distributions will differ slightly from unweighted distributions. The construction and activation of the weighting factor is described in Appendix C, under the variable "WGTS."

M52b/MFS87-S.REP

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M52b/MFS87-S.REP

B. Northeast Region Oversample

1987 REGION THREE SUPPLEMENT: TECHNICAL REPORT

OVERVIEW

The 1987 Region Three Supplement was a survey of adults, age 18 and over, who reside in Development Region Three of Minnesota. Data collection was conducted during December 1987 and January 1988 by the Minnesota Center for Survey Research at the University of Minnesota. Selected respondents in Region Three answered questions about quality of life and business.

A total of 202 telephone interviews were completed for Region Three. The overall response rate was 76%. This compares favorably with other telephone social surveys which generally have response rates of 70% to 75%.

The survey sample consisted of households selected randomly from all Region Three telephone exchanges. Selection procedures guaranteed that every telephone household in the region had an equal chance to be included in the survey, and that once the household was sampled every adult had an equal chance to be included.

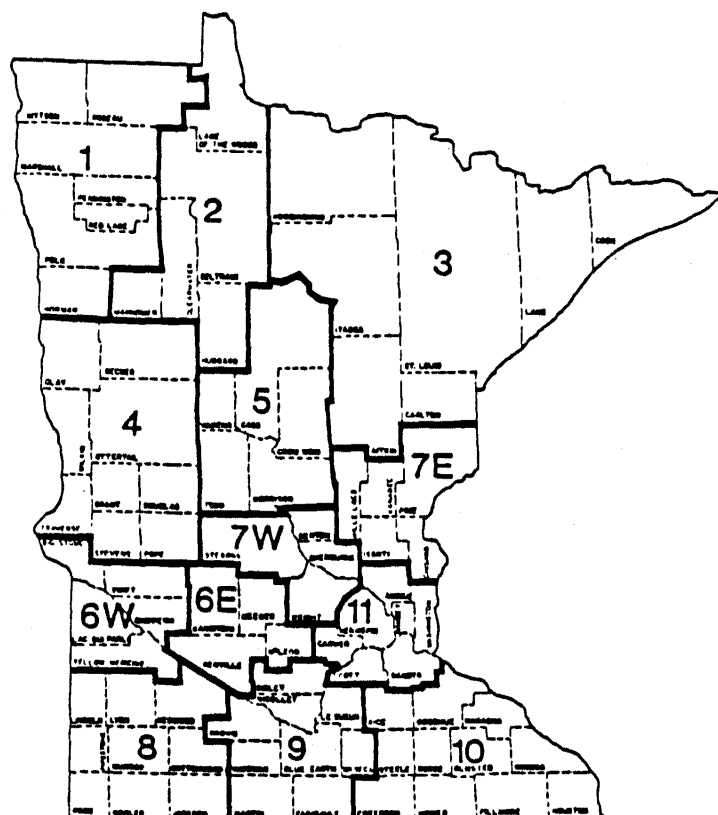
The questionnaire and results section of this report is a replica of the questionnaire. It contains the response frequencies and percentages for each question in the survey. Because the data file is weighted to represent individuals, the absolute responses will sum to 198. Percentage distributions are also presented; "valid" percentages were computed after eliminating those who refused to answer, did not know, or were not required to answer a particular question.

GOALS

The primary goal of the Region Three Supplement was to obtain additional information for that portion of Minnesota (See Figure 1, below). This information will then be combined with data collected for the 1987 Minnesota Fall Survey (MFS'87). Results and a technical report are available separately for MFS'87.

Selected respondents in Region Three answered questions about quality of life and business.

FIGURE 1
MINNESOTA DEVELOPMENT REGIONS



MANAGEMENT PLAN

The overall coordination of the project was provided by the Survey Manager, Rossana Armson. The data collection operation was coordinated by Nancy Davenport-Sis, who was responsible for supervision of the interviewers and overseeing the project on a daily basis. Management of the coding process was the responsibility of Carol Westrum. The final computer file was prepared by the Data Manager, Lisa Miller, who was responsible for converting the paper survey forms to a computer format ready for analysis.

SAMPLING DESIGN

The survey sample consisted of households selected randomly from all Region Three telephone exchanges. The random digit telephone sample was acquired from Survey Sampling, Inc. of Westport, Connecticut.

Selection of respondents occurred in two stages: first a household was randomly selected, and then a person was randomly selected for interviewing from within the household. The selection of a person within the household was done using the Most Recent Birthday Selection Method, a sample of which appears in the introduction (See Appendix E: Administrative Forms). These selection procedures guaranteed that every telephone household in the region had an equal chance to be included in the survey, and that once the household was sampled every adult had an equal chance to be included.

INTERVIEWING

The Region Three Supplement was a survey of adults, age 18 and over, who reside in Development Region Three. Data collection was conducted during December 1987 and January 1988 by the Minnesota Center for Survey Research (MCSR) at the University of Minnesota.

Interviewer Recruitment

All of the interviewers who participated in the Region Three Supplement were recruited from a pool of interviewers with prior MCSR experience, and were students at the University of Minnesota.

Training of Interviewers

New applicants for interviewing positions were hired only after completing a personal interview with the interviewing manager. Training of interviewers was conducted in three phases. In the first phase, new interviewers were required to attend an initial training session during which they were given basic instructions in survey interviewing.

For the second phase of training, all interviewers attended a session covering survey procedures and policies, and review of the actual interview schedule. In addition, they were provided with standard protocols for dealing with anticipated questions about the survey and possible reasons for refusing to participate. Before beginning actual interviewing, all new interviewers were required to conduct: (1) a practice interview with a supervisor or other MCSR staff member, and (2) a pilot interview with a randomly selected survey respondent, which was critiqued immediately.

For the final phase of training, all interviewers attended a supplementary session on specific techniques for converting potential refusals into completed interviews.

In addition, all interviewers were required to sign a statement of professional ethics, which contained explicit guidelines about appropriate interviewing behavior and the confidentiality of all respondent information. A copy of this statement is included in Appendix E.

Supervision

The interviews were conducted by telephone from a central phone bank at the Minnesota Center for Survey Research. This interviewing was conducted on six days each week, including weekend, evening, and weekday interviewing. Every work shift was managed by a supervisor whose responsibilities included distributing new phone numbers and scheduled appointments, monitoring interviewers at work, and reviewing completed interview schedules for errors and omissions.

In addition to the informal monitoring which was done by supervisors, there was a formal monitoring system in operation. This formal monitoring system utilized an experienced interviewer, who listened to interviews being conducted, completed evaluation forms, and provided immediate feedback on how to improve interviewing quality. Interviewers whose performance was not acceptable were re-evaluated on subsequent shifts. If their performance did not improve, their employment was terminated.

Operations

Numbers to be called were recorded on callback records (see Appendix E for forms), and these were distributed to interviewers at the beginning of each shift. The disposition of each attempt to complete an interview was recorded on these callback records. Each telephone number in the sample continued to be called until there were 10 "no answer" dispositions on 10 different shifts.

On the back of every callback record were two forms for recording relevant information about refusals and appointments. The refusal form included entries for the respondents' reasons for declining to participate in the study, the arguments used by the interviewer to encourage participation, and the point at which the termination occurred. The appointment form required specifying the date and time of the scheduled appointment, the name of the targeted respondent if selected, and whether the appointment was firm, probable, or "a shot-in-the-dark."

All completed interview schedules were turned in to the supervisor for review immediately after the conclusion of the interview. They were then assigned a unique ID number, the phone number was recorded on the master list, and the interview schedule was filed for coding and data entry. All other callback records were returned to the supervisor at the end of the shift. For each call made, interviewers recorded the date, time, and disposition of the call as well as their unique interviewer number. Copies of the callback records and explanations for all possible disposition codes are included in Appendix E.

MANAGEMENT OF THE DATA

Coding and Quality Control

Completed instruments were reviewed immediately by shift supervisors for missed questions, errors in branching, and insufficient detail in open-ended responses. Errors detected in this fashion were returned to the interviewer for correction. Following shift supervisor review, survey instruments were sent to coder/editors for a more detailed and rigorous examination. Coder/editors prepared completed instruments for data entry by: (1) coding administrative variables on the contact record; (2) making certain that every question on the schedule was answered properly; (3) assuring that branching had been followed; and (4) coding open-ended responses. Again, errors which required further clarification were returned to interviewers to call back the respondent.

As many questions as possible were pre-coded. The actual coding work was done by coder/editors who had completed the same training as the interviewers. These coder/editors were given one hour of instruction in coding procedures, followed by one hour of close supervision in coding actual interviews.

Data Entry

Shortly after interviewing began, completed questionnaires were key entered onto a data tape. Data entry and cleaning were continuous during the data collection phase and, as a result of this, a computer file of 202 completed interviews was available for preliminary analysis within a few weeks after the last interviews had been collected and coded.

Data Cleaning

Once a complete file of 202 interviews was constructed, it was examined systematically to remove data entry errors. Data cleaning involved use of a computer program to evaluate each case for (1) variables with values out of range and (2) inappropriate branching on screening and filter questions. In addition, the file was examined manually to identify cases with paradoxical or inappropriate responses.

COMPLETION STATUS

A total of 202 telephone interviews were completed for the Region Three Supplement (Table 1). An additional 51 individuals refused to participate, 5 were eliminated because of physical or language problems, and 7 were still active when interviewing was terminated. The remainder of the sample was categorized as follows: 7 of the telephone numbers in the sample were business numbers, 98 were not working numbers, and 17 were no answers on each of 10 attempted contacts. The overall response rate for the Region Three Supplement was 76%. This compares favorably with other social surveys which generally have response rates of 70% to 75%.

TABLE 1

FINAL STATUS OF INTERVIEWING FOR REGION THREE OVERSAMPLE

<u>Status</u>	<u>Number (Percent)</u>	
Completion	202	(52%)
Refusal	51	(13%)
Physical or Language Problem	5	(1%)
Active	7	(2%)
Not Home Phone	7	(2%)
Not Working Number	98	(25%)
No Answer (on 10 attempts)	17	(4%)
Eliminated	3	(1%)
	-----	-----
TOTALS	390	(100%)

RESPONSE RATE * 76%

*Response rate was calculated by the following formula:

$$\text{response rate} = \frac{\text{completions}}{\text{potential interviews}}$$

(Potential interviews were defined as all instances where contact was made with the selected household, and were represented by the sum of the first four categories in Table 1.)

SAMPLING ERROR

The margin of error for a simple random sample of the size of the Region Three Supplement may be as high as plus or minus seven percent, depending upon the distribution of sample responses. This sampling error presumes the conventional 95% degree of desired confidence, which is equivalent to a "significance level" of .05. This means that in theory, in 19 cases out of 20 the results based on a such a sample will differ by no more than seven percentage points in either direction from what would have been obtained by interviewing all adult residents of Region Three.

As in all public opinion surveys, the results are also subject to other types of error associated with telephone data collection procedures. One general type of error is sampling error, and includes the systematic exclusion of households without telephones. The other general type of error is non-sampling error, and includes such things as question wording and question order.

WEIGHTING OF DATA

The responses presented in the codebook and appendices have been weighted based upon the total number of adults living in the household. Because telephone surveys tend to oversample people who live in single-individual households, these individuals were downweighted by about 50% and all others upweighted accordingly to more accurately represent the distribution of adult members in households in the population of this region. Weighted response distributions will differ slightly from unweighted distributions. The construction and activation of the weighting factor is described in Appendix C, under the variable "WGTS".

READING THE QUESTIONNAIRE AND RESULTS SECTION

The questionnaire and results section of this report is a replica of the questionnaire. It contains the response frequencies and percentages for each question in the survey. The absolute responses of all respondents are shown for each question. However, because the data file is weighted to represent individuals, the absolute responses will sum to 198. Percentage distributions are also presented; "valid" percentages were computed after eliminating those who refused to answer, did not know, or were not required to answer a particular question.

The question numbers were used as variable labels in the computer data file. This information is provided as documentation for those who wish to use a computer and the SPSS software package for more detailed analysis.

DEMOGRAPHIC PROFILE OF THE SAMPLE

The purpose of this portion of the report is to briefly describe the Region Three sample according to its demographic characteristics. In addition to variables which are reported here as raw survey results, certain variables have been constructed for the convenience of the user, such as household income and household work status. The definitions for the construction of these variables can be found in Appendix C. The first seven variables describe characteristics of the respondent, while the remaining variables are characteristics of the household.

<u>VARIABLE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
AGEMD	Age of respondent, grouped	9
RACE	Race of respondent	9
GENDER	Gender of respondent	9
EDUC	Education of respondent	10
WKSTATUS	Work status of respondent	10
OCCGRP	Occupational work group of respondent	10
MARSTAT	Marital status of respondent	11
HHCOMP	Household composition	11
HHSIZE	Household size	11
NADULTS	Number of adults in household	12
NKIDS	Number of children in household	12
INCOME	Household income	12
HHWKSTAT	Household work status	13
HHOCCGRP	Household occupational group	13
COUNTY	County of residence	13
DDREGION	Development district region	14
WGHT	Case-weighting factor	14

AGEND AGE OF RESPONDENT, GROUPED

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
18 - 24	1.00	27	13.5	13.6	13.6
25 - 34	2.00	36	18.4	18.5	32.1
35 - 44	3.00	43	21.9	22.1	54.1
45 - 54	4.00	37	18.9	19.0	73.1
55 - 64	5.00	24	12.2	12.3	85.4
65 AND OLDER	6.00	29	14.5	14.6	100.0
	99.00	1	.5	MISSING	
	TOTAL	198	100.0	100.0	

Valid Cases 197 Missing Cases 1

RACE RACE OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
WHITE	1.00	186	94.1	95.3	95.3
BLACK	2.00	1	.3	.3	95.6
INDIAN	3.00	1	.5	.5	96.1
HISPANIC	4.00	2	1.0	1.0	97.2
OTHER	5.00	6	2.8	2.8	100.0
	9.00	3	1.3	MISSING	
	TOTAL	198	100.0	100.0	

Valid Cases 195 Missing Cases 3

GENDER GENDER OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MALE	1.00	92	46.7	46.7	46.7
FEMALE	2.00	105	53.3	53.3	100.0
	TOTAL	198	100.0	100.0	

Valid Cases 198 Missing Cases 0

EDUC EDUCATION OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
LESS THAN HIGH SCHL	1.00	9	4.3	4.3	4.3
SOME HIGH SCHOOL	2.00	12	6.1	6.1	10.5
HIGH SCHOOL GRADUATE	3.00	70	35.2	35.2	45.7
SOME TECHNICAL SCHOOL	4.00	8	3.8	3.8	49.5
TECHNICAL SCHOOL GRAD	5.00	15	7.7	7.7	57.1
SOME COLLEGE	6.00	48	24.2	24.2	81.4
COLLEGE GRADUATE	7.00	26	13.0	13.0	94.4
GRAD OR PROFESSIONAL DEGREE	8.00	11	5.6	5.6	100.0
		-----	-----	-----	
	TOTAL	198	100.0	100.0	

Valid Cases 198 Missing Cases 0

WKSTATUS WORK STATUS OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
WORKED FULL TIME	1.00	92	46.4	46.7	46.7
WORKED PART TIME	2.00	32	16.1	16.2	62.8
UNEMPLOYED	3.00	24	12.2	12.3	75.1
STUDENT	4.00	6	2.8	2.8	77.9
RETIRED	5.00	31	15.6	15.6	93.6
HOMEMAKER	6.00	13	6.4	6.4	100.0
	9.00	1	.5	MISSING	
		-----	-----	-----	
	TOTAL	198	100.0	100.0	

Valid Cases 197 Missing Cases 1

OCCGRP OCCUPATIONAL WORK GROUP OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MANAGE, PROF	1.00	23	11.7	18.8	18.8
TECH, SALES, ADMINISTRATOR	2.00	43	21.9	35.1	53.9
SERVICE	3.00	29	14.5	23.3	77.1
FARM, FISH, FOREST	4.00	3	1.5	2.4	79.6
CRAFT, REPAIR	5.00	14	6.9	11.0	90.6
OPERATIVES, LABORERS	6.00	12	5.9	9.4	100.0
	9.00	74	37.5	MISSING	
		-----	-----	-----	
	TOTAL	198	100.0	100.0	

Valid Cases 124 Missing Cases 74

MARSTAT MARITAL STATUS OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MARRIED	1.00	130	65.6	65.6	65.6
SINGLE	2.00	45	22.7	22.7	88.3
DIVORCED	3.00	11	5.4	5.4	93.6
WIDOWED	5.00	13	6.4	6.4	100.0
		-----	-----	-----	
TOTAL		198	100.0	100.0	

Valid Cases 198 Missing Cases 0

HHCOMP HOUSEHOLD COMPOSITION

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MARRIED, KIDS	1.00	58	29.3	29.3	29.3
MARRIED, NO KIDS	2.00	72	36.2	36.2	65.6
SINGLE PARENT	3.00	20	9.9	9.9	75.5
SINGLE, NO KIDS	4.00	48	24.5	24.5	100.0
		-----	-----	-----	
TOTAL		198	100.0	100.0	

Valid Cases 198 Missing Cases 0

HHSIZE HOUSEHOLD SIZE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
ONE PERSON	1.00	17	8.7	8.7	8.7
TWO PEOPLE	2.00	76	38.3	38.6	47.3
3 OR 4 PEOPLE	3.00	87	43.9	44.2	91.5
5 OR MORE PEOPLE	4.00	17	8.4	8.5	100.0
	9.00	2	.8	MISSING	
		-----	-----	-----	
TOTAL		198	100.0	100.0	

Valid Cases 196 Missing Cases 2

NADULTS NUMBER OF ADULTS IN HOUSEHOLD

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1.00	23	11.5	11.5	11.5
	2.00	130	65.8	65.8	77.3
	3.00	36	18.4	18.4	95.7
4+ ADULTS	4.00	9	4.3	4.3	100.0
	TOTAL	198	100.0	100.0	

Valid Cases 198 Missing Cases 0

NKIDS NUMBER OF CHILDREN IN HOUSEHOLD

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0.0	120	60.7	60.7	60.7
	1.00	32	16.3	16.3	77.0
	2.00	33	16.6	16.6	93.6
	3.00	10	4.8	4.8	98.5
	5.00	3	1.5	1.5	100.0
	TOTAL	198	100.0	100.0	

Valid Cases 198 Missing Cases 0

INCOME HOUSEHOLD INCOME

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
UNDER 5,000	5.00	10	5.1	5.8	5.8
5 TO 10,000	10.00	12	5.9	6.7	12.5
10 TO 15,000	15.00	27	13.8	15.7	28.1
15 TO 20,000	20.00	24	12.2	13.9	42.0
20 TO 25,000	25.00	13	6.4	7.2	49.3
25 TO 30,000	30.00	21	10.7	12.2	61.4
30 TO 35,000	35.00	17	8.7	9.9	71.3
35 TO 40,000	40.00	17	8.7	9.9	81.2
40 TO 50,000	50.00	15	7.7	8.7	89.9
50 TO 60,000	60.00	7	3.3	3.8	93.6
MORE THAN 60,000	61.00	11	5.6	6.4	100.0
	99.00	24	12.0	MISSING	
	TOTAL	198	100.0	100.0	

Valid Cases 174 Missing Cases 24

HHWKSTAT HOUSEHOLD WORK STATUS

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
WORKED FULL TIME	1.00	65	32.7	72.3	72.3
WORKED PART TIME	2.00	1	.5	1.1	73.4
UNEMPLOYED	3.00	12	5.9	13.0	86.4
STUDENT	4.00	1	.5	1.1	87.6
RETIRED	5.00	11	5.6	12.4	100.0
	9.00	108	54.8	MISSING	
		-----	-----	-----	
TOTAL		198	100.0	100.0	

Valid Cases 89 Missing Cases 108

HHOCCGRP HOUSEHOLD OCCUPATIONAL WORK GROUP

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MANAGE, PROF	1.00	29	14.8	22.5	22.5
TECH, SALES, ADMINISTR	2.00	26	13.0	19.8	42.2
SERVICE	3.00	19	9.7	14.7	57.0
FARM, FISH, FOREST	4.00	5	2.6	3.9	60.9
CRAFT, REPAIR	5.00	24	12.2	18.6	79.5
OPERATIVES, LABORERS	6.00	27	13.5	20.5	100.0
	9.00	68	34.2	MISSING	
		-----	-----	-----	
TOTAL		198	100.0	100.0	

Valid Cases 130 Missing Cases 68

COUNTY COUNTY OF RESIDENCE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
AITKIN	1.00	8	3.8	3.8	3.8
CARLTON	9.00	19	9.7	9.7	13.5
COOK	16.00	3	1.3	1.3	14.8
ITASCA	31.00	26	13.0	13.0	27.8
KOOCHICHING	36.00	11	5.6	5.6	33.4
LAKE	38.00	7	3.6	3.6	37.0
ST. LOUIS	69.00	125	63.0	63.0	100.0
		-----	-----	-----	
TOTAL		198	100.0	100.0	

Valid Cases 198 Missing Cases 0

DDREGION DEVELOPMENT DISTRICT REGION

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
DISTRICT 3	3.00	198	100.0	100.0	100.0
		-----	-----	-----	
	TOTAL	198	100.0	100.0	
Valid Cases	198	Missing Cases	0		

WGHT CASE-WEIGHTING FACTOR

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	.50	23	11.5	11.5	11.5
	1.01	130	65.8	65.8	77.3
	1.51	36	18.4	18.4	95.7
	2.02	6	3.1	3.1	98.7
	2.52	3	1.3	1.3	100.0
		-----	-----	-----	
	TOTAL	198	100.0	100.0	
Valid Cases	198	Missing Cases	0		

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The 1987 Region Three Supplement was a survey of adults, age 18 and over, who reside in Development Region Three of Minnesota. Data collection was conducted during December 1987 and January 1988 by the Minnesota Center for Survey Research at the University of Minnesota. Selected respondents in Region Three answered questions about quality of life and business.

A total of 202 telephone interviews were completed for Region Three. The overall response rate was 76%. This compares favorably with other telephone social surveys which generally have response rates of 70% to 75%.

The survey sample consisted of households selected randomly from all Region Three telephone exchanges. Selection procedures guaranteed that every telephone household in the region had an equal chance to be included in the survey, and that once the household was sampled every adult had an equal chance to be included.

The questionnaire and results section of this report is a replica of the questionnaire. It contains the response frequencies and percentages for each question in the survey. Because the data file is weighted to represent individuals, the absolute responses will sum to 198. Percentage distributions are also presented; "valid" percentages were computed after eliminating those who refused to answer, did not know, or were not required to answer a particular question.

SAMPLING DESIGN

The survey sample consisted of households selected randomly from all Region Three telephone exchanges. The random digit telephone sample was acquired from Survey Sampling, Inc. of Westport, Connecticut.

Selection of respondents occurred in two stages: first a household was randomly selected, and then a person was randomly selected for interviewing from within the household. The selection of a person within the household was done using the Most Recent Birthday Selection Method, a sample of which appears in the introduction (See Appendix E: Administrative Forms). These selection procedures guaranteed that every telephone household in the region had an equal chance to be included in the survey, and that once the household was sampled every adult had an equal chance to be included.

INTERVIEWING

The Region Three Supplement was a survey of adults, age 18 and over, who reside in Development Region Three. Data collection was conducted during December 1987 and January 1988 by the Minnesota Center for Survey Research (MCSR) at the University of Minnesota.

Interviewer Recruitment

All of the interviewers who participated in the Region Three Supplement were recruited from a pool of interviewers with prior MCSR experience, and were students at the University of Minnesota.

Training of Interviewers

New applicants for interviewing positions were hired only after completing a personal interview with the interviewing manager. Training of interviewers was conducted in three phases. In the first phase, new interviewers were required to attend an initial training session during which they were given basic instructions in survey interviewing.

For the second phase of training, all interviewers attended a session covering survey procedures and policies, and review of the actual interview schedule. In addition, they were provided with standard protocols for dealing with anticipated questions about the survey and possible reasons for refusing to participate. Before beginning actual interviewing, all new interviewers were required to conduct: (1) a practice interview with a supervisor or other MCSR staff member, and (2) a pilot interview with a randomly selected survey respondent, which was critiqued immediately.

For the final phase of training, all interviewers attended a supplementary session on specific techniques for converting potential refusals into completed interviews.

In addition, all interviewers were required to sign a statement of professional ethics, which contained explicit guidelines about appropriate interviewing behavior and the confidentiality of all respondent information. A copy of this statement is included in Appendix E.

Supervision

The interviews were conducted by telephone from a central phone bank at the Minnesota Center for Survey Research. This interviewing was conducted on six days each week, including weekend, evening, and weekday interviewing. Every work shift was managed by a supervisor whose responsibilities included distributing new phone numbers and scheduled appointments, monitoring interviewers at work, and reviewing completed interview schedules for errors and omissions.

In addition to the informal monitoring which was done by supervisors, there was a formal monitoring system in operation. This formal monitoring system utilized an experienced interviewer, who listened to interviews being conducted, completed evaluation forms, and provided immediate feedback on how to improve interviewing quality. Interviewers whose performance was not acceptable were re-evaluated on subsequent shifts. If their performance did not improve, their employment was terminated.

Operations

Numbers to be called were recorded on callback records (see Appendix E for forms), and these were distributed to interviewers at the beginning of each shift. The disposition of each attempt to complete an interview was recorded on these callback records. Each telephone number in the sample continued to be called until there were 10 "no answer" dispositions on 10 different shifts.

On the back of every callback record were two forms for recording relevant information about refusals and appointments. The refusal form included entries for the respondents' reasons for declining to participate in the study, the arguments used by the interviewer to encourage participation, and the point at which the termination occurred. The appointment form required specifying the date and time of the scheduled appointment, the name of the targeted respondent if selected, and whether the appointment was firm, probable, or "a shot-in-the-dark."

All completed interview schedules were turned in to the supervisor for review immediately after the conclusion of the interview. They were then assigned a unique ID number, the phone number was recorded on the master list, and the interview schedule was filed for coding and data entry. All other callback records were returned to the supervisor at the end of the shift. For each call made, interviewers recorded the date, time, and disposition of the call as well as their unique interviewer number. Copies of the callback records and explanations for all possible disposition codes are included in Appendix E.

MANAGEMENT OF THE DATA

Coding and Quality Control

Completed instruments were reviewed immediately by shift supervisors for missed questions, errors in branching, and insufficient detail in open-ended responses. Errors detected in this fashion were returned to the interviewer for correction. Following shift supervisor review, survey instruments were sent to coder/editors for a more detailed and rigorous examination. Coder/editors prepared completed instruments for data entry by: (1) coding administrative variables on the contact record; (2) making certain that every question on the schedule was answered properly; (3) assuring that branching had been followed; and (4) coding open-ended responses. Again, errors which required further clarification were returned to interviewers to call back the respondent.

As many questions as possible were pre-coded. The actual coding work was done by coder/editors who had completed the same training as the interviewers. These coder/editors were given one hour of instruction in coding procedures, followed by one hour of close supervision in coding actual interviews.

Data Entry

Shortly after interviewing began, completed questionnaires were key entered onto a data tape. Data entry and cleaning were continuous during the data collection phase and, as a result of this, a computer file of 202 completed interviews was available for preliminary analysis within a few weeks after the last interviews had been collected and coded.

Data Cleaning

Once a complete file of 202 interviews was constructed, it was examined systematically to remove data entry errors. Data cleaning involved use of a computer program to evaluate each case for (1) variables with values out of range and (2) inappropriate branching on screening and filter questions. In addition, the file was examined manually to identify cases with paradoxical or inappropriate responses.

COMPLETION STATUS

A total of 202 telephone interviews were completed for the Region Three Supplement (Table 1). An additional 51 individuals refused to participate, 5 were eliminated because of physical or language problems, and 7 were still active when interviewing was terminated. The remainder of the sample was categorized as follows: 7 of the telephone numbers in the sample were business numbers, 98 were not working numbers, and 17 were no answers on each of 10 attempted contacts. The overall response rate for the Region Three Supplement was 76%. This compares favorably with other social surveys which generally have response rates of 70% to 75%.

TABLE 1

FINAL STATUS OF INTERVIEWING FOR REGION THREE OVERSAMPLE

<u>Status</u>	<u>Number (Percent)</u>	
Completion	202	(52%)
Refusal	51	(13%)
Physical or Language Problem	5	(1%)
Active	7	(2%)
Not Home Phone	7	(2%)
Not Working Number	98	(25%)
No Answer (on 10 attempts)	17	(4%)
Eliminated	3	(1%)
	-----	-----
TOTALS	390	(100%)

RESPONSE RATE * 76%

*Response rate was calculated by the following formula:

$$\text{response rate} = \frac{\text{completions}}{\text{potential interviews}}$$

(Potential interviews were defined as all instances where contact was made with the selected household, and were represented by the sum of the first four categories in Table 1.)

SAMPLING ERROR

The margin of error for a simple random sample of the size of the Region Three Supplement may be as high as plus or minus seven percent, depending upon the distribution of sample responses. This sampling error presumes the conventional 95% degree of desired confidence, which is equivalent to a "significance level" of .05. This means that in theory, in 19 cases out of 20 the results based on a such a sample will differ by no more than seven percentage points in either direction from what would have been obtained by interviewing all adult residents of Region Three.

As in all public opinion surveys, the results are also subject to other types of error associated with telephone data collection procedures. One general type of error is sampling error, and includes the systematic exclusion of households without telephones. The other general type of error is non-sampling error, and includes such things as question wording and question order.

WEIGHTING OF DATA

The responses presented in the codebook and appendices have been weighted based upon the total number of adults living in the household. Because telephone surveys tend to oversample people who live in single-individual households, these individuals were downweighted by about 50% and all others upweighted accordingly to more accurately represent the distribution of adult members in households in the population of this region. Weighted response distributions will differ slightly from unweighted distributions. The construction and activation of the weighting factor is described in Appendix C, under the variable "WGTS".

READING THE QUESTIONNAIRE AND RESULTS SECTION

The questionnaire and results section of this report is a replica of the questionnaire. It contains the response frequencies and percentages for each question in the survey. The absolute responses of all respondents are shown for each question. However, because the data file is weighted to represent individuals, the absolute responses will sum to 198. Percentage distributions are also presented; "valid" percentages were computed after eliminating those who refused to answer, did not know, or were not required to answer a particular question.

The question numbers were used as variable labels in the computer data file. This information is provided as documentation for those who wish to use a computer and the SPSS software package for more detailed analysis.

DEMOGRAPHIC PROFILE OF THE SAMPLE

The purpose of this portion of the report is to briefly describe the Region Three sample according to its demographic characteristics. In addition to variables which are reported here as raw survey results, certain variables have been constructed for the convenience of the user, such as household income and household work status. The definitions for the construction of these variables can be found in Appendix C. The first seven variables describe characteristics of the respondent, while the remaining variables are characteristics of the household.

<u>VARIABLE</u>	<u>DESCRIPTION</u>	<u>PAGE</u>
AGEMD	Age of respondent, grouped	9
RACE	Race of respondent	9
GENDER	Gender of respondent	9
EDUC	Education of respondent	10
WKSTATUS	Work status of respondent	10
OCCGRP	Occupational work group of respondent	10
MARSTAT	Marital status of respondent	11
HHCOMP	Household composition	11
HHSIZE	Household size	11
NADULTS	Number of adults in household	12
NKIDS	Number of children in household	12
INCOME	Household income	12
HHWKSTAT	Household work status	13
HHOCCGRP	Household occupational group	13
COUNTY	County of residence	13
DDREGION	Development district region	14
WGHT	Case-weighting factor	14

AGEMD AGE OF RESPONDENT, GROUPE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
18 - 24	1.00	27	13.5	13.6	13.6
25 - 34	2.00	36	18.4	18.5	32.1
35 - 44	3.00	43	21.9	22.1	54.1
45 - 54	4.00	37	18.9	19.0	73.1
55 - 64	5.00	24	12.2	12.3	85.4
65 AND OLDER	6.00	29	14.5	14.6	100.0
	99.00	1	.5	MISSING	
	TOTAL	198	100.0	100.0	

Valid Cases 197 Missing Cases 1

RACE RACE OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
WHITE	1.00	186	94.1	95.3	95.3
BLACK	2.00	1	.3	.3	95.6
INDIAN	3.00	1	.5	.5	96.1
HISPANIC	4.00	2	1.0	1.0	97.2
OTHER	5.00	6	2.8	2.8	100.0
	9.00	3	1.3	MISSING	
	TOTAL	198	100.0	100.0	

Valid Cases 195 Missing Cases 3

GENDER GENDER OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MALE	1.00	92	46.7	46.7	46.7
FEMALE	2.00	105	53.3	53.3	100.0
	TOTAL	198	100.0	100.0	

Valid Cases 198 Missing Cases 0

EDUC EDUCATION OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
LESS THAN HIGH SCHL	1.00	9	4.3	4.3	4.3
SOME HIGH SCHOOL	2.00	12	6.1	6.1	10.5
HIGH SCHOOL GRADUATE	3.00	70	35.2	35.2	45.7
SOME TECHNICAL SCHOOL	4.00	8	3.8	3.8	49.5
TECHNICAL SCHOOL GRAD	5.00	15	7.7	7.7	57.1
SOME COLLEGE	6.00	48	24.2	24.2	81.4
COLLEGE GRADUATE	7.00	26	13.0	13.0	94.4
GRAD OR PROFESSIONAL DEGREE	8.00	11	5.6	5.6	100.0
		-----	-----	-----	
	TOTAL	198	100.0	100.0	

Valid Cases 198 Missing Cases 0

WKSTATUS WORK STATUS OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
WORKED FULL TIME	1.00	92	46.4	46.7	46.7
WORKED PART TIME	2.00	32	16.1	16.2	62.8
UNEMPLOYED	3.00	24	12.2	12.3	75.1
STUDENT	4.00	6	2.8	2.8	77.9
RETIRED	5.00	31	15.6	15.6	93.6
HOMEMAKER	6.00	13	6.4	6.4	100.0
	9.00	1	.5	MISSING	
		-----	-----	-----	
	TOTAL	198	100.0	100.0	

Valid Cases 197 Missing Cases 1

OCCGRP OCCUPATIONAL WORK GROUP OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MANAGE, PROF	1.00	23	11.7	18.8	18.8
TECH, SALES, ADMINISTRATOR	2.00	43	21.9	35.1	53.9
SERVICE	3.00	29	14.5	23.3	77.1
FARM, FISH, FOREST	4.00	3	1.5	2.4	79.6
CRAFT, REPAIR	5.00	14	6.9	11.0	90.6
OPERATIVES, LABORERS	6.00	12	5.9	9.4	100.0
	9.00	74	37.5	MISSING	
		-----	-----	-----	
	TOTAL	198	100.0	100.0	

Valid Cases 124 Missing Cases 74

MARSTAT MARITAL STATUS OF RESPONDENT

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MARRIED	1.00	130	65.6	65.6	65.6
SINGLE	2.00	45	22.7	22.7	88.3
DIVORCED	3.00	11	5.4	5.4	93.6
WIDOWED	5.00	13	6.4	6.4	100.0
		-----	-----	-----	
	TOTAL	198	100.0	100.0	

Valid Cases 198 Missing Cases 0

HHCMP HOUSEHOLD COMPOSITION

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MARRIED, KIDS	1.00	58	29.3	29.3	29.3
MARRIED, NO KIDS	2.00	72	36.2	36.2	65.6
SINGLE PARENT	3.00	20	9.9	9.9	75.5
SINGLE, NO KIDS	4.00	48	24.5	24.5	100.0
		-----	-----	-----	
	TOTAL	198	100.0	100.0	

Valid Cases 198 Missing Cases 0

HHSIZE HOUSEHOLD SIZE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
ONE PERSON	1.00	17	8.7	8.7	8.7
TWO PEOPLE	2.00	76	38.3	38.6	47.3
3 OR 4 PEOPLE	3.00	87	43.9	44.2	91.5
5 OR MORE PEOPLE	4.00	17	8.4	8.5	100.0
	9.00	2	.8	MISSING	
		-----	-----	-----	
	TOTAL	198	100.0	100.0	

Valid Cases 196 Missing Cases 2

NADULTS NUMBER OF ADULTS IN HOUSEHOLD

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	1.00	23	11.5	11.5	11.5
	2.00	130	65.8	65.8	77.3
	3.00	36	18.4	18.4	95.7
4+ ADULTS	4.00	9	4.3	4.3	100.0
		-----	-----	-----	
	TOTAL	198	100.0	100.0	

Valid Cases 198 Missing Cases 0

NKIDS NUMBER OF CHILDREN IN HOUSEHOLD

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	0.0	120	60.7	60.7	60.7
	1.00	32	16.3	16.3	77.0
	2.00	33	16.6	16.6	93.6
	3.00	10	4.8	4.8	98.5
	5.00	3	1.5	1.5	100.0
		-----	-----	-----	
	TOTAL	198	100.0	100.0	

Valid Cases 198 Missing Cases 0

INCOME HOUSEHOLD INCOME

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
UNDER 5,000	5.00	10	5.1	5.8	5.8
5 TO 10,000	10.00	12	5.9	6.7	12.5
10 TO 15,000	15.00	27	13.8	15.7	28.1
15 TO 20,000	20.00	24	12.2	13.9	42.0
20 TO 25,000	25.00	13	6.4	7.2	49.3
25 TO 30,000	30.00	21	10.7	12.2	61.4
30 TO 35,000	35.00	17	8.7	9.9	71.3
35 TO 40,000	40.00	17	8.7	9.9	81.2
40 TO 50,000	50.00	15	7.7	8.7	89.9
50 TO 60,000	60.00	7	3.3	3.8	93.6
MORE THAN 60,000	61.00	11	5.6	6.4	100.0
	99.00	24	12.0	MISSING	
		-----	-----	-----	
	TOTAL	198	100.0	100.0	

Valid Cases 174 Missing Cases 24

HHWKSTAT HOUSEHOLD WORK STATUS

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
WORKED FULL TIME	1.00	65	32.7	72.3	72.3
WORKED PART TIME	2.00	1	.5	1.1	73.4
UNEMPLOYED	3.00	12	5.9	13.0	86.4
STUDENT	4.00	1	.5	1.1	87.6
RETIRED	5.00	11	5.6	12.4	100.0
	9.00	108	54.8	MISSING	
		-----	-----	-----	
	TOTAL	198	100.0	100.0	

Valid Cases 89 Missing Cases 108

HHOCCGRP HOUSEHOLD OCCUPATIONAL WORK GROUP

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
MANAGE, PROF	1.00	29	14.8	22.5	22.5
TECH, SALES, ADMINISTR	2.00	26	13.0	19.8	42.2
SERVICE	3.00	19	9.7	14.7	57.0
FARM, FISH, FOREST	4.00	5	2.6	3.9	60.9
CRAFT, REPAIR	5.00	24	12.2	18.6	79.5
OPERATIVES, LABORERS	6.00	27	13.5	20.5	100.0
	9.00	68	34.2	MISSING	
		-----	-----	-----	
	TOTAL	198	100.0	100.0	

Valid Cases 130 Missing Cases 68

COUNTY COUNTY OF RESIDENCE

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
AITKIN	1.00	8	3.8	3.8	3.8
CARLTON	9.00	19	9.7	9.7	13.5
COOK	16.00	3	1.3	1.3	14.8
ITASCA	31.00	26	13.0	13.0	27.8
KOOCHICHING	36.00	11	5.6	5.6	33.4
LAKE	38.00	7	3.6	3.6	37.0
ST. LOUIS	69.00	125	63.0	63.0	100.0
		-----	-----	-----	
	TOTAL	198	100.0	100.0	

Valid Cases 198 Missing Cases 0

DDREGION DEVELOPMENT DISTRICT REGION

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
DISTRICT 3 .	3.00	198	100.0	100.0	100.0
		-----	-----	-----	
	TOTAL	198	100.0	100.0	
Valid Cases	198	Missing Cases	0		

WGHT CASE-WEIGHTING FACTOR

Value Label	Value	Frequency	Percent	Valid Percent	Cum Percent
	.50	23	11.5	11.5	11.5
	1.01	130	65.8	65.8	77.3
	1.51	36	18.4	18.4	95.7
	2.02	6	3.1	3.1	98.7
	2.52	3	1.3	1.3	100.0
		-----	-----	-----	
	TOTAL	198	100.0	100.0	
Valid Cases	198	Missing Cases	0		