

THE 2009 ALBERTA SURVEY
SAMPLING REPORT

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INTRODUCTION

The 2009 Alberta Survey (AS) is the 20th annual provincial survey administered by the Population Research Laboratory (PRL). This omnibus survey of households in the province of Alberta continues to enable academic researchers, government departments, and non-profit organizations to explore a wide range of research topics in a structured research framework and environment. Sponsors' research questions are asked together with demographic questions in a telephone interview of Alberta households.

This report describes the sampling design, data collection procedures, estimated sampling error and the weighting used in the 2009 Alberta Survey.

SAMPLING DESIGN

Main Features of Design:

- a. Province of Alberta was delineated into three areas for telephone interviewing:
 - (1) Edmonton Metropolitan Area
 - (2) Calgary Metropolitan Area
 - (3) Remainder of the Province (Other Alberta).
- b. Two-stage selection process:
 - (1) Selection of households.
 - (2) Selection of respondent within each household.

A minimum sample size of 400 or more for each of the three areas of the province was instituted.

The target population designated for telephone interviewing was all persons 18 years of age or older who, at the time of the survey, were living in a dwelling unit in Alberta that could be contacted by direct dialling. From this population, three samples were drawn to cover Alberta: Edmonton Metropolitan Area, Calgary Metropolitan Area, and the rest of the province.

A Random-Digit Dialling (RDD) approach was used to ensure that respondents had an equal chance to be contacted whether or not their household was listed in a telephone directory. The PRL has developed a database of five-digit telephone banks (e.g. 403/780-xxx-xx) covering all of Alberta. The 2009 Alberta Survey sample was generated from this provincial database by using a computer program to select, with replacement, a simple random sample of banks for each area and appending a random number between 00 and 99 to each number selected. Duplicate telephone numbers generated were purged from the computer list. Within the household, one eligible person was selected as the respondent.

A respondent within each household was selected on the basis of gender using the following selection guidelines to ensure an equal selection of male and female participants.¹

- a. He/she must be 18 years of age or older.
- b. If an adult male answers the phone and is willing to be interviewed, he is the respondent.
- c. If an adult female answers the phone and there is an adult male present who is willing to be interviewed, interview the male. If the male is not willing to be interviewed, and the female is willing, interview the female.
- d. If an adult female answers the phone and there is no adult male present, choose her as the respondent.
- e. If the quota for females is full and a female answers the phone, provided the household has an eligible male, make an appointment to interview the male.

¹Past surveys indicate that 60% of the time, the first household contact is female. The respondent selection process works best when calls are made in the evenings and on weekends. Some daytime interviewing shifts were also scheduled during weekdays to eliminate non-eligible telephone numbers (e.g. businesses) as well as interview eligible respondents.

Table 1 shows the final breakdown of the telephone samples by gender of the respondent.

<p style="text-align: center;">TABLE 1 UNWEIGHTED SAMPLE SIZES BY AREA AND GENDER 2009 Alberta Survey</p>								
	Edmonton Metropolitan Area	%	Calgary Metropolitan Area	%	Other Alberta	%	Total	%
Male	201	49.9	200	49.6	202	49.9	603	49.8
Female	202	50.1	203	50.4	203	50.1	608	50.2
Total	403	100.0	403	100.0	405	100.0	1211	100.0

THE SURVEY INSTRUMENT

The survey instrument consisted of the following components: (1) a standardized introduction; (2) questions that reflected the specific research interests of the University researchers and outside agencies participating in the study; and (3) demographic questions.² The demographic section was replicated from previous Alberta Survey questionnaires. The questionnaire was pre-tested by trained interviewers on a total of 20 households throughout the province: Edmonton=5, Calgary=5, other Alberta=10. The sponsors reviewed interviewer comments for potential sources of non-sampling errors³ and pre-test frequency distributions before modifications were made to the main 2009 Alberta Survey questionnaire. All questions and survey protocols were reviewed and approved by the Arts, Science and Law Research Ethics Board (ASL REB) before administration to the general public. The mean length of the interview in the 2009 survey was 27 minutes.

²See Appendix A for the subject areas included in the survey instrument.

³ Examples include confusing wording, inadequate response categories, question order effect, etc.

DATA COLLECTION

The 2009 Alberta Survey was administered through the 20-station CATI (Computer-Assisted Telephone Interviewing)⁴ system installed on a local area network at the PRL. This system facilitates the exchange of information among interviewing PC (Personal Computer) stations and supervisor stations linked using a file and database server during the data collection period. Supervisors monitor call dispositions, field edit, validate data and generate progress reports.

Following the pre-test, the electronic questionnaire was modified for the main phase of the data collection. The sample database was also loaded into the CATI system, which allocated telephone numbers to the interviewing stations. The question text and instructions were presented on the computer screen to the interviewer who asked the questions to the respondent over the telephone and then entered the given responses into the computer. CATI features, such as the automatic routing of questions and built-in checks for inconsistencies and out-of-range codes, eliminated potential field editing. Since the interviewers keyed in the responses directly into the computers, continual monitoring of the closed-ended responses was possible. Ten percent of the respondents were randomly selected and re-contacted by the telephone supervisors for interviewing validation.

At the end of the interviewing period, verbatim responses were coded into numeric responses with the coding frames that were either developed by the PRL in previous years or provided by the sponsor. The open-ended codes were then merged with the main SPSS data file for additional cleaning, labelling and subsequent weighting.

The interviewing began on April 29, 2009 and was completed on June 18, 2009. All of the data collection was conducted from the Population Research Laboratory at the University of Alberta. Interviews were conducted between the hours of 9:00 a.m. to 2:00 p.m. and 4:00 p.m. to 9:00 p.m., Mondays to Fridays, 10:00 a.m. to 4:00 p.m. Saturdays, and 2:00 p.m. to 8:00 p.m.

⁴The Ci3 Wincati System is a PC-Windows based product of Sawtooth Software, Northbrook, Illinois.

Sundays. If the interviewers were unsuccessful in establishing contact on their first call, a minimum of 10 call-back attempts were made before declaring a residential telephone number as "no contact." Upon making contact, interviewers identified themselves, verified the telephone number, and then asked the screening questions for selecting the respondent.

Before administering the questionnaire, the interviewer informed the respondents that their participation was entirely voluntary, their responses would be kept completely confidential, that they could terminate the interview at any time, and that the information was being collected in conformity with the Alberta Freedom of Information and Protection of Privacy Act.⁵

Table 2 displays the breakdown of call dispositions of the sample by the three sample areas: Edmonton Metropolitan, Calgary Metropolitan and Other Alberta. The number and percentage of the phone numbers in the sample database are provided. The top half of the table shows the breakdown of eligible and ineligible phone numbers. The bottom half of the table provides a corrected sample breakdown of the call dispositions based on the eligible numbers in the sample database. These dispositions are used in calculating the response rates.

Prior to calling households, the database telephone numbers were pre-dialled for ineligible telephone numbers, such as not in service numbers or business/fax numbers. This procedure decreased the screening time needed by the interviewers dialling households as there were 22% fewer 'not in service' numbers reached compared to 2006.

⁵See Appendix B for the telephone introduction used.

TABLE 2
BREAKDOWN OF DISPOSITIONS OF THE 2009 ALBERTA SURVEY SAMPLES
Edmonton (EDM), Calgary (CAL), and Other Alberta (AB)

Samples as Drawn	EDM	CAL	OTHER AB	TOTAL	EDM %	CAL %	OTHER AB %	TOTAL %
	3475	3814	3554	10843	100	100	100	100
DEDUCT								
Non-Residential/Ineligible	842	860	828	2530	24.2	22.5	23.3	23.3
No Contact- Estimated Ineligible	108	483	186	709	3.8	12.7	5.2	6.5
Not in Service	113	117	140	370	3.3	3.1	3.9	3.4
Total Ineligible Numbers	1063	1461	1154	3609	31.3	38.3	32.5	33.3
CORRECTED SAMPLE BREAKDOWN- Eligible Numbers								
	1994	2549	2400	7234	57.4	66.8	67.5	66.7
Completed Interviews	403	403	405	1211	20.2	15.8	16.9	16.8
Incomplete Interviews	7	9	5	21	0.4	0.4	0.2	0.3
Refusals	951	1061	945	2956	47.7	41.6	39.4	40.9
Language Problems	48	64	13	125	2.4	2.5	1.1	1.7
Not Available	362	377	591	1330	18.2	14.8	24.6	18.4
No Contact- estimated eligible	223	630	440	1583	11.8	24.7	18.3	21.9
Total Eligible Numbers	1994	2549	2400	7234	100.0	100.0	100.0	100.0

The *response rates* are calculated percentages representing the number of people who participated in the survey divided by the number selected in the eligible sample. Two methods of calculation were used to determine the response rates for this study. In the first method, the numerator is the number of completed interviews and the denominator includes completed interviews, incomplete interviews, refusals, and language problems. Using this method of calculation the overall response rate is 28.1 %.

Response Rate -

Method 1:

$$\frac{\text{completed interviews}}{\text{completed} + \text{incomplete} + \text{refusals} + \text{language problems}}$$

$$= \frac{1211}{1211 + 21 + 2956 + 125}$$

$$= \mathbf{28.1\%}$$

The second method of calculation incorporates additional dispositions in the denominator and results in a lower overall response rate. In this method, the numerator is the number of completed interviews and the denominator consists of completes, incompletes, refusals, language problems, not available (e.g. call-backs, respondent will call the PRL, communication problems, family crisis) and no contacts estimated as eligible.⁶ Using this method, the overall response rate for the 2009 Alberta Survey is 16.7%.

Response Rate -

Method 2:

$$\frac{\text{completed interviews}}{\text{completed} + \text{incomplete} + \text{refusals} + \text{language problems} + \text{not available} + \text{no contacts}}$$

$$= \frac{1211}{1211 + 21 + 2956 + 125 + 1330 + 1583}$$

$$= \mathbf{16.7\%}$$

Response rates for general household surveys have been on the decline in recent years, as respondents in urban areas are increasingly subject to telephone solicitation for fundraising, market research, or sales. As a result, householders are reluctant to participate in telephone surveys. A perceived barrier to contacting respondents is householder's increased use of the call display option to screen telephone calls.

⁶ Numbers that were called 10+ times but no contact was made.

CALCULATION OF WEIGHTS

The sample sizes of completed interviews obtained for metropolitan Edmonton, metropolitan Calgary, and Other Alberta are not always proportional to the current Alberta population they represent. In combining the samples for Provincial sample estimates, weighting is advised.

**TABLE 3
CALCULATION OF WEIGHTS
2009 Alberta Survey**

Sample Area	2006 Population 18+ Years	Percentage of Population	Sample size	Percentage of Sample	Weighting Factor	Weighted Sample
Edmonton Metropolitan	803,605	31.95%	403	33.28%	0.960324	387
Calgary Metropolitan	836,065	33.24%	403	33.28%	0.999098	403
Other Alberta	875,500	34.81%	405	33.44%	1.040968	421
TOTAL	2,515,170	100%	1211	100%		1211

Age (123) and Sex (3)
Canadian Census 2006 Catalogue 97-551-x2006-009
Acknowledgements: Chuck Humphrey, Data Librarian, University of Alberta

THE DATA

The data were tabulated and cleaned using the SPSS for Windows⁷ statistical package. The data cleaning process included wildcode, discrepant value⁸, and consistency checks. The resultant data set contains 1211 cases. An SPSS system file with a dictionary was created for end users to analyze the data. Public access to the data file will be available after the end of February, 2010. Access to previous Edmonton Area and Alberta Survey data sets can be obtained by contacting the Data Library, in the Rutherford Humanities and Social Sciences Library, at the University of Alberta.

⁷SPSS is a product of SPSS Inc., Chicago, Illinois.

⁸Wildcodes and discrepant values refer to unexpected responses (eg. outside response set or incompatible with other responses).

DEMOGRAPHIC PROFILE

Table 4 presents some of the major demographic characteristics of the respondents in the three sample areas.

TABLE 4 DEMOGRAPHIC PROFILE OF RESPONDENTS 2009 Alberta Survey			
	Edmonton % (Unweighted)	Calgary % (Unweighted)	Other AB % (Unweighted)
RELIGION			
Protestant	32.0	30.8	33.7
Roman Catholic and Other Catholic	22.5	23.9	25.1
Other	18.9	19.8	19.7
No Religion	26.6	25.5	21.5
EDUCATION (Highest Level Completed)			
Less than High School	7.2	3.5	17.4
High School	15.9	13.0	20.1
Post-Secondary (University, College, Technical Institute)	76.9	83.5	62.5
EMPLOYMENT STATUS			
Full-Time	51.1	53.7	49.3
Part-time (no Full-time Job) ⁹	11.7	17.2	17.7
Unemployed and Looking for Work	6.2	6.2	5.5
Not in Labour Force and Not Looking for Work	7.1	4.2	7.0
Retired	23.9	18.7	20.5
Median Age (Years)	49	47	48
Median Household Income Range (\$)	\$80,000- \$84,999	\$95,000- \$99,999	\$70,000- \$75,999

⁹ Statistics Canada defines part-time employment as less than 30 hours per week.

ESTIMATED SAMPLING ERROR

The sampling error is a measure of the validity of the descriptive statistics that are observed in a sample. The estimated sampling error, at the 95% confidence level, for an area sample of 1211 households assuming a 50/50 binomial percentage distribution is plus or minus 2.8 percentage points. Survey estimates for the sub-sample of 400 are estimated to be within plus or minus 5.0 percentage points, at the 95% confidence level.

APPENDICES

APPENDIX A

SUBJECT AREAS INCLUDED IN THE 2009 ALBERTA SURVEY

Socio-demographic and background characteristics of the sample:

Household composition, age, gender, marital status, highest level of education, household income, individual income, religion, ethnicity, country of birth, employment status, occupation, industry, home ownership, sample area, political party support, and perceptions of personal safety.

Substantive Topics:

1. Population Health
2. AADAC Performance Measures
3. Financial Literacy; Awareness of Ministry of Alberta Seniors and Community Supports
4. Health Ethics and Disabilities
5. Neighbourhood Disorder and Social Control
6. Children in the Labour Force
7. Impaired Driving

APPENDIX B

TELEPHONE INTRODUCTION 2009

INTRO1

Hello, my name is _____ and I'm calling (long distance) from the Population Research Laboratory at the University of Alberta.

I have dialed XXX-XXXX, is that correct? Your telephone number was selected at random by computer.

[PRESS '1' TO CONTINUE]

INTRO2

The Lab is currently conducting an important study of public opinion on a variety of topics. The survey information will assist with decision-making in public policies and to support the work of university researchers and educators.

(OPTIONAL READ: The study sponsors are three departments from the University of Alberta, the University of Calgary, Alberta Federation of Labour, the Population Research Laboratory and two government clients.)

[PRESS '1' TO CONTINUE]

NUMWOM

To ensure that we speak to a good cross-section of people in Alberta, can you please tell me the following:

How many women age 18 or over live at this number?

NUMBER OF WOMEN _____

99 REFUSED

NUMMEN

...and how many men aged 18 and over live at this number?

NUMBER OF MEN _____

99 REFUSED

[INTERVIEWER INSTRUCTION: IF NO ONE 18 YEARS OR OLDER LIVES IN THE HOUSEHOLD, TERMINATE THE INTERVIEW. SELECT A HOUSEHOLD RESPONDENT ACCORDING TO THE STANDARDIZED RESPONDENT SELECTION GUIDELINES.]

(OPTIONAL READ: “We don’t always speak to the person who answers the phone. If possible, I would like to speak with (the/one of the) male(s) in the household, as males are often a more difficult quota to fill. Would it be possible to speak with (the/one of the) males(s) of the household?” REPEAT INTRO IF NECESSARY.)

VERIFY18

And just to confirm, are you 18 years of age or older?

- 1 - Yes, 18 years or older (GO TO **TER18**)
- 2 - No, Underage. (ASK TO SPEAK TO ADULT MEMBER OF HOUSEHOLD)

INTRO3

I would like to interview you and I'm hoping that now is a good time for you. The interview will take approximately 25-30 minutes, or less depending on which questions apply to you.

Your opinions will provide valuable information for researchers at the University of Alberta.

May we proceed with the interview now?

- 1 YES [PRESS '1' TO GO TO NEXT SCREEN]
- 2 NO [SCHEDULE CALLBACK OR TERMINATE APPROPRIATELY]

FOIPP

Before we start, I would like to assure you that your participation in this interview is completely voluntary. If there are any questions you don't wish to answer, please point these out to me and we'll go on to the next question. You, of course, have the right to end this phone call at any time. The information you provide will be used only for the indicated purposes in conformity with the Alberta Freedom of Information and Protection of Privacy (FOIPP) Act.

If you have any questions about this study, you can call Erin Stepney, Research Coordinator at the Population Research Lab (collect) at (780) 492-4659, ext. 225.

[PRESS '1' TO CONTINUE]