



EKOS' OBSERVATIONS ON MRIA STUDY - CANADIAN ONLINE  
PANELS: SIMILAR OR DIFFERENT?

Study Presented at MRIA Net Gain 4.0 Conference  
Toronto, January 27, 2010

## BOTTOM LINE

This new research extends the evolving testing of online panels in the Canadian context. While not definitive, it does provide very useful guidance for advancing our knowledge on the crucial issue of the efficacy of online research.

EKOS Research declares upfront that we have a conflict of interest. Several years ago we believed that the Internet was going to displace the telephone as the main method for doing survey research. This belief was accompanied by an equally strong conclusion that the real value and power of online surveying would only be realized when we found a method to apply random, probability sampling and inferential statistical tools to the Internet data collection process. Over the past several years, we have attempted to create a random online panel, while watching the non-random, opt-in panels capture virtually all of the market share for online research. After a number of methodological and pragmatic dead ends, we now have a fully functioning online probability-based panel. So we were more than a little curious to see how Probit, our online panel, stacked up against the opt-in panels in this study.

This current study has shown some things with stark clarity. Other comparative evaluations have been less clear in their conclusions but we are extremely pleased with the evidence which seems to reinforce the emerging literature on the relative performance of probability-based versus non-probability based or opt-in panels (see Appendix 1).

First, the incontrovertible. All of the opt-in online panels feature a dramatically higher incidence of professional respondents who conduct a surprisingly large number of online surveys in search of the modest financial incentives offered. Certainly the general public, either as citizens or consumers, bear little resemblance to these fairly downstream hyper active users of the Internet, who in addition to doing surveys at least weekly (and for a large number daily) and participating in a high number of panels reveal an unusual propensity to video games, coupon cutting, and instant messaging, and exhibit unrepresentatively low levels of income. These characteristics are not evident in the one probability sample based panel in the study (Panel # 148 or Probit), nor are they a representative feature of the general population.

What this means, and this is consistent with other research, is that a very sizeable portion of the survey output of opt-in panels is being shouldered by a very narrow and atypical portion of Internet users.

## PROBIT METHODOLOGY

There are two key methodological features of Probit that distinguish it from opt-in online panels:

- Respondents are recruited randomly by telephone (both landline and cell phone) from the general population
- Probit is administered both online and by telephone to ensure coverage of the entire population, online and offline.

While effective panel management is critical to generating high quality survey data, the recruitment process is primary. Outstanding panel management processes and rigorous quality procedures in later stages of the survey cannot reverse the range of negative effects created by the opt-in sampling process to intake panellists.

Probit starts from the fundamental principles that sampling must be done using a random probability methodology and that all elements of the population need to have a chance of being selected in the sample. After several years of internal R&D, EKOS settled on using a two-stage, IVR-live interviewer recruitment process as the most cost-effective method of generating a random probability panel.

At the first stage of recruitment, a sample is randomly generated from a dual landline-cell phone sample frame. Sample is loaded into our IVR (Interactive Voice Response) system. The IVR system makes an initial call and three call backs, spread over a number of days and times, before cases are retired from the sample.

IVR surveying is based on a recorded script questionnaire, maintaining complete consistency across respondents, with the language of the interview selected by the respondent. For panel recruitment, the IVR questionnaire typically contains two or three foot-in-the-door questions (e.g., vote intention). Respondents answer the recorded questions by pressing the appropriate buttons on their telephone keypad and the system records the responses into a survey database.

Once respondents have completed the foot-in-the-door questions, they are asked if they would like to participate in additional surveys with EKOS. If they indicate a willingness to do so, they move to the next stage of the recruitment process: live interviewer confirmation.

At the second stage of the recruitment process, a live interviewer contacts by telephone a respondent who indicated an interest in participating in additional surveys. The interviewer introduces the respondent to Probit's incentive scheme, records basic demographic data (gender, age, postal code) and provides them with a choice of completing surveys by telephone or over the Internet. Email addresses are confirmed "in real time" during the conversation for those indicating a preference for follow up online surveying. Approximately 85 per cent of respondents select the online mode.

Probit uses a unique incentive scheme designed to help discourage professional respondents and maintain regular contact with panel members. Rather than reward/loyalty points or survey dollars, panellists accrue charity dollars. Once a panellist has earned 20 charity dollars, they are contacted by a live interviewer. The live interviewer informs them of their status and provides them with an option to donate the dollars to a charity of their choice. In addition to the charity dollars, panellists are entered into a monthly draw for a cash prize of \$1,000 for each completed survey.

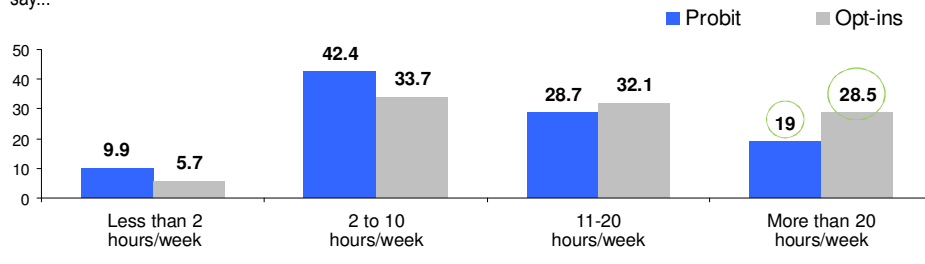
Probit achieves high response rates once respondents join the panel, approximately 45 per cent on average. Additionally, 86 per cent of Probit panellist are exclusive to Probit (i.e., they claim to not belong to any other panel).

## MEASURES OF QUALITY: PROBIT VS. OPT-IN PANELS

The measures of quality contained in the MRIA study clearly demonstrate the advantages of a probabilistic recruiting methodology versus opt-in or convenience sampling. By virtually any of the quality indicators measured, Probit performs significantly better than the opt-in panels.

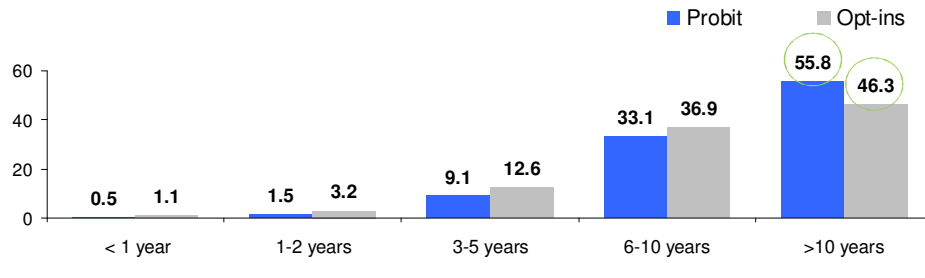
### Q.8 – Number of Hours Spent Online in an Average Week

Not including time at your job or office, about how many hours do you spend online in an average WEEK? Would you say...



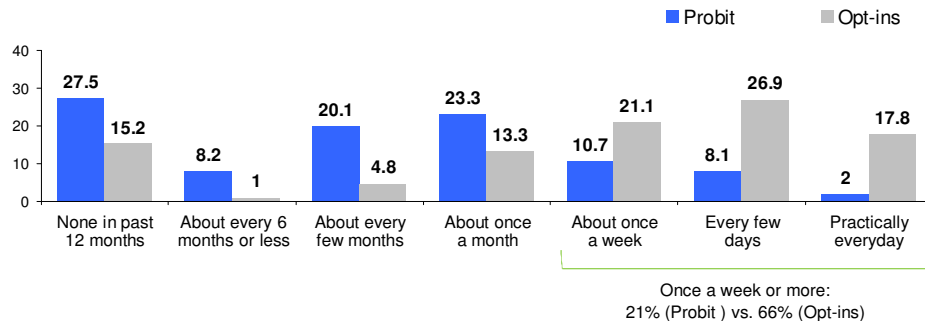
### Q.9 – Number of Years Using the Internet

How long have you been using the Internet?



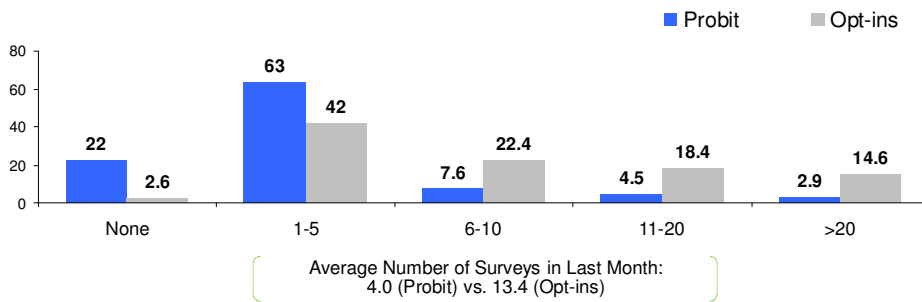
### Q.13 – Frequency of Participating in Online Panels

On average, how often do you participate in online surveys (6 or more questions)?



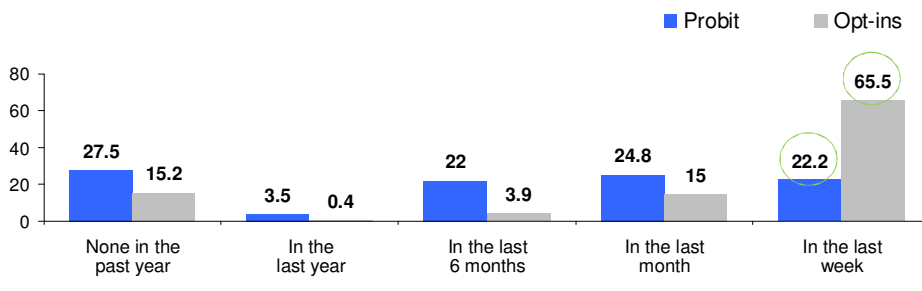
**Q.14 – Number of Online Surveys Taken in Last Month**

Approximately how many online surveys, (6 or more questions), have you taken in the last month?



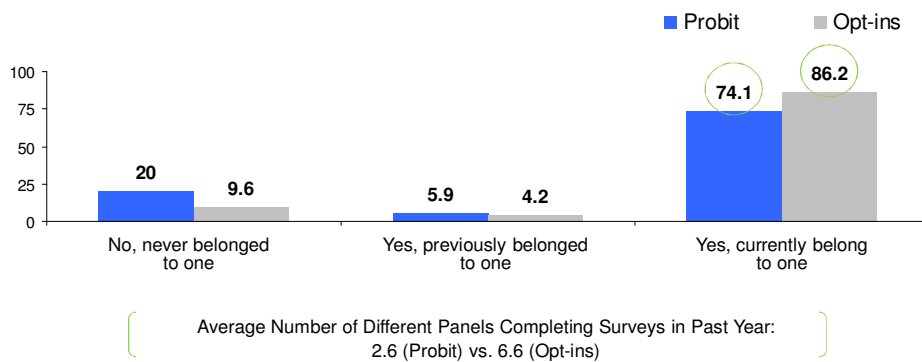
**Q.15 – Last Time Participated in Online Survey**

Aside from today, when was the last time you took an online survey (6 or more questions)?



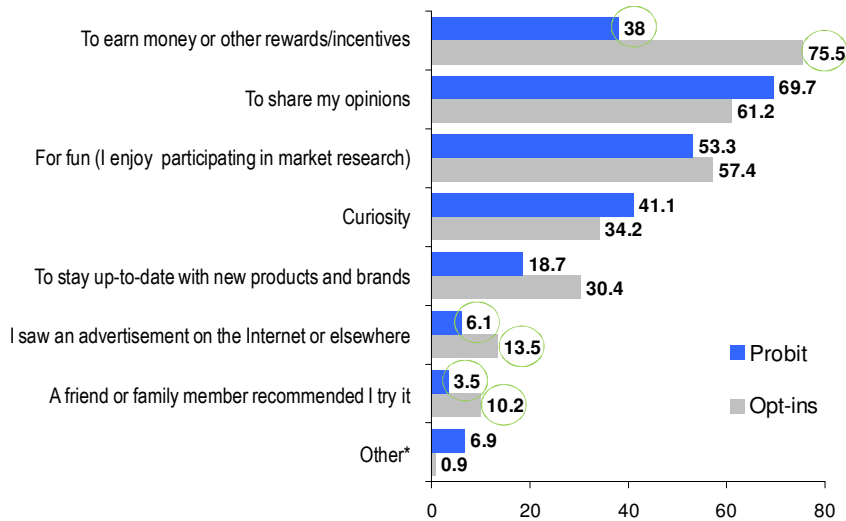
**Q.16 – Past and Current Membership into Online Research Panel**

Do you currently belong or have you ever belonged to an online survey/research panel?



Q.17 – Reasons for Joining Online Research Panel

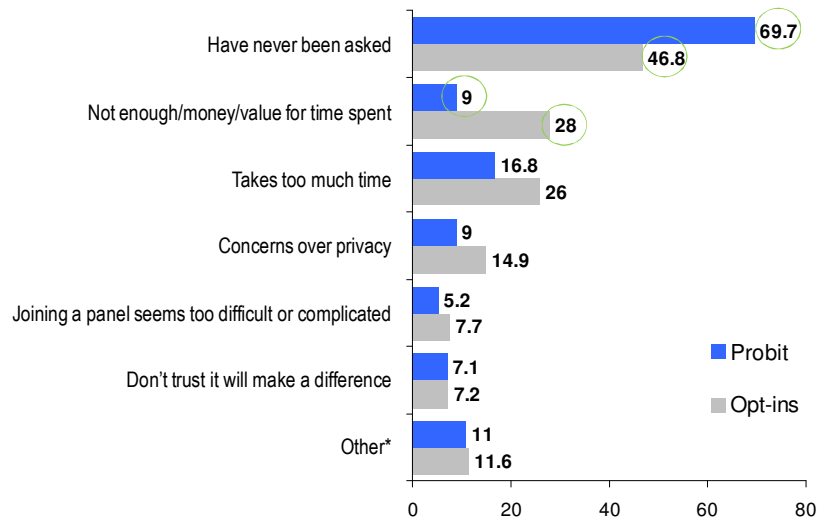
Which of the following, if any, are reasons you joined a survey/research panel?



\*Other and 'none of the above' categories combined

Q.18 – Reasons for Not Joining Online Research Panel

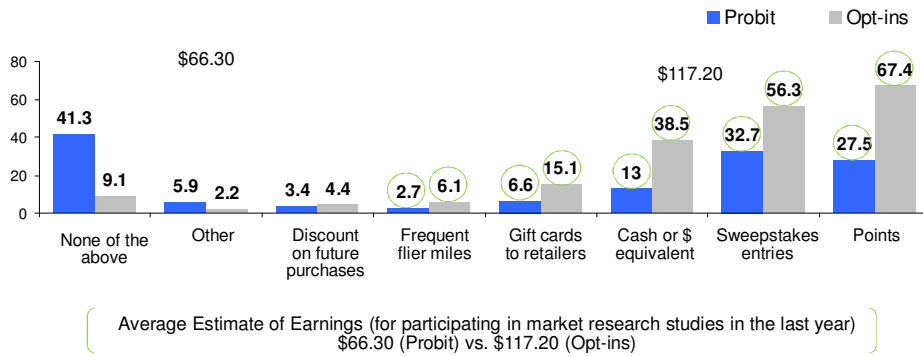
Which of the following, if any, are reasons you have not joined a survey/research panel?



\*Other and 'none of the above' categories combined

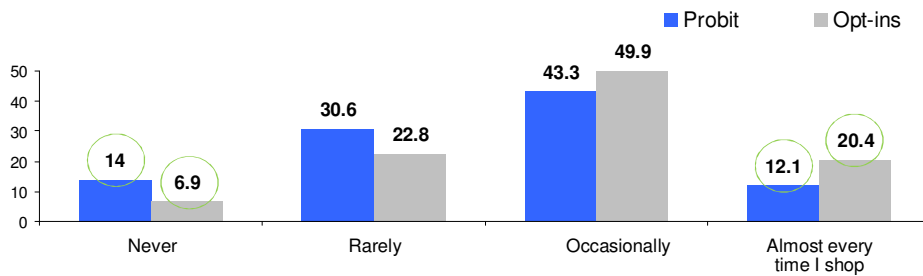
Q.20 – Rewards/Incentives Received for Participation

Which of the following, if any, have you received for participating in market research studies in the last 12 months?



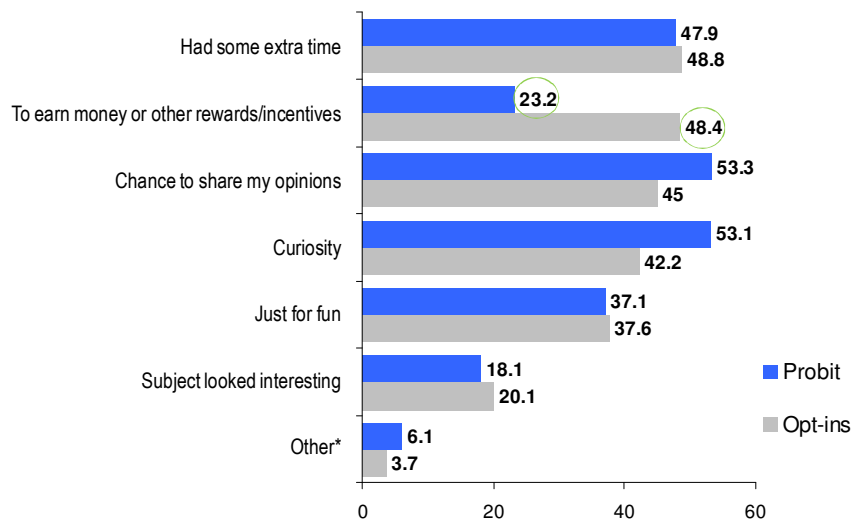
Q.28 – Frequency of Using Coupons

On average, how often do you use coupons when you shop?

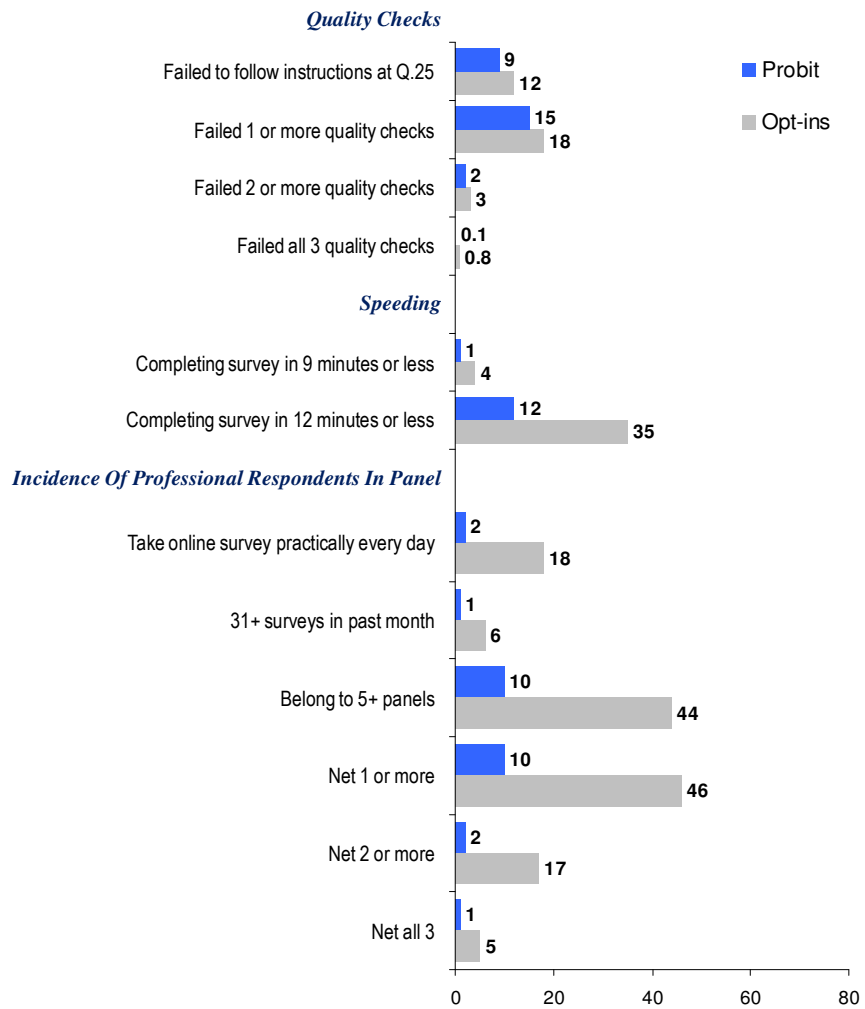


Q.23 – Reasons for Taking This Survey

You may have mentioned some of these in the last question, but which, if any, of the following are reasons you decided to take this survey today?



\*'Other' and 'none of the above' categories combined



Average time to complete survey (minutes) = 23.2 (Probit) vs. 20.8 minutes (Opt-ins)

---



# EXTERNAL BENCHMARKS

## INCOME

External benchmarks suggest that Probit is generally representative of Canadian internet users by income. Conversely, opt-in panels skew lower income and severely under-represent high income households. This result is consistent with the study findings discussed above showing opt-in panellists exhibit a high propensity completing online surveys for modest financial incentives, much more so than Probit panellists.

**Table 1: Household Income (before taxes, excluding non-response)**

Categories	Probit	Opt-ins	Info Highway*	Canada Internet Use Survey*
\$49,999 and under	36.3	46.8	36.1	29.7
\$50,000 to \$99,999	35.7	39.2	39.9	39.7
\$100,000 and above	28.2	13.9	25.0	30.7

\*See Appendix 2 for description of studies

## EDUCATION

It is difficult to benchmark the study data on education against external benchmarks, as it was measured in the study in an unorthodox fashion. Question wording asks “educational status” rather than highest level of attainment, as per Statistics Canada. Additionally, the response categories differ from external benchmarks and are at times ambiguous.

Challenges in measurement aside, it is evident that Probit panellists skew higher across education categories relative to the general population of Internet users. While it is counter-intuitive that Probit panellists should be solidly representative by income but not as representative by education, we recognize this issue. Unlike professional respondents, however, this is a variable that is easily weighted by Statistics Canada data (i.e., the Canadian Internet User Survey).

## SMOKING

Reflecting the unrepresentatively low SES for the opt-in panels, external benchmarking also reveals an unusually high incidence of smokers among the opt in panel group in aggregate. As shown in the table below, Probit panellists show a similar incidence of smokers to the general population, whereas opt-in panellists show an unrepresentatively high incidence of smokers.

**Table 2: Smoking – Revised Categories**

Categories	Probit	Opt-ins	Canadian Tobacco Use Monitoring Survey*
Everyday or some days / daily or occasionally	20.1	28.5	18

\*See Appendix 2 for description of study

## PASSPORT

The study also shows a significant difference between Probit and the opt-ins on the incidence of holding a passport. The survey asked, “Do you hold a valid passport?” The only external benchmark for this is from Passport Canada. However, Passport Canada specifies a valid Canadian passport.

Given that the incidence of holding a passport among opt-in panellists is the same as the incidence of Canadian passports among the general population, this points to the unrepresentative nature of the opt-ins. This incidence should be significantly higher because: (a) it includes passports of any nationality, and: (b) the incidence of passports among internet users is surely higher than among the general population.

**Table 3: Passport**

Categories (per cent “yes”)	Probit	Opt-ins	Passport Demand Projections Survey*
Passport holders	72.7	60.4	61

\*See Appendix 2 for description of study

## Appendix 1

### **Bibliography of Articles, Papers, Blogs, etc. on On Line Research Quality As of January 27, 2010**

Crassweller et al	"Between Random Samples and Online Panels: Where Is the Next Lily Pad?", ESOMAR paper, 2008
Crassweller et al	"In Search of Readers: A Brave New World For Researchers, World Readership Research Symposium, March 2009
AAPOR	"An Evaluation of the Methodology of 2008 Pre-Election Primary Polls", April 2009
ARF	"Foundations of Quality Results – Preview", presented at the ARF Annual Conference by Robert Walker and Raymond Petit, NYC, April 2009
Gary Langer	"Survey Reporting Standards", Presentation to the Harvard Program on Survey Research, April 17, 2009
Yeager & Krosnick	"Comparing the Accuracy of RDD Telephone Surveys and Internet Surveys Conducted with Probability and Non-Probability Samples", August 2009
Jeffrey Henning	"Sample Quality of Online Panels: Putting Lipstick on the Piggy Bank", Pollster.com, September 4, 2009
Doug Rivers et al	"Second Thoughts About Internet Surveys", Pollster.com, September 6, 2009
Gary Langer	"More on the Problems of Opt-in Internet Surveys", Gary Langer, ABCNews.com, September 28, 2009
Humphrey Taylor	"Social Desirability Bias – How Accurate Were the Benchmarks", Pollster.com, October 27, 2009
Mark Blumenthal	"How Accurate Were the Benchmarks?", Pollster.com, December 17, 2010
Chang & Krosnick	"National Surveys Via RDD Telephone Interviewing Versus The Internet: Comparing Sample Representativeness and Response Quality", Public Opinion Quarterly, Winter 2009

## Appendix 2

### Methodology for External Sources

#### *Canadian Internet Use Survey (CIUS)*

The results of Statistics Canada 2007, Canadian Internet Use Survey (CIUS) are based on a telephone survey of 26,588 residents of Canada 16 years of age or older.

The CIUS was administered to a sub-sample of the individuals already selected for the Labour Force Survey (LFS). The response rate for this survey was 75.9%. The LFS uses a stratified, multi-stage cluster design employing probability sampling at all stages to select a representative sample of households from Canada's ten provinces, excluding persons living on Indian Reserves, full-time members of the Canadian Forces and inmates of institutions. The data collection period began on October 14, 2007 and was completed November 29, 2007. The coverage error of the Labour Force Survey, of which the CIUS is a sub-sample, is estimated at less than 2%. The exclusion of households in which no member is 16 years old or over is considered negligible. The coefficient of variation for the estimated proportion of Internet users (a key survey variable) is 0.55 percent.

For the purposes of the study, an Internet user is someone who used the Internet from any location for personal non-business reasons in the 12 months preceding the survey. Internet access from any location includes use from home, school, work, public library or other, and counts an individual only once, regardless of use from multiple locations.

For detailed methodology:

<http://www.statcan.gc.ca/cgi-bin/imdb/p2SV.pl?Function=getSurvey&SDDS=4432&lang=en&db=imdb&adm=8&dis=2#2>

#### *Rethinking Information Highway (RIH)*

The results are based on a telephone survey completed by EKOS Research with a stratified national random sample of 4,542 Canadians, aged 16 and over undertaken between October 12 and November 6, 2007. The findings were statistically weighted by age, gender and region to ensure that they are representative of the Canadian public aged 16 and over. In areas, the survey was designed to randomize questions in order to test differences in attitudes across various indicators as well as to minimize response burden. Correspondingly, some questions were given to a random half of the overall sample (i.e., approximately 2,250 Canadians). In other areas, some questions were given to a random quarter of the overall sample (i.e., approximately 1,125 Canadians). Findings from questions posed on Wave 1 full sample may be considered accurate within +/- 1.5 percentage points, 19 times out of 20. The margin of error half sample and quarter sample questions are +/- 2.1 and +/- 2.9, respectively.

For the purposes of the study, "Internet User" is defined by a series of screening questions:

In the past 3 months, have you used the Internet, either at home or elsewhere?

(if no) Have you ever used the Internet before?

How long have you been using the Internet?

### *Canadian Tobacco Use Monitoring Survey*

The results of the Canadian Tobacco Use Monitoring Survey are based on a telephone survey. Respondents included all persons 15 years of age and over living in Canada with the exception of residents of the Yukon, Northwest Territories and Nunavut, and full-time residents of institutions.

The sample design is a special two-phase stratified random sample of telephone numbers. The two-phase design is used in order to increase the representation in the sample of individuals belonging to the 15 to 19 and 20 to 24 age groups. In the first phase, households are selected using Random Digit Dialling. In the second phase, one or two individuals (or none) are selected based upon household composition. The CTUMS, Cycle 2 conducted from July to December 2008, collected data from 10,822 respondents.

For the microdata file, statistical weights were placed on each record to represent the number of sampled persons that the record represents. One weight was calculated for each household and a separate weight was calculated and provided on a different file, for each person.

### *Passport Demand Projections Survey*

The January 2008 Passport Demand Projections Survey consisted of telephone surveys with a nationally representative sample of 4,000 Canadians, 16 years of age and older), conducted between January 10 and January 31, 2008. A national sample of this size provides results accurate to within plus or minus 1.5 percentage points, in 19 out of 20 samples.

Two key regional population segments were over-sampled for the study. They include: residents of 3 border towns: St. Stephen, NB, Windsor, ON, and Surrey, B.C.; and those living in the top 8 Census Metropolitan Areas (CMAs) in Canada: Vancouver, Calgary, Edmonton, Winnipeg, Toronto, Ottawa, Montreal and Quebec City.

Data is weighted by age, gender and region to ensure that the findings were representative of the Canadian population 16 years of age and over.

With a sample size of 4,000, the results from the survey may be considered statistically accurate to within +/- 1.5 percentage points, 19 times out of 20.

### *Census Canada, 2006*