

IN SEARCH OF A NEW APPROACH TO MEASURE NEWSPAPER AUDIENCES IN CANADA: THE JOURNEY CONTINUES

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Introduction

NADbank, the tripartite industry organization responsible for the newspaper readership service in Canada, continues to explore opportunities for migrating its methodology to a web-based or hybrid survey approach. This interest is driven by many factors including the following:

- An increase in Canadians' access to and use of broadband internet;
- The proliferation of platforms and devices for internet access;
- Reduced sample coverage in traditional telephone readership surveys (e.g. exclusion of cellular telephone only households);
- Declining response rates to surveys of all types;
- Increased pressure to measure publishers' *brand footprint* for printed and web-based products (e.g., online versions of printed newspaper editions, websites and apps);
- Timing and cost considerations.

NADbank has long recognized the need to respond to changes in consumer behaviour and publishers' requirements. Using a variety of suppliers, it commissioned online panel tests over the past six years. The tests were designed to determine the extent to which web-based surveys could meet the needs of publishers while respecting NADbank's commitment to accurate and reliable readership and profile data. NADbank has not transitioned from its modified random digit dialling telephone survey (CATI) to an online data capture methodology because none of the tests conducted in the past has met enough of its requirements to warrant such a change.

More recently, NADbank initiated new testing recognizing the challenges of obtaining comprehensive, reliable and stable estimates of the readership behaviour and characteristics of the *general public*. The days when a single data collection approach could capture this information seem to be past. No single approach appears able to overcome issues of sample coverage, public resistance to cooperation, self-selecting respondents, changing technology, and affordable costs. The organization's goal, therefore, was to identify one or more data collection approaches that, singly or in combination, optimize the likelihood of generating credible estimates of newspaper organizations' readership and user profiles, at a cost affordable to the industry.

A new test was commissioned by NADbank in the late spring of 2011 and conducted by EKOS Research Associates Inc. (EKOS). It utilized an online panel whose members had been recruited offline via an interactive voice response (IVR) telephone survey using probability based sampling of both landline and cell phone-only households. The panel operates under the brand name Probit, developed by EKOS. The test was conducted during June and July, 2011 among approximately 1,800 panel members who resided in the Toronto Census Metropolitan Area (CMA).

Objective and Research Questions

The overall objective of the test was to determine whether a more rigorous panel recruitment methodology using an offline probability based sampling process (i.e., IVR) produces a representative sample of the population under study and, in turn, generates sound currency estimates for the Canadian daily newspaper industry. In determining whether the objective was met, consideration was given to the following research questions:

- Previous online panel tests commissioned by NADbank have generated demographic and behavioural profiles that were inconsistent with census information and/or historical NADbank readership profiles. The discrepancies have largely been attributed to the non-probabilistic nature of the samples (convenience, self-selecting recruitment procedures). To what extent, if any, does a panel recruitment method based on offline sampling utilizing an IVR technology¹ redress imbalances in demographic and behavioural profiles?

¹ See Methodology Appendix for details about IVR and the Probit panel.

- Take-up rates among IVR surveys are low.² Furthermore, after a survey invitation is sent to a random sample of recruited panellists, many fail to complete the questionnaire, creating a second level of non-response. To what extent does this incremental non-response generate biases that may impact the quality of estimates of demographic and readership characteristics?
- How representative of their general population group are respondents in traditionally hard-to-reach segments (e.g., youth affluent) when surveyed using a Probit panel with controlled broadcasts to take into account low response rates in these segments? Are these segments more representative of their cohorts than those included in studies relying on random probability sampling methods with no stratification or oversampling?
- Currently cellular telephone only households (cell-only) are excluded from NADbank's CATI survey but are included in the EKOS test. What is the impact on readership estimates and profiles of including the cell-only segment of the population?
- All respondents in this EKOS test are Internet users (online). Those in NADbank's telephone survey include those who do and do *not* use the Internet at home. To what extent does limiting the universe to Internet users impact estimates of readership and profiles?

Methodological Overview

The test utilized EKOS Research's Probit online panel, a survey platform that permits surveying panellists via online (Internet/web) or offline (telephone, mail) methods in order to provide full coverage of the study population. In this test NADbank elected to use only the online survey portion of EKOS's Probit panel.

Online panellists from the Probit pool were sent an initial survey invitation from EKOS, describing the purpose of the study and asking them to go to the EKOS website to complete the survey. In order to increase the response rate to the survey invitation, EKOS sent reminder emails to all panellists who had not responded within 5 to 8 days of receiving the invitation.

For hard-to-reach panellists including 18 to 34 year olds, and those who are not university educated, EKOS instituted a special follow-up procedure. These individuals were emailed up to two more reminders and called at least once by a "live" interviewer to encourage them to complete the online NADbank test questionnaire. All panellists completing the survey were provided with a \$2.00 donation to a charity and put into a draw for \$1,000.

The final step in EKOS' sampling process involved using a quota sampling procedure to "top up" the shortfall in young adults in the survey. This procedure involved screening Probit panellists by age, and terminating any sample point that did not include a person 18-34 in the household. While the underlying process of generating the RDD frame is probability sample based, the fact that "live" sample was terminated via a quota procedure technically renders that part of the sample (79 persons out of the test sample of 1,769) as a "convenience" or "purposive" sample.

The final in-tab sample that EKOS obtained was weighted by a number of variables to reflect the population distribution of the study. The weighting variables included: age, gender, education, geography (Toronto CMA 416 vs. 905 exchange), and day of week.

Altogether 10,274 panellists were sent an invitation from the total pool of 65,018 online-capable *Probit* panellists, generating 1,769 usable completions, or about 17% of the four per cent who joined the *Probit* panel during the initial telephone recruitment phase (see Note 2).

More details about EKOS' methodology are provided in the Methodological Appendix.

Key Findings

Capturing Cell-Only Torontonians

The EKOS test provides the opportunity to estimate readership within a sample that includes the increasing universe of persons who rely exclusively on cellular telephones (cell-only). Since the cell-only segment is systematically excluded from NADbank's current telephone survey, the opportunity to capture readership behaviour of this market segment is a key potential benefit of the Probit methodology and its panel composition.

² EKOS estimates the response rate to the initial telephone recruitment to be approximately four per cent. Source: *Interactive Voice Response: The Past, the Present, and Into the Future*, Presentation to: The MRIA Ottawa Chapter, January 21, 2011

The incidence of cell-only respondents in the EKOS test sample closely resembles the incidence estimated for all households in the Toronto CMA by Statistics Canada.³ Although direct profile comparisons cannot be made as the Statistics Canada data are household-based and represent Canada as a whole and EKOS' individual-based data are for the Toronto CMA, there are indications to suggest that the EKOS cell-only cohort resembles the national profile with respect to several key demographics:

- Approximately one-fifth of Statistics Canada's cell-only households live in one-person households; the same proportion of cell-only EKOS respondents live in one-person households;
- Almost one-quarter of Canada's cell-only households include at least one individual between the ages of 18 and 24 years. One-third of EKOS' cell-only Toronto CMA respondents are in this age group;
- Two-fifths of Canada's cell-only households have at least one individual between the ages of 25 and 34 years and the same proportion of EKOS' cell-only Toronto CMA respondents are in this age group;
- Compared to the national household population overall, rented dwellings are appreciably more characteristic of cell-only households (31% for *all* households; 68% of *cell-only* household). A similar predominance of renters is evident in EKOS' cell-only sample of individuals in Toronto: 40% are renters;
- Employment data are somewhat less consistent, possibly because the EKOS and Statistics Canada studies are not directly comparable. In 59% of cell-only households across Canada at least one household member is employed whereas 71% of the EKOS Toronto CMA cell-only cohort is either self-employed or employed by others.

In aggregate, these findings suggest that the EKOS test data are reasonably successful in representing a segment of Toronto's population that has been missing from NADbank's telephone survey.

Implications of Including Cell-Only Younger Respondents

Up to now, NADbank based its understanding of the youth market on 18 – 34 year olds who are reachable via landlines. EKOS findings suggest that such reliance is increasingly problematic since the cell-only component of the youth market is undoubtedly changing the segment's complexion overall. Inclusion of cell-only young people in the EKOS sample may not make a substantive difference at the aggregate or city-wide level but the extent to which they influence media behaviour *within* the younger market segment and for specific newspapers is noteworthy and examined (see Readership section for examples).⁴

Cell phone-only ownership is a growing phenomenon in Canada and not only among young adults. As the trend towards cell-only phone ownership continues, addressing this issue in NADbank's recruitment protocols becomes increasingly important.

Panel Participation

Panel participation rates vary from online panel company to company. A 2010 Market Research Intelligence Association (MRIA) study suggests that on average, 18% of panel respondents complete online surveys on at least a daily basis.⁵ Encouragingly, only two per cent of EKOS panel respondents in the current test claim to complete online surveys this frequently. Relative to the group of seven opt-in online panels in the MRIA study, the EKOS panel also has a lower incidence of panellists completing surveys on a weekly or monthly basis (see Table 1). While less prone to frequent survey participation than many panels recruited in other ways, 25% of the EKOS panellists in this test say they complete online surveys at least weekly and 58% say they do so at least monthly.

To boost the number of young people in the EKOS panel, an oversample was recruited by rebroadcasting the survey invitation to known panellists within the 18-34 age group. Because they had been recruited more recently to the EKOS panel, these young people might be expected to be panel newcomers. Correspondingly, this youthful cohort is least likely to complete online surveys at least weekly (17% of 18 – 24 year olds versus 25% of all respondents and about one-third of those 55 years of age or over – see Table 2, appended). This finding suggests that as NADbank considers an online panel approach to data collection, it should take into account panel tenure, sample refreshment and broadcast strategies used by suppliers.

Demographics of professional or frequent online survey respondents are shown to differ from the general population of panellists in the MRIA study. While the incidence of professional respondents in the EKOS test sample is lower than was found in the MRIA study, there are similar differences by participation rates. Specifically, consistent with the industry study, those in the EKOS test who complete surveys at least weekly or monthly tend to be older, to be retirees, to be less affluent, and are less apt to be university educated than are panellists who complete surveys less often (see Table 3, appended).

³ Statistics Canada data are available at the household level for Canada as a whole and EKOS data are at the individual level for the Toronto CMA. Statistics Canada source: *Residential Telephone Service Survey*, 2010.

⁴ In the EKOS sample (unweighted), 64 or 39% of all 18 to 24 year old respondents (164) are cell-only. One-third or 105 of the 323 respondents in the 25 – 34 year old cohort rely exclusively on cell phones. For additional insight into the impact of including the cell-only youth segments, comparisons could be made between the cell-only versus landline accessible young people in the EKOS sample and landline accessible 18 to 24 year olds (n = 134) and 25 – 34 year olds (n = 275) in the NADbank sample. This type of analysis will be performed in the months ahead.

⁵ MRIA, Canadian Online Panels NetGain 4, 2010.

Compared to industry estimates, all panel companies in the MRIA study appear to include a disproportionately high number of mediaphiles, thereby possibly influencing the very estimates the test was designed to capture: print and online newspaper readership. This subject will be explored further, particularly in light of the substantive differences between NADbank and EKOS estimates of newspaper website readership yesterday.

Readership of newspapers is particularly high for several panel suppliers included in the MRIA study, relative to published currency estimates from NADbank. The EKOS panel test also resulted in higher readership estimates relative to NADbank, but generally not as extreme as in previous NADbank testing of other online panels.

Some Demographics

There is considerable concordance between census data and EKOS sample with respect to some demographic variables. This is the result of research design factors (i.e. probability based recruitment, sampling protocols, and differential survey treatments or DSTs for harder to survey groups). There are also survey execution factors (i.e. the targets set in the study's broadcast strategy in anticipation of participation rate propensities).⁶ The EKOS sample is more consistent with census data for owners versus renters than is the NADbank sample (see Table 4, appended). The increase in renters found in the EKOS sample is likely a function of the inclusion of cell-only respondents in the frame: cell-only panellists are more likely to be renters (see Table 5, appended).

At the same time, one-person households are slightly more prevalent in the EKOS sample than would be expected based on census data. Again, inclusion of the cell-only cohort could be at play: cell-only respondents reside in single person households at twice the rate (21%) as does Toronto's population as a whole (10%, census). At eight percent, the incidence of one-person households in the online segment of NADbank's telephone survey is closer to census estimates than is the EKOS estimate (Table 5).

Conversely, the EKOS online panel estimate for university graduates is somewhat closer to census estimates than is the one generated by NADbank's telephone survey. Nonetheless, a higher proportion of panellists have university degrees (39%) than would be expected based on estimates derived from the census (33%). The higher-than-anticipated incidence of university graduates is also found in the NADbank telephone survey.

Potential Impacts of Panel Composition

In an effort to obtain an *apples to apples* comparison of the NADbank and EKOS test samples, cell-only respondents were excluded from an analysis of the EKOS sample for respondents 35 years of age and over. These findings were compared to NADbank's findings for the same 35+ cohort who were online capable, across key demographic characteristics. Results suggest that within landline-accessible populations, there are substantive differences between the NADbank and EKOS samples (see also Note 6). Specifically, the EKOS respondents are more likely to be retired, to be in the oldest age segment, to live alone, to have English as their mother tongue and are less apt to have a university degree than are the corresponding NADbank respondents (see Table 6).

Does this information suggest that panel populations, regardless of the rigour of the initial recruitment process, differ on key characteristics from the full spectrum of the population? Of course, NADbank's survey also suffers from coverage deficiencies. Nonetheless, when the demographic differences highlighted here are taken in combination with panel participation rates, EKOS panellists and, potentially, members of other panels, appear to be skewed toward older, live-alone people. Participation of this segment of the population, if not in balance with its occurrence in the general population, could impact readership and other behaviour of key interest to NADbank.

A two-pronged exploration is required to gain a better understanding of the extent to which panel members, irrespective of the supplier, are representative of the general population demographically and on key behavioural variables:

- Are the idiosyncrasies evident in the EKOS test equally characteristic of other panels?
- What recruitment/panel management strategies would be most successful in bringing panel members into closer alignment with the general public on demographic and behavioural characteristics? For example, EKOS could have employed a more granular stratification approach for controlling the incidence of certain demographic groups in the sample at the panel recruitment stage of the process.

⁶ The full NADbank survey (online + offline) was weighted by age within gender whereas figures shown in Table 1 reflect the portion of the full sample that accesses the internet at least monthly (online only). As noted in the methodology section, EKOS set targets when it broadcast the NADbank questionnaire to panel members. These targets were set to maximize the chances of obtaining a respondent mix that reflected the adult population of Toronto by age within gender. Some additional sampling was required to boost the number of younger people in the final EKOS sample. The NADbank methodology excludes households that rely exclusively on cellular telephones whereas the EKOS survey includes such households. Because reliance on cellular telephones is more characteristic of younger people, there may be some loss in direct comparability between the two data sets.

Behavioural Measures: Print and Online Readership of Toronto’s Newspapers

For the most part, past three-month readership of Toronto’s daily printed newspapers parallels but is slightly higher in the EKOS test than in NADbank’s sample (online adults). Similarly, EKOS estimates are higher for the critical print currency measure: *read yesterday’s Monday – Friday printed edition*. At the same time, the rank order of newspaper readership is the same as that generated within the portion of NADbank’s survey that accesses the internet (online) for printed Monday to Friday editions (see Table 7, appended). The consistency in the differences between the EKOS and NADbank print readership results suggests that the EKOS survey is measuring the same behaviour as the NADbank survey, but at a systematically higher level. The higher readership estimates may be reflecting the propensity of panel members, regardless of the research supplier, to be mediaphiles to a greater extent than is the population at large.

Aggregated data may mask important differences in readership profiles for individual newspapers. A preliminary review for several titles suggests that, by and large, the EKOS and NADbank studies produce similar profiles despite differences in the overall sample composition. While this subject requires further analysis, the similarities would seem to outweigh the differences, particularly for printed editions (see Tables 8, 9, appended).

Inclusion of cell-only consumers in the EKOS test has the greatest impact among younger people because they rely exclusively on cell phones at a much higher rate than do older people. Thus, including the cell-only segment might be expected to impact readership levels among 18 to 34 year olds. Interestingly, print readership (read any paper) estimates are virtually identical between NADbank’s young people (37%) and those in the EKOS test (38%) even though the former systematically *excludes* cell-only consumers and the latter includes them (see Table 10, appended). As noted below, the same consistency is *not* apparent for newspaper *website readership*.

While EKOS *print readership* estimates parallel those of NADbank at a somewhat higher rate, the same is not the case for *online readership* of newspaper websites. At 40%, EKOS’s estimate of Toronto’s newspaper websites (read any yesterday) is nearly three times higher than that generated by NADbank (14%). Within the younger segment of the EKOS sample, differences are also substantial: twelve per cent of 18 to 34 year olds reached on landlines (NADbank) claim to have visited at least one of Toronto’s newspaper websites yesterday. The corresponding EKOS estimate is almost four times as high (44%) (see Table 10, appended).

In light of small sample sizes, any comparisons of the profiles of individual newspaper website readers are directional, at best and must be interpreted with caution. There are, nonetheless, indications in the EKOS findings to suggest that the inclusion of cell-only respondents, irrespective of their age, has a downward influence on *print readership* and an upward influence on *website readership* for the same newspaper (see Tables 9 and 11, appended).

While the website readership patterns mimic one another (NADbank and EKOS), with appreciably higher amplitudes in the EKOS data, the question of why such differences occur remains unanswered. The time may come when web-based or other electronic channels out-pace printed readership levels for newspaper publishers. At this juncture, however, such a scenario is at odds with NADbank data and other industry information. In the case of two major daily newspapers, EKOS’ estimates for yesterday’s web readership are actually *higher* than yesterday’s printed edition estimates (see Table 12, appended).

However, the results for individual newspapers for the print editions do indicate that there are different readership behaviours for respondents depending solely on cell phones compared to those with access to landlines. For example, 25% of *all* EKOS panellists claim to have read yesterday’s printed edition of Toronto’s largest daily newspaper. The proportion is about the same among those with a landline (27%) but falls to 17% among those with only cell phones. In contrast, the incidence of accessing the same newspaper’s website yesterday is 27% for the total sample, 26% for landline accessible individuals but increases to 30% among cell-only respondents. Furthermore, reflecting the more youthful skew of cell-only respondents, the share of cell-only readers is higher among readers of the city’s free dailies than for other papers – a finding consistent with the target market of free dailies (younger, working people who rely on public transit) and results found in the current NADbank study (see Table 11, appended).

While based on very small samples, these examples are suggestive of the increasing importance of ensuring that the full array of populations – online, offline, cell-only and landline – is included in a study being designed to capture newspaper organizations’ brand footprints – print and online. Thus, the EKOS test provides a helpful indication of how the dynamics of the newspaper marketplace may evolve as more and more people rely exclusively on cell phones.

Inclusion of a cell-only cohort in the EKOS test undoubtedly contributes to a higher incidence of online readership but is not sufficient to explain the magnitude of the differences (see Table 11, appended). To date, reviews of the EKOS test data provide no clear answer on why online readership estimates are so much higher than those in the NADbank survey or industry expectations. Test results do, however, suggest that as the number of people accessible only by cell phone increases, surveys that do *not* capture this segment will generate increasingly less accurate print and, particularly, online newspaper readership.

Further exploration may provide insights into the substantive differences in online readership estimates between NADbank and EKOS findings. Possible explanations include the following:

- Data capture methodology: a self-completion online survey may create a different understanding of the nature of the question being asked than when it is asked by an interviewer over the telephone.
- General usage of and commitment to the internet: panel respondents may be more committed and frequent internet users in general than are Toronto adults who access the internet but are not members of consumer research panels. The possibility of increased commitment to internet usage may, in turn, increase the propensity to visit newspapers' websites. At this juncture, however, comparable empirical data on general internet usage behaviour between the two studies are unavailable. However, previous NADbank data support the finding of mediaphiles being over-represented in online panels.
- Panel survey participation rates: As noted above, over half of EKOS panellists in the test claim to complete online surveys at least monthly. These committed panellists might be expected to spend more time online, including newspapers' websites than would infrequent online survey responders. As noted above, general internet usage patterns may differ between consumers captured in the NADbank and EKOS studies.
- Special characteristics of the EKOS panel: EKOS's reputation for political and social issue polling might attract a disproportionately high number of individuals who are politically and/or civically engaged, despite IVR recruitment. If it is the case that the panel includes higher-than-average numbers of politically and/or civically minded Canadians, such individuals could be especially avid internet users in order to keep up with current events and could, in turn, inflate estimates of online readership.

Once NADbank obtains results from another online test currently in field and those from panel survey tests NADbank has conducted in the past using a variety of recruitment strategies, there will be an opportunity to compare the EKOS online readership estimates to those generated in a similar data capture environments, albeit, ones relying on some form of *opt in* online panel recruitment.

Conclusions and Next Steps

The sample as a whole and the cell-only segment of the EKOS sample are generally consistent with incidence and profile data available from Statistics Canada, suggesting that the IVR recruitment method and process for stratifying panellists by demographics in advance of selection is worthy of further consideration.

Inclusion of the cell-only cohort seems to bring some demographic estimates into closer alignment with census data than is evident in the traditional NADbank telephone survey. The test results suggest that as this cohort grows, a survey methodology that *includes* cell-only households/individuals will become essential for estimating newspaper readership, in print and online.

EKOS' print readership estimates, while higher, parallel those of NADbank's, suggesting that EKOS is measuring the same behaviour as NADbank, albeit systematically higher.

The EKOS Probit panel has the potential to provide a one-stop shop for online and offline consumers. In addition to the online panel members captured in this test, the Probit panel contains individuals that do not have access to the internet (surveyed via telephone or mail). While NADbank excluded the offline segment in this test for pragmatic reasons, a test within this segment could be implemented at a later date. If such a test proved successful, it could provide a single data capture platform for all key market segments: online, offline, landline and cell phone only consumers. Such an integrated platform might have advantages over a hybrid approach that utilizes different sampling frames and methodologies for one or more of these market segments.

There remain areas to be explored and differences to be assessed as NADbank continues its journey toward the optimal readership measurement approach.

- What would the impact on estimates be if the EKOS test had included the portion of Probit panellists who are *offline*?⁷ Further testing could address this question.
- How does the EKOS online sample compare with Statistics Canada profile data for the online Toronto population? Profile data from Statistics Canada's 2010 *Canadian Internet Use Survey* (CIUS) will be reviewed over the coming months.

⁷ If an *offline* cell were to be added, it should be restricted to Probit respondents who have not used the internet in the past month (or some other pre-determined time period) rather than those who may or may not use the internet but elect to be contacted by telephone instead of via the internet for EKOS surveys.

- How do EKOS results compare with those from an opt-in panel test combined with a standard modified random digit dial telephone survey? Results of the current test (in field) will be reviewed as soon as they become available.
- What recruitment and/or panel management strategies would be most successful in bringing panel members into closer alignment with the general public on demographic and behavioural characteristics?

There is no doubt that the EKOS Probit test is a valuable step on the way to NADbank's destination: a study design that supports the collection of valid and reliable readership data from the complete cross section of the population – online and offline, landline and cell phone. The test helps guide NADbank as its measurement system for print and online newspaper content evolves in response to changing consumer and technology environments but the journey is not yet over.

Table 1: EKOS vs. Other Panel Suppliers (Opt-in): Frequency of Completing Online Surveys		
	EKOS	Other Panel Suppliers (Average)
Daily	2%	18%
At least weekly (includes daily)	21%	66%
At least monthly (includes weekly/daily)	44%	79%

Source: EKOS presentation of MRIA study) EKOSs' Observations On MRIA Study - Canadian Online Panels: Similar Or Different? Study Presented At MRIA Net Gain 4.0 Conference Toronto, January 27, 2010.

Table 2: Panel Participation	EKOS	Age of Respondent					
	Total	18 - 24	25 - 34	35 - 44	45 - 54	55 - 64	65+
Unweighted base*	1769	164	323	344	363	272	303
% of EKOS Population (Weighted)	100%	12%	19%	21%	20%	13%	15%
Complete Online Surveys							
Weekly+ (Very Dedicated)	25%	17%	23%	20%	24%	35%	34%
Monthly + (Dedicated)	58%	47%	56%	58%	56%	66%	65%
Less Often than Monthly	32%	36%	33%	34%	36%	26%	25%
Don't know	10%	17%	11%	7%	9%	8%	10%

**Percentages are calculated on the weighted base and may not add to 100% because of Don't Know/Not Stated responses.*

Table 3: Sample Composition	EKOS Total	Completes Online Surveys Weekly or More Often	Completes Online Surveys Monthly or More Often	Completes Online Surveys Less Often than Monthly
Unweighted base*	1769	446	1036	559
% of EKOS Population (Weighted)	100%	25%	58%	32%
Age				
18-24	12%	7%	8%	10%
25-34	19%	16%	17%	19%
35-44	21%	15%	19%	21%
45-54	20%	19%	19%	23%
55-64	13%	21%	17%	13%
65+	15%	22%	19%	13%
Household size				
1	15%	17%	16%	16%
2	26%	35%	30%	23%
3	18%	17%	18%	15%
4	25%	18%	21%	28%
5+	16%	11%	12%	14%
Education				
Some Secondary or less	7%	8%	7%	7%
Graduated Secondary	16%	17%	14%	16%
Some Post-Secondary	38%	41%	41%	30%
University Graduate	39%	33%	37%	45%
Household Income (Adjusted for non-response)				
Under \$50K	25%	28%	25%	23%
\$50K - \$99.9K	36%	41%	38%	32%
\$100K or more	39%	31%	37%	45%
Retired	17%	24%	20%	16%

**Percentages are calculated on the weighted base and may not add to 100% because of Don't Know/Not Stated responses.*

Table 4: Sample Composition	Census	NADbank Total Population (excludes cell only HHs)	NADbank Online (excludes cell only HHs)	EKOS
Weighted Respondents (18+) ⁸				
Age				
18-24	12%	12%	14%	12%
25-34	19%	19%	21%	19%
35-44	21%	21%	22%	21%
45-54	19%	19%	20%	20%
55-64	13%	13%	13%	13%
65+	15%	15%	10%	15%
Gender				
Male	49%	48%	49%	48%
Female	51%	52%	51%	52%
Education ⁹				
Some Secondary or less	17%	9%	5%	7%
Graduated Secondary	25%	18%	15%	16%
Some Post-Secondary	23%	29%	31%	38%
University Graduate or more	33%	42%	47%	39%
Employment Status ¹⁰				
Employed/Self Employed	64%	63%	67%	61%
Unemployed	5%	9%	9%	8%
Retired	N/A	15%	10%	17%
Tenure ¹¹				
Own	68%	76%	78%	69%
Rent	32%	22%	20%	26%
Household size ¹²				
1	10%	10%	8%	15%
2	24%	24%	23%	26%
3	20%	20%	21%	18%
4	24%	24%	26%	25%
5+	22%	22%	23%	16%
Suburban/Core				
Suburban (L)	51%	51%	52%	51%
Urban Core (M)	49%	49%	48%	49%

⁸ The full NADbank survey (online + offline) was weighted by age within gender whereas figures shown in Table 1 reflect the portion of the full sample that accesses the internet at least monthly (online only). As noted in the methodology section, EKOS set targets when it broadcast the NADbank questionnaire to panel members. These targets were set to maximize the chances of obtaining a respondent mix that reflected the adult population of Toronto by age within gender. Some oversampling was required to boost the number of younger people in the final EKOS sample. The NADbank methodology excludes households that rely exclusively on cellular telephones whereas the EKOS survey includes such households. Because reliance on cellular telephones is more characteristic of younger people, there may be some loss in direct comparability between the two data sets, especially at the younger end of the age spectrum (18 – 34 years).

⁹ Recalculated from census data based on Torontonians 15+ years of age.

¹⁰ Census data based on Torontonians 15+ years of age.

¹¹ Based on 2006 Census, total dwellings in Toronto CMA.

¹² NADbank's household sample is adjusted by household size as a pre-weight prior to adjustments for individual respondents by age within gender. This pre-adjustment likely explains the parallelism between the census and full NADbank sample on this variable.

Table 5: Sample Composition	Census	NADbank Online	EKOS Total	EKOS Cell Only	EKOS Land Only	EKOS Any Land	EKOS One-Person Households
Unweighted base*		1702	1769	248	214	1518	284
Age							
18-24	12%	14%	12%	32%	1%	9%	4%
25-34	19%	21%	19%	40%	8%	15%	17%
35-44	21%	22%	21%	15%	17%	22%	7%
45-54	19%	20%	20%	8%	19%	22%	17%
55-64	13%	13%	13%	4%	19%	15%	21%
65+	15%	10%	15%	2%	36%	18%	34%
Household size							
1	10%	8%	15%	21%	36%	14%	100%
2	24%	23%	26%	28%	33%	26%	-
3	20%	21%	18%	19%	12%	18%	-
4	24%	26%	25%	18%	12%	26%	-
5+	22%	23%	16%	15%	7%	16%	-
Education¹³							
Some Secondary or less	17%	5%	7%	5%	10%	8%	11%
Graduated Secondary	25%	15%	16%	12%	25%	17%	17%
Some Post-Secondary	23%	31%	38%	43%	40%	37%	46%
University Graduate	33%	47%	39%	41%	36%	39%	26%
Tenure¹⁴							
Own	68%	78%	69%	40%	59%	74%	45%
Rent	32%	20%	26%	53%	36%	22%	54%

*Percentages are calculated on the *weighted* base and may not add to 100% because of *Don't Know/Not Stated* responses.

Table 6: Sample Composition: Population 35+, Accessible by Land Line		
	NADbank	EKOS
Age		
35 - 44	34%	29%
45 - 54	30%	28%
55 - 64	20%	20%
65+	16%	23%
Gender		
Male	49%	47%
Female	51%	53%
University Grad+	54%	38%
Employment Status		
Employed	72%	59%
Retired	15%	25%
Mother Tongue		
English	60%	83%
Tenure		
Own	81%	78%
Rent	17%	19%
Household Size		
1 person	9%	16%
2 people	27%	27%
3 people	21%	16%
4 people	24%	24%
5+ people	18%	13%

*Less than 0.5%.

¹³ Recalculated from census data based on Torontonians 15+ years of age.

¹⁴ Based on 2006 Census, total dwellings in Toronto CMA.

Table 7: Readership	NADbank Total (excludes cell only HHs)	NADbank Online (excludes cell only HHs)	EKOS	Index
Weighted Respondents 3 Months Reach - Printed				
Any	78%	80%	87%	109
The Globe & Mail	28%	31%	39%	127
Toronto Star	55%	57%	65%	113
National Post	14%	16%	22%	138
Toronto Sun	29%	29%	36%	122
Metro	32%	33%	36%	109
24 Hours	23%	23%	27%	116
Yesterday Reach – M-F Printed				
Any	44%	46%	51%	111
The Globe & Mail	8%	9%	13%	137
Toronto Star	21%	21%	25%	119
National Post	4%	5%	6%	126
Toronto Sun	11%	10%	14%	135
Metro	12%	12%	12%	98
24 Hours	7%	7%	8%	104
Website Reach (Visited Yesterday)				
Any	12%	14%	40%	301
The Globe & Mail	5%	6%	22%	354
Toronto Star	7%	8%	27%	354
National Post	1%	1%	9%	671
Toronto Sun	2%	2%	9%	468
Metro	*	*	3%	700
24 Hours	1%	9%	3%	28
*Less than 0.5%.				

Table 8: Population 35+, Accessible by landline														
Read Yesterday (print edition) Reach														
	Any Paper		The Globe and Mail		Toronto Star		National Post		The Toronto Sun		Metro		24 Hours	
	NAD bank	EKOS	NAD bank	EKOS	NAD bank	EKOS	NAD bank	EKOS	NAD bank	EKOS	NAD bank	EKOS	NAD bank	EKOS
Age														
35+	50%	57%	12%	15%	26%	31%	6%	7%	10%	17%	11%	9%	7%	6%
35-44	35%	40%	5%	10%	15%	16%	3%	4%	7%	12%	14%	11%	6%	8%
45-64	47%	61%	10%	16%	21%	29%	4%	6%	12%	18%	10%	11%	9%	7%
55-64	62%	59%	20%	15%	37%	40%	11%	9%	14%	19%	11%	6%	8%	4%
65+	71%	71%	20%	20%	44%	42%	11%	12%	10%	19%	6%	9%	6%	5%
Gender														
Male	54%	61%	14%	16%	26%	34%	7%	10%	14%	22%	11%	9%	7%	7%
Female	47%	53%	11%	14%	26%	28%	5%	5%	7%	12%	11%	10%	7%	6%
Education														
Some HS or less	43%	44%	4%	7%	24%	21%	4%	2%	13%	25%	5%	1%	6%	6%
Grad HS	48%	60%	2%	10%	21%	33%	4%	8%	22%	27%	14%	11%	7%	8%
Grad HS or less														
Some PS	19%	61%	10%	13%	25%	33%	7%	8%	14%	18%	10%	11%	10%	8%
University Grad+	52%	55%	17%	22%	27%	30%	7%	8%	5%	8%	10%	8%	6%	4%
Employment Status														
Self-employed	44%	53%	14%	19%	20%	29%	10%	12%	9%	13%	3%	5%	2%	3%
Employed by other	49%	53%	11%	13%	25%	26%	6%	5%	10%	16%	14%	12%	10%	7%
Employed														
Unemployed	42%	47%	7%	12%	22%	22%	1%	5%	12%	17%	11%	9%	5%	9%
Retired	69%	69%	18%	18%	43%	42%	9%	10%	13%	20%	7%	7%	5%	4%
Tenure														
Own	52%	57%	14%	16%	28%	31%	7%	8%	10%	16%	10%	7%	6%	4%
Rent	46%	57%	6%	11%	17%	28%	5%	4%	11%	17%	17%	20%	14%	13%

	Any Paper		The Globe and Mail		Toronto Star	
	NADbank	EKOS	NADbank	EKOS	NADbank	EKOS
Age						
35+	15%	37%	7%	18%	8%	25%
35-44	18%	32%	9%	23%	11%	31%
45-64	15%	38%	6%	20%	8%	25%
55-64	13%	36%	8%	14%	7%	24%
65+	10%	33%	5%	14%	2%	19%
Gender						
Male	20%	45%	10%	25%	11%	29%
Female	10%	30%	5%	12%	5%	22%
Education						
Some HS or less	7%	26%	2%	8%	4%	14%
Grad HS	4%	25%	1%	7%	1%	16%
Grad HS or less						
Some PS	11%	38%	5%	15%	5%	26%
University Grad+	20%	44%	11%	28%	11%	31%
Employment Status						
Self-employed	18%	42%	10%	24%	8%	26%
Employed by other	16%	40%	8%	20%	9%	29%
Employed						
Unemployed	16%	38%	5%	22%	11%	24%
Retired	10%	31%	4%	13%	4%	17%
Tenure						
Own	16%	37%	8%	18%	8%	24%
Rent	11%	38%	3%	20%	6%	27%

	Age of Respondent					
	18 – 34		18 - 24		25 – 34	
	NADbank	EKOS	NADbank	EKOS	NADbank	EKOS
Read Any Printed Monday – Friday Edition Yesterday	37%	38%	37%	40%	38%	37%
Read Any Newspaper Website Yesterday	12%	44%	7%	38%	16%	47%
*Percentages are calculated on the <i>weighted</i> base and may not add to 100% because of <i>Don't Know/Not Stated</i> responses.						

Table 11: Adults 18+ Readership by Phone Status						
	NADbank	EKOS				
		Total	Cell only	Any land	Land only	% who are cell only
Incidence in EKOS Sample			15%	85%	12%	
<u>Print Yesterday Reach</u>						
Any Paper	44%	51%	42%	52%	56%	12%
The Globe and Mail	8%	13%	9%	13%	14%	10%
Toronto Star	21%	25%	17%	27%	33%	10%
National Post	4%	6%	5%	6%	6%	12%
The Toronto Sun	11%	14%	9%	15%	14%	10%
Metro	12%	12%	17%	11%	12%	20%
24 Hours	7%	7%	9%	7%	7%	18%
<u>Website Yesterday Reach</u>						
Any Paper	14%	40%	49%	38%	29%	19%
The Globe and Mail	7%	22%	30%	20%	14%	21%
Toronto Star	8%	27%	33%	26%	22%	18%
National Post	1%	9%	13%	9%	3%	21%
The Toronto Sun	2%	9%	7%	9%	8%	11%
Metro	0%	3%	5%	3%	3%	24%
24 Hours	1%	3%	5%	2%	1%	31%

Table 12: Readership	NADbank Online			EKOS		
	Yesterday – M-F Printed	Website (Visited Yesterday)	% Difference Print to Web	Yesterday – M-F Printed	Website (Visited Yesterday)	% Difference Print to Web
Any	46%	14%	-70%	51%	40%	-18%
The Globe & Mail	9%	6%	-33%	13%	22%	69%
Toronto Star	21%	8%	-62%	25%	27%	8%
National Post	5%	1%	-80%	6%	9%	50%
Toronto Sun	10%	2%	-80%	14%	9%	-36%
Metro	12%	-	N/A	12%	3%	-75%
24 Hours	7%	9%	29%	8%	3%	-63%

Methodological Appendix

The sampling methodology that was followed to reach and survey Probit panellists for the test involved a multi-stage, probability-based sampling process incorporating the following steps:

Stage 1 – Starting sample

EKOS uses an RDD process (based on probability selection procedures) to create pools of randomly generated telephone numbers for both the landline and cell-phone portions of the sample. The process incorporates data on known working exchanges when generating RDD numbers and includes both listed and unlisted households/individuals.

Stage 2 – Initial contact

RDD numbers are loaded in the EKOS IVR (Interactive Voice Response) system. The IVR process dials each number up to 4 times in order to reach a prospective panellist. Days and times of the 3 call backs are rotated to maximize the chances of reaching someone at the number.

Stage 3 – Intake

When an individual is reached by the IVR system, the person is asked a few short “foot in the door” questions and then presented with the opportunity to join EKOS’ Probit panel. The individual can use the keypad on their phone to indicate “yes” or “no” at this point. Those who say “yes” move on to the next step in the process, while those who say “no” are thanked and the interview is terminated. There are no additional follow ups with refusing or terminating households.

Stage 4 – Confirmation/verification

Shortly after recording “yes” to the IVR panel invitation, prospective panellists are called back by a “live” EKOS interviewer. During this call, the nature of the panel survey process is described along with EKOS’ privacy policy. Demographic and other administrative information about the individual is also confirmed. At this stage the online-offline status of the individual is ascertained as well as his/her preference for survey mode, i.e. offline (telephone or mail) or online (Internet/Web). For those who are online capable, the interviewer will record the person’s email address and attempt to test it “live” with the respondent on the call.

Stage 5 – Stratified probability selection from panel pool

EKOS’ Probit panel consists of a total over 80,000 individuals who have been recruited using the sampling process above. For this test, EKOS stratified the total online-capable pool (65,018) into demographic groups based on anticipated response rate propensities. Sample targets for demographic strata were set according to Statistics Canada published estimates, so that the unweighted distribution of the in tab test sample would mirror the population as closely as possible. After setting targets by demographics, EKOS used assumptions about response rates within strata (based on historical experience) to select the appropriate number of panellists from the pool. An “nth” sampling procedure was used to randomly select the required number of starting panellists from strata, based on the number of panellists required vs. the number of panellists in the pool.

Stage 6 – Survey invitation/broadcast

Panellists who were chosen on a probability sampling basis from the Probit pool were sent an initial survey invitation from EKOS, describing the purpose of the study and asking the panellist to go to the EKOS website to complete the survey. Altogether 10,274 panellists were sent an invitation from the total pool of 65,018 online *Probit* panellists.

Stage 7 – Reminders, incentives and differential survey treatments

In order to control for day of week collection in an online environment the random sample was randomly segmented in silo’s and assigned a day of week (Monday to Sunday). The volume of sample assigned to each ‘day’ was calculated based on 5 weeks in field (note that there were in total 7 weeks of field, however the final 2 weeks were reserved for extra differential reminders and newly recruited panellist cycles). The field protocol for the first five weeks saw the field period starting on Thursday June 9, 2011 at 4:15 EST. On ‘day one’ roughly n=400 randomly selected in-scope panellists were invited to participate. Understanding (based on historical experience) that roughly 10 per cent of panellists will respond to a survey invitation either immediately or within a short period of time, that a further 5 per cent will respond within a day and a further 2.5 per cent by the day after that, the first block of sample net n=35 completed interviews that were hence forth treated as Day of Week Complete ‘Thursday’, n=16 treated as Day of Week Complete ‘Friday’ and n=7 treated as Day of Week Complete ‘Saturday’.

In order to complete roughly the same amount of cases each day following Day One (n=40) the subsequent daily samples were roughly n=200 panellists (therefore on June 10, 2011, roughly n=200 are invited where roughly n=20 complete it, added to the n=20 or so who complete the survey but were invited the day before, and so on). Time of day was randomly assigned on each day of email broadcasting as well as the subsequent reminders. In order to increase the response rate to the survey invitation, EKOS sent a first reminder to a panellist who had not responded within 5-8 days of receiving the initial invitation. These reminders typically net, over time, an additional 10 per cent completing.

Once the case was reminded, it then lay dormant until the final 2 weeks of field where, depending on the panellist's demographic characteristics, additional reminders were executed. For the hard to reach panellists (those 18-34 and those non-university educated) EKOS instituted a special follow-up procedure where these individuals were emailed up to two more reminders and called at least once by a "live" interviewer to encourage them to complete the online NADbank test questionnaire. All panellists completing the survey were provided with \$2 charity dollars and put into a draw for \$1,000.

Stage 8 – Quota sampling for selected strata

The final step in EKOS' sampling process involved using a quota sampling procedure to "top up" the shortfall in young adults in the survey. This procedure involved screening Probit panellists by age, and terminating any sample point that did not include a person 18-34 in the household. While the underlying process of generating the RDD frame is probability sample based, the fact that "live" sample was terminated via a quota procedure technically renders that part of the sample (79 persons in total out of the total test sample of 1,769 persons) as a "convenience" or "purposive" sample.

Participation Rate

Altogether 10,274 panellists were sent an invitation from the total pool of 65,018 online-capable *Probit* panellists, generating 1,769 usable completions, or about 17% of the four per cent who joined the *Probit* panel during the initial telephone recruitment phase (see Note 2).