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Recruitment and Collection of Web Panels at Statistics Canada

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Abstract

In 2020, Statistics Canada started to use probabilistic web panels as an alternate method of collecting official statistics. In a web panel, respondents to another survey are asked for contact information to participate in future short surveys. This paper will highlight Statistics Canada's experience with panels after 4 years, including what has been learned about the recruitment of panel participants and how to subsequently collect data using panel surveys. The ways in which recruitment questions are presented can result in very different rates of participation. Moreover, the wealth of auxiliary information available on the recruitment survey can be used to actively manage panel collection operations, by predicting the probability of response and using this information to target follow-up efforts.

Key Words: Probabilistic web panel; Panel recruitment; Adaptive collection management.

1. Introduction

1.1 Probabilistic Web Panels at Statistics Canada

Statistics Canada has been exploring the use of web panels, with the first pilot panel conducted in 2020 (Baribeau, 2020). The purpose of using web panels is to obtain timely data to address emergent, social data gaps by having a readily available group of people who can be contacted quickly when the need arises.

The web panels conducted by Statistics Canada have all been probabilistic web panels, meaning that the probability of each unit being selected for the original recruitment sample is known, which facilitates inference about the target population. These panel surveys are carried out as follows. Recruitment for the web panel is done as part of a traditional probabilistic survey. After completing this survey's questionnaire, respondents are asked if they are willing to participate in future surveys and to provide their contact information. The panel series is then conducted among the willing participants. This method provides several advantages for the panel survey. In particular, all the questions from the recruitment survey can be used as covariates to adjust for non-response to the panel because they are available for all units in the panel. The recruitment for the panel is also done at no additional cost to the panel series.

The web panel surveys consist of very short questionnaires that take 5 to 10 minutes to complete. They are typically part of a series, where each wave focuses on a specific topic within the collective theme of the series. The willing participants are contacted using the provided email address, which is a quick and inexpensive method of data collection. Additionally, Statistics Canada has started to use limited telephone follow-up when targeting specific subsets of the population.

The first two web panels conducted by Statistics Canada were the Canadian Perspectives Survey Series (CPSS) and the Portrait of Canadian Society (PCS), both of which were aimed at producing estimates for the Canadian population in general. The CPSS recruited participants from the Labour Force Survey (LFS) and consisted of 6 waves of questionnaires between March 2020 and January 2021. The PCS was recruited from the General Social Survey (GSS) and consisted of 3 waves collected between March 2021 and May 2022. The content of the CPSS and PCS were related to various topics concerning social and economic impacts of Covid-19.

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The next set of probabilistic web panels at Statistics Canada were aimed at specific sub-groups of the Canadian population. The overall aim of these projects was to provide timely information about their populations of interest. The first such panel, the Survey Series on People and their Communities (SSPC) targeted racialized groups and recent immigrants (Waye and Boulet, 2023). The panel portion of the SSPC was recruited during the first and second waves of the survey series. The SSPC was collected over 5 waves between October 2022 and April 2024. The content of the 5 waves of SSPC were related to community engagement, political engagement and shared values, trust in media, participation in sports and experiences with discrimination.

The two other targeted panels are the Survey Series on First Nations People, Métis and Inuit (SSFNPMI) and the Survey Series on Accessibility (SSA). These panels recruited from two post-censal surveys: the Indigenous Peoples Survey (IPS) and the Canadian Survey on Disability (CSD), respectively. Each of these panels had 3 waves of collection starting in 2024 and ending in early 2025. The SSFNPMI collected information on access to health care, impacts of rising prices and emergency preparedness among First Nations People, Métis and Inuit in Canada. The Survey Series on Accessibility collected information on barriers to work, technology and travel faced by persons with long-term conditions. These panels provided a means of getting additional information on small sub-groups of the population with a short time frame of only a few months between collection and dissemination.

The response rate to a panel survey is best summarised by the cumulative response rate which combines the proportion who responded to the recruitment survey, the proportion who provided contact information and the response to the panel series itself (see Table 1.1-1). For example, the CPSS had a higher cumulative response rate than the PCS, primarily because the CPSS was recruited from the LFS, which is mandatory and thus has a higher response rate than the voluntary GSS. The CPSS also had a higher panel questionnaire response rate. It is likely that this is related to its subject matter and collection period which occurred during the early portion of the Covid-19 pandemic. The proportion of respondents who provided contact information on the SSPC (97%) was very high due to the design of the question that asked for contact information. This topic will be explored further in section 2. Since the panel weighting can incorporate rich auxiliary information from the recruitment survey, cumulative response rates are not directly comparable to response rates of surveys carried out in one phase. However, low cumulative response rates can be associated with a risk of bias and this is examined by Mather, Boulet, and Ra (2025).

**Table 1.1-1
Response Rates for Web Panels**

Panel	Recruitment Survey	Recruitment Survey Response Rate	Provided Contact Information	Panel Response Rate¹	Cumulative Response Rate
Canadian Perspectives Survey Series	Labour Force Survey	87%	23%	54% - 64%	10.7% - 12.6%
Portrait of Canadian Society	General Social Survey	40%	22%	41% - 44%	3.7% - 3.9%
Survey Series on People and their Communities	Survey Series on People and their Communities	53%	97%	24% - 28%	12.9% - 15.4%
Survey Series on First Nations People, Métis and Inuit	Indigenous Peoples Survey	52%	21%	TBD	TBD
Survey Series on Accessibility	Canadian Survey on Disability	61%	25%	TBD	TBD

1. The panel response rates are presented in a range because the values vary between waves.

The remainder of this paper describes what has been learned about how to efficiently obtain contact information to reach participants for future web panels (section 2), and subsequently carry the web panel collection (section 3).

2. Recruitment of Panel Participants

2.1 Recruitment Question Tests

Web panel participants are recruited at the end of the questionnaire of a probabilistic survey, just prior to submitting the questionnaire. Respondents are asked to provide contact information (email and/or telephone number) to participate in future surveys. From July to August 2023 a test was conducted to determine the optimal wording and layout of the question that would maximize the number of people providing contact information. Three different components were tested: the content of the introduction and exit text, the inclusion of a short paragraph about the future surveys being voluntary and the presence of an explicit opt-in question. Each component had two options for a total of 8 combinations. The 20,000 units selected for the Canadian Social Survey (CSS) were used for the test and one eighth of the sample was randomly assigned to each of the 8 options.

The wording of the intro and exit text explore different options to emphasize the importance of participating and the purpose of the future surveys. The optional paragraph explaining the voluntary nature of the panel informs respondents that they could later choose not to participate in the panel after providing their contact information. The third element assessed the effect of a screen containing an opt-in recruitment question. On the two-screen version, if the respondent accepts the recruitment opt-in, then the next screen asks for their contact information and if the respondent declines the recruitment opt-in question, the follow-up contact information collection screen is not shown. The alternate option is to use one screen and ask for contact information after the introductory text.

2.2 Results of Recruitment Question Tests

The recruitment question tests showed that the choice of wording in the description and question gave only a marginal difference in the rate of respondents giving contact information (55.9% vs 56.9%, Table 2.2-1). However, the presence of the opt-in question had a large impact with 25.6% of respondents providing their contact information (email and /or phone) when they were explicitly asked on a first screen to opt-in to future panels prior to having the chance to provide contact information, compared to 87.8% who gave contact information without the opt-in question. These results are consistent with the observations from previous panels. As shown in Table 1.1-1, the rate of giving contact information was 21-25% on panels that first asked whether a respondent would want to participate in future panels, and 97% on the SSPC, where respondents were simply asked to provide their email and phone number. Whether these options will lead to different rates of participation in a panel is not yet known as the persons from this test have not yet been contacted to participate in a panel.

Table 2.2-1: Sample sizes, number of respondents and percentage of respondents that provided contact information.

Test component	Option	Sample	Respondents	Percentage providing contact information
All cases	-	20,000	9,288	56.4%
Introduction and exit text	Original	10,000	4,680	55.9%
	Alternate	10,000	4,608	56.9%
Voluntary text	Original (No additional text)	10,000	4,653	55.9%
	Alternate	10,000	4,635	56.8%
Presence of opt-in question	Original (Opt-in question)	10,000	4,687	25.6%
	Alternate (No opt-in question)	10,000	4,601	87.8%

The rate of providing contact information also varied based on whether the questionnaire was completed via self-response using an online questionnaire or with an interviewer by telephone (Table 2.2-2). When the opt-in question was present, 35.6% of respondents gave contact information over the phone compared to 22.9% online, as they were likely encouraged by the interviewer. When there was just one screen asking for contact information, 96.4% of

respondents provided contact information when completing the electronic questionnaire compared to just 60.1% who responded by phone. This is likely due to a soft edit that existed in the questionnaire which prompt respondents to fill-in the contact information if they tried to submit the questionnaire when the fields were blank. The interviewers knew that by clicking the next button a second time would allow the respondent to continue the questionnaire.

Table 2.2-2
Response Rates for Web Panels

Presence of Opt-In Question	Provided Contact Information	
	By Web	By Phone
Yes	22.9%	35.6%
No	96.4%	60.1%

For future Statistics Canada surveys, the recruitment questions for panel participants will use the single screen design as it was the most successful for obtaining contact information. However, the soft edit that prompts respondents to supply missing information will not be included as participation in the panels is voluntary and the edit may give the impression that it is not.

3. Collection for Web Panels

3.1 Overview of Collection Strategy

The initial web panels conducted by Statistics Canada, CPSS and PCS, were entirely web-based. The panel participants were sent an email invitation to participate in the survey on the first day of collection and were then sent 3 to 4 email reminders over the next 1-2 weeks. For these and the targeted population panel surveys, all emails that are sent to respondents contain the secure access code (SAC) that they need to complete the survey. This means the respondents can complete the survey from anywhere with internet access once they receive the email.

Figure 3.1-1A shows the number of responses per day for the 3rd wave of the PCS. Each time an email is sent, there is a spike in the response rates, indicating that there is immediate response to emails. That response period is also relatively short with the spike in response lasting only 2-3 days. For this reason, it is possible to send emails in close succession. In general, the number of responses decreases with each email reminder.

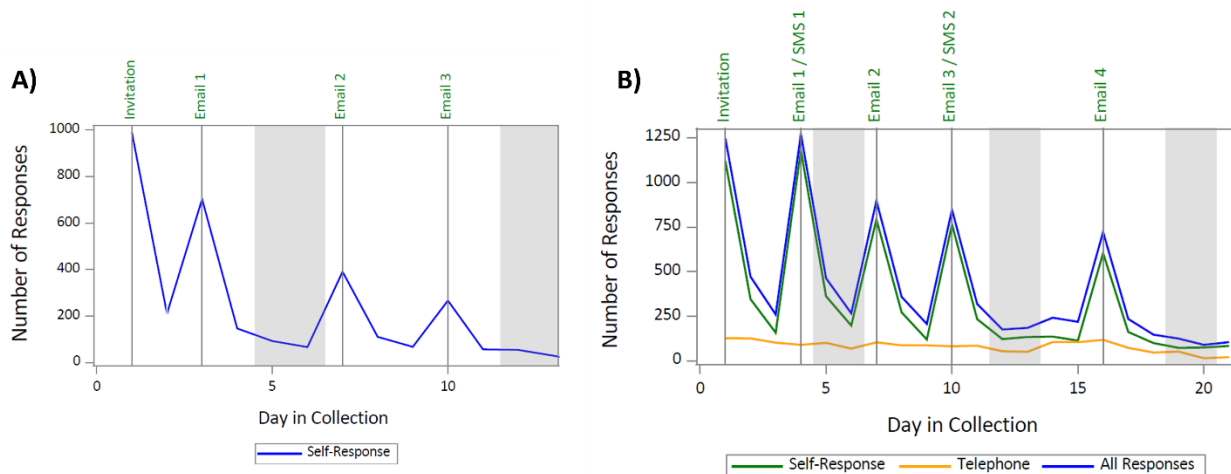


Figure 3.1-1: Number of responses per day to A) The Portrait of Canadian Society – wave 3 and B) the Survey Series on People and their Communities – wave 5. Gray bars indicate weekends.

The targeted web panels, starting with SSPC, also used telephone numbers from people who were recruited to the panel. This was done to ensure better coverage of and response from the sub-groups targeted by the panels. Given the

greater expense of telephone interviewing, only the units that did not provide an email address started collection by phone. Anyone who gave an email address, received the invitation email at the start of collection and a limited number of these cases received telephone follow-up during the second half of collection (see section 3.2 for further details). Overall, the highest response rates were obtained from people who supplied both an email and phone number (Table 3.1-1). Providing both types of contact information may be an indication that the person is more inclined to respond to the panel surveys. The proportion of respondents who replied by phone is relatively small, however receiving a telephone follow-up call may also have encouraged some respondents to complete the questionnaire online.

Table 3.1-1: Response Rates for SSPC waves 3 and 5 by response mode and availability of contact information.

Available contact info	Response Rate					
	SSPC – Wave 3			SSPC – Wave 5		
	Web	Phone	Total	Web	Phone	Total
Phone only (20%)	0.4%	27.8%	28.2%	0.1%	20.9%	21.0%
Email only (14%)	23.2%	0.0%	23.3%	17.4%	0.0%	17.4%
Both phone and email (66%)	27.9%	1.3%	29.2%	25.0%	2.8%	27.7%

The SSPC also tested the addition of SMS text reminders. The SMS message was sent on the same day as the email to persons who had provided a cell phone number and an email address. The SMS message simply told respondents to check their email where they would find the SAC and link to access the questionnaire. Figure 3.1-1B illustrates the number of responses per day to the SSPC wave 5 which sent SMS reminders with the first and third email reminders. Contrary to the response pattern in Figure 3.1-1A, the number of responses when the SMS was sent (Figure 3.1-1B) did not decrease from the previous reminder, but rather remained about the same. Taking into account the response pattern observed among units with and without a cell phone number, the overall boost in the response rates attributable to the SMS reminders was estimated to be approximately 2.8%.

3.2 Adaptive Collection Management

As mentioned, data collection is initiated via email invitation for all cases having an email address. This is to encourage response by the least expensive mode. Since the response rate by demographic groups, such as age and education, is not the same, telephone follow-up is used to target the groups with the lowest response rates. This is accomplished by using a logistic regression model to estimate the probability of response according to the socio-demographic information available on the frame. Since panel survey recruits are respondents to the recruitment survey, this information is known for all units in the sample. The availability of this auxiliary information for all units in the sample, is one of the advantages of panel surveys.

During a 3-week collection period, the first week will typically be dedicated to self-response and the logistic regression model will be fit to the data from the current wave at the start of the second week of collection. The exact set of variables included in the model is based on the current data and varies from one wave to the next. The variables that are mostly commonly included in the model are age group, highest level of education obtained, population sub-group of interest (racialized group for SSPC or indigenous identity for SSFNPMI), and geography (province or region). The model is fit based on all units in the sample, regardless of the contact information available. Units with the lowest probability of response, who provided both an email and phone number are then eligible to receive telephone follow-up calls.

To illustrate how this works we will consider the 5th wave of SSPC, which was collected over a 3-week period from April 2 to 22, 2024 (see Figure 3.2-1). The sample contained 35,468 units, 23,328 of which provided both an email and phone number. The logistic model was fit to the data on day 10 of collection working with all 35,468 units. At this point, the response rates ranged from 10.3% for the 15–24-year-old age group to 23.4% for the 65-74 age group. Since age group is highly related to the response mechanism, it is used as a predictor in the regression model. The 6,669 cases whose estimated response propensity was lowest among the 23,328 cases with both an email and telephone number were selected to receive telephone follow-up. The 15-24 and 25-34 age groups represented 14.1% and 18.4% of the sample, respectively, but accounted for 43.0% and 30.4% of the cases opened for telephone follow-up. By the

last day of collection, the difference in the response rates by age group had decreased by more than half to 5.7% (22.0% for the age group 15-24 and 27.7% for the age group 65-74). A similar trend was observed for the highest level of education, in which the spread of response rates was reduced from 11 percentage points to 6.9.

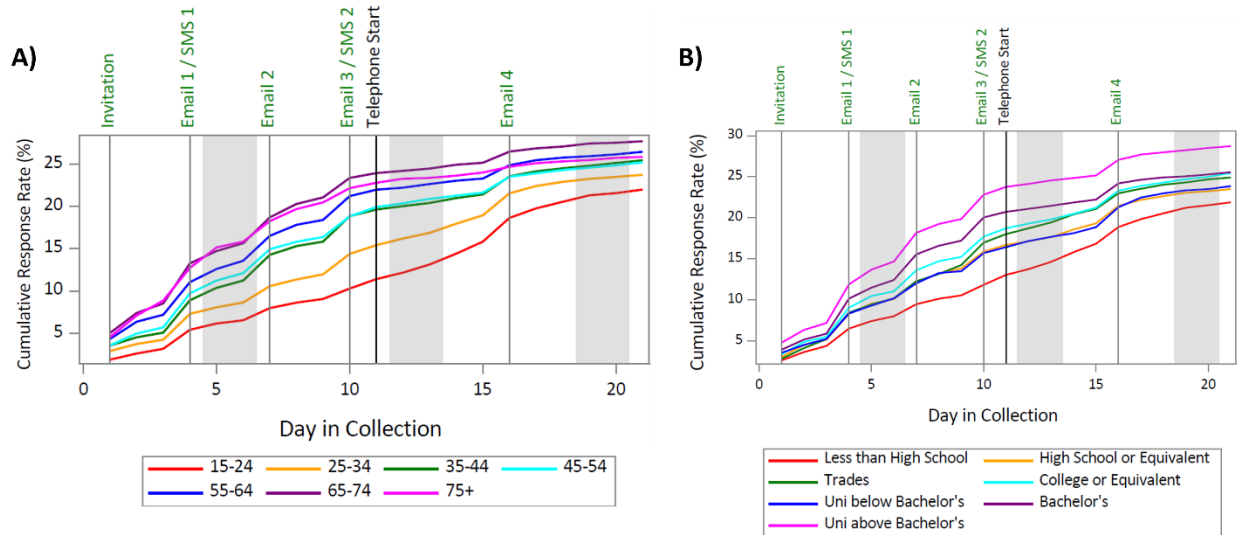


Figure 3.2-1: Cumulative response rate by day in collection by age group (A) and education (B) for the 5th wave of SSPC.

4. Conclusion

Probabilistic web panels are a way in which Statistics Canada can collect data quickly and disseminate results in a timely manner. Since they were first introduced as a data collection option in 2020, experimentation has been carried out to better understand factors related to web panel non-response and develop methods that can be used to increase participation. Though the panels remain a tool whose cumulative response rates are low compared to more traditional surveys, these methods can help increase participation and even out the response rates between subgroups.

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