Polling in Modern Times: Canadian Election Polling, 2015-2018

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Introduction

To what extent have those involved in gathering public opinion research (POR) moved away from what was once considered the standard model of using live telephone interviewers for surveying Canadians? In the past 20 years, the industry has moved away from this model and towards two other modes for conducting interviews: 1) online panels consisting of pre-recruited respondents and 2) automated telephone interviewing using Interactive Voice Response (IVR) systems. What follows is a study of the polls released to the media in the final five days of the 2015 federal election and all provincial elections held between January 1, 2015, and the end of 2018. We do this by comparing the polling figures that were released for the successful party in each election and the outcome. This examination assesses the extent to which a) polling firms have been able to provide a reliable gauge for electoral outcomes, and b) the extent to which there is any statistically significant variability in the reliability of each of the three polling modes used by the firms.

The Era of the Landline

During the latter half of the twentieth century, surveying Canadians via landline telephones was the most effective way to conduct POR. However, since the beginning of this current century, especially in more recent years, many Canadians are difficult to reach due to the abandonment of household landlines in exchange for mobile devices, including cellular telephones. The Canadian Radio-television and Telecommunications Commission (CRTC) reports that from 2012 to 2016, landline telephone subscriptions in Canadian households declined from 83.8 percent

to 66.8 percent, while among Canadian households subscriptions to mobile devices increased from 81.3 percent to 87.9 percent (CRTC, 2018). To address this relatively new challenge, polling firms now must acquire lists of phone numbers (sample) containing both mobile numbers in addition to those attached to landlines. In the United States, the Pew Research Centre now conducts three-quarters of its interviews via mobile devices (Gramlich, 2017). One problem for firms is that mobile phone numbers are more expensive to acquire compared to landline sample.

Canadians also communicate via online technologies, especially via email and through social media. According to the Canadian Internet Registration Authority (CIRA), as of 2016, 86 percent of Canadians had a broadband Internet connection in their home (CIRA, 2018). The impact that this has had on the POR industry was noted in 2009 when the Canadian Marketing Research and Intelligence Association (MRIA) was reporting that online surveys were quickly replacing traditional telephone surveys (Brydon, 2011).

How Canadians are now communicating with each other has had a direct impact on polling during elections. As this paper will show, Canadians were surveyed during general elections from 2015 to 2018 using three different modes. These are: 1) the traditional approach of using live interviewers who are located in a telephone field centre using random digit dialing (RDD) to reach both landlines and mobile devices; 2) the use of Interactive Voice Response (IVR) systems which involves using automated telephone technologies to contact respondents, who then answer questions by pushing buttons on their phones; and 3) conducting online surveys with samples derived from pre-recruited panels.

- **Telephone Surveys with Live Interviewers**

Telephone interviewing for election polls continues to be done in Canada. However, for the period studied for this paper, almost all firms that used live telephone interviewers also relied on the use of online surveys for the same polls. Nanos was the only firm that conducted polls based wholly on live telephone interviews. One advantage to this "blended" approach is that per-completion costs are reduced, while at the same time the results derived from each of the

modes can be compared for reliability. Presumably, if there are significant differences between the results from each of the two modes, the firm can take corrective action (such as completing more interviews in a particular mode, or weighting the sample) before releasing the results to the public.

- **Interactive Voice Response**

The use of IVR for polling is now a generally acceptable industry practice, especially for gauging voter intentions. Because telephones work with a numeric keypad, with each button emitting specific tones, IVR allows respondents to respond to pre-recorded questionnaires based on closed-ended questions (Roos, 2008). The system is cost-effective in that it bypasses the need to use field centres equipped with interviewers and supervisors, each drawing an hourly wage. Furthermore, because it is an automated system, the speed by which a sufficiently large number of interviews are conducted is limited only by the firm's computer capacity, having sufficient sample, and having a sufficient number of telephone lines for outbound calling.[2]

In 2008, EKOS was the first major firm in Canada to provide to the media with national results using IVR, with 1,000 completed surveys collected per night (Waddell, 2009, 245-6). During the 2013 national Liberal Party leadership campaign, EKOS was also able to reach out to 40,000 party supporters, of whom 6,455 completed an automated interview (Grenier, 2014, 26).

- **Online Polling**

Studies recently published in Canada show that when done properly by firms who understand the craft of public opinion polling, online surveys are as reliable as telephone-based studies (Breton *et al*, 2017, 1006). This is the case in other jurisdictions as well. Evelyn Byztek and Ina Bieber, in their examination of polling data from the 2009 German national election, observed "that the data quality of online, telephone and face-to-face surveys is comparable. Hence,

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[2] In the United States, according to federal law, firms must manually dial the numbers to reach respondents when interviewing those with cellular telephones (DeSilver and Keeter, 2015).

online surveys are useful for electoral research" (2016, 41). Likewise, Stephen Ansolabehere and Brian Schaffner, in their study of national polls conducted in 2010 in the USA, compared results from online surveys with telephone-based studies and concluded that "a carefully executed opt-in Internet panel produces estimates that are as accurate as a telephone survey and that the two modes differ little in their estimates of other political indicators and their correlates" (2014, 285).

Online polls are usually conducted by sending e-mail invitations to pre-recruited respondents who have provided their contact information and agreed to take part in an online panel used for marketing research purposes. The invitation includes a link to a website whereby the respondent then conducts an online survey. The research manager will pre-select the sample according to specific characteristics, including age, gender, and specific socio-economic characteristics, such as level of education and household income. The objective, of course, is to ensure that the sample reflects the population under study. In the case of voter studies, the aim is to create what George Gallup would refer to as a "miniature electorate" (Gallup and Rae, 73).

One approach used by many firms to build up their own panels of respondents is to include a recruitment question at the end of every survey they conduct, regardless of the topic, which asks for permission to contact the respondent again. At this point, they include a request for the respondent's email address. After the conclusion of the interview, the respondent then receives an online survey. This survey seeks to capture additional information about the respondent which is then included in the respondent's profile in the panel.[3]

Online panels of pre-recruited individuals can be very large. Currently, Ipsos claims it has 40,000 Canadian households in its panel (Ipsos Consumer Panel of Canada, n.d.). Having such a large panel allows a firm to select sample according to very narrow fields. For example, a large panel would allow the firm to draw a sample of women of a specific age in a region with a specific

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[3] While I served as a Vice President with the Angus Reid Group, later Ipsos-Reid, in the late 1990s and early 2000s, the firm introduced a company-wide policy that all surveys of the Canadian population, regardless of the topic or client for which the survey was being conducted, were to have a recruit-to-panel question at the end of all surveys. This was also the practice at Probe Research, a firm where I worked from 2004 to 2012.

level of education. For firms that have neither the interest nor capacity to create and steward their own online panels, a panel built and maintained by a third party can be accessed at a cost. The global firm Dynata (previously Research Now) has millions of panelists throughout the world, including nearly 500,000 members of its Canadian consumer panel (Research Now, n.d.). Another such company that provides this service is Canadian Viewpoint. This firm claims to maintain 300,000 panelists (Canadian Viewpoint, n.d.). Some firms compile panels for one purpose, but give access to clients seeking to use the panels for purposes for which they were not originally intended. For example, during the 2017 Calgary Municipal Election the firm AskingCanadians provided sample and fielding services to LRT on the Green, an advocacy group that was doing a poll. The sample was based on those who had joined consumer loyalty programs and resided in Calgary (Adams, *et al*, 2018, 33-3).

Of all the 43 polls that were publicly released in the final five days of all the general election campaigns at the national and provincial level held from 2015 to 2018, IVR was the most prevalent mode used to collect survey data, with a total of three firms releasing results from 21 polls.[4] The next most prevalent mode for interviewing was through online surveys, with 16 polls released to the public by seven firms.[5] The least-used mode was the use of live telephone interviewing which was done by a total of three firms that were responsible for a total of six polls. Of these six, five of these polls had the telephone survey results blended with online surveys in the final reported sample.[6]

The period under study, that is, from the beginning of 2015 to the end of 2018, contains ten provincial elections and one federal election. With the exception of Prince Edward Island, polling results were released to the media in all of the provincial elections as well as the federal election during the final five days of the campaigns.

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[4] The three firms were Forum Research, Mainstreet Research, and EKOS.
[5] The seven firms were Insights West, Justason, Insightrix, Leger, Abacus, Angus Reid Institute, and Research Co.
[6] The three firms were Ipsos, Pollara, and Nanos.

The 2015 Federal Election

As I have written elsewhere,**[7]** during the 2015 national campaign, the public had access to polling results based on survey data collected through live telephone, online and IVR methodologies. Nanos was the most prolific firm, with 45 releases based on rolling polls conducted during the length of the campaign. All the Nanos polling results were wholly based on live telephone interviews.[8] Using IVR, EKOS Research and Forum Research each provided results from 12 polls during the campaign. Mainstreet Research also used IVR for five polls. Ipsos and Innovative Research both used a blend of live and online methodologies for their polls, with nine conducted by Ipsos and seven by Innovative Research. Leger provided results from six polls based on online surveys. Abacus Data released results from five online polls, and the Angus Reid Institute released results from four online polls. One oddity was Environics, which used IVR to conduct a total of 57 riding-specific polls for Leadnow, an advocacy group seeking to inform anti-Conservative voters on how best to place their vote strategically within their local ridings (Coletto, 2016, 307-9).

Table 1 provides a comparison of national polling results released during the final five days of the 2015 federal campaign. It includes the identity of the polling firm, its media partner (if any), the interviewing fielding dates, the number of respondents, and the mode used to collect the data. Also provided is a shaded column showing the difference between each poll and the percentage of votes received by the winning party, which in the case of the 2015 election was the Liberal Party. Nanos was the closest to predicting the Liberal vote, with only a 0.4 percentage point difference between its poll and the actual result. The second most accurate firms included Forum Research, Leger (with both using IVR) and Ipsos (which blended both telephone and online samples). All three firms exhibited a difference of only 1.5 points between their polling results and the actual Liberal vote. It is interesting that for the two firms that had wide variations

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[7] This discussion of the 2015 Federal Election and the polls released to the public is based on media releases issued by each of the polling firms as reported in Adams (2015, 108; see also Adams, 2019).

[8] A "rolling poll" consists of surveys collected on a regular basis (usually daily) with specific quotas for completion, the results are "rolled up" up into a final set of results for reporting at a given point in time. As time evolves, the firm drops the older portions of the completed sample and adds newer results to produce a new media release. By doing this, a firm can generate up-to-date media releases within a few days of each other, with some overlapping sample.

between their results and the actual Liberal vote, EKOS and the Angus Reid Institute, both were exceptionally accurate in predicting the Conservative Party's support, with EKOS' numbers being identical to the final vote, while the Angus Reid Institute was off by less than a single point.

Table 1: Final Pre-Election Polls, 2015

Polling Firm and Media Outlet	Fielding Dates	Method	Liberal	LPC Vote vs Poll	CPC	NDP	Bloc	Grn
Actual Vote	**October 19, 2015**	**Actual Vote**	**39.5%**		**31.9 %**	**19.7 %**	**4.7%**	**3.4%**
Nanos/Globe& Mail-CTV	Oct 16-18	N=2,400 Telephone	39.1	.4	30.5	19.7	5.5	4.6
Forum/Toronto Star	Oct 16-18	N=1,373 IVR	40	1.5	30	20	6	3
EKOS/iPolitics	Oct 16-18	N= 2,122 IVR/Teleph one	35.8	3.7	31.9	20.4	4.9	5.6
Ipsos/Global News	Oct 15-17	N=2,503 Online/Tele phone	38	1.5	31	22	4	4
Leger/Le Devoir-Journal de Montréal	Oct 13-16	N=2,086 Online	38	1.5	30	22	6	4
Angus Reid Institute	Oct 13-16	N=2,022 Online	35	4.5	31	22	5	5
Mainstreet/Post media	Oct 14-15	N=5,546 IVR	38	1.5	33	21	5	4

Provincial and Federal Elections 2015 to 2018

Discussed in this section are all the election results at both the federal and provincial level for the four-year period commencing January 1, 2015 to the end of 2018, with a comparison of the polling results to the final outcome for the party that won the campaign.[9] Provided in Table 2 is the percentage of vote for the winning party, the number of firms that produced results to the media in the final five days of the campaign, and the average differences within each jurisdiction between all the polls in the final five days and the actual outcome.

For the period of 2015 to 2018, a total of 13 firms released 43 polls in the final five days leading up to end of all the campaigns.[10] The elections with the most polls in the final days of the campaign were Ontario with eight, the federal election with seven, and Quebec with six. Table 2 shows that the polls were accurate within two points of the outcome in Saskatchewan, Manitoba, British Columbia, and Nova Scotia. The polls for the Canadian and Ontario elections had an average difference of less than three points. Where polls were the least accurate were in Alberta with an average difference of 3.17, Newfoundland with an average 5.00 difference, and Quebec with an average 5.15 difference.

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[9] In the situation where the party that won the most seats was not the party that won the most votes, such as the case of New Brunswick in the 2018 provincial election, the party with the most seats was selected for inclusion.

[10] The initial list of polls is found at: https://en.wikipedia.org/wiki/Opinion_polling_for_the_2015_Canadian_federal_election. All listed polls were examined by going to each of the press releases and, in some cases, the media coverage for the poll listed. In some cases, polling firms produced more than one poll during the brief five-day period examined. In some of these cases, multiple polls appeared due to having results "rolled" into the later poll. In a few other cases, a firm will have conducted a stand-alone single night IVR poll followed by a second stand-alone poll in the same five-day period. In either of these situations, I have eliminated the earlier poll releases from this study.

Table 2: Elections 2015-2018, Outcome, Final Polls, and Differences

Year	Election	Winning Party (Forming Government)	Winning Party % Vote	# Firms 5 days prior	Average Difference to outcome
2015	Canada	Liberal	39.5	7	2.09
2015	Alberta	NDP	40.6	3	3.17
2015	Newfoundland	Liberal	57.2	2	5.00
2015	PEI	Liberal	40.8	0	-
2016	Saskatchewan	Saskatchewan Party	62.4	4	1.95
2016	Manitoba	Progressive Conservative	53.1	4	1.80
2017	BC	NDP	40.3	5	1.26
2017	Nova Scotia	Liberal	39.5	2	1.50
2018	Ontario	Progressive Conservative	40.5	8	2.34
2018	Quebec	Coalition Avenir Québec	37.4	6	5.15
2018	New Brunswick	Progressive Conservative	31.9	2[11]	2.80

Table 3 identifies and compares those firms that released results to the media in the final five days of the campaigns, with the order of the list based on the most prolific to the least prolific firms. Forum Research released 10 IVR polls, with the only election not covered by the firm being that of PEI, where no polls were released by any firms during this period. Mainstreet Research was the next most prolific firm, having produced polls in eight elections using IVR. Oddly, the average difference between the polls and the actual results for the successful parties for these two firms is identical, with both showing a difference of 2.24. One other firm to use IVR as the survey mode for its polling was EKOS, which released polls during three campaigns, with an average figure for the difference being at 2.93.

Two firms had an average difference of less than 1.0 between their polls and the outcome. The first was Insights West, which restricted its activities to the four western provinces. This firm had a .90 average difference between its online survey results and the outcomes in four campaigns. The other was Nanos which released only one poll during the period studied here, and, as noted before, was the only polling firm to rely wholly on surveys conducted by live

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[11] Three polls were released to the public in the final days of the Nova Scotia campaign, however, the link to the polling firm's media release, Corporate Research Associates (now operating as Narrative Research), does not work. Hence, until the media release can be located with the relevant information, the poll is not counted in this table.

interviewers. The two firms that used a blended form of surveying, (i.e. telephone and online survey modes) were Ipsos, which released four polls with an average difference figure of 2.18, and Pollara, which conducted one poll, which had a difference figure of 2.50.

Table 3: Polling Firms in Final 5 Days of the Campaigns with Survey Mode and Differences to Outcomes

Polling Firm	Elections	Mode	Mean Difference to Result of Winning Party
Forum Research	Total 10: BC, Alberta, SK, MB, Ont, QC, NB, NS, Nfld, Canada	IVR	2.24
Mainstreet Research	Total 8: BC, SK, MB, Ont, QC, NB, NS, Canada	IVR	2.24
Insights West	Total 4: BC, Alberta, SK, MB	Online	0.90
IPSOS	Total 4: BC, Ont, QC, Canada	Online + RDD	2.18
EKOS	Total 3: Alberta, Ont, Canada	IVR	2.93
Leger	Total 3: Ont, QC, Canada	Online	2.80
Abacus	Total 2: Ont, Nfld.	Online	7.15
Angus Reid Institute	Total 2: QC, Canada	Online	4.95
Insightrix	Total 2: SK, MB	Online	3.25
Research Co.	Total 2: Ont, QC	Online	2.95
Justason	Total 1: BC	Online	4.30
Nanos	Total 1: Canada	Telephone	0.40
Pollara	Total 1: Ont	Online + RDD	2.50
	Total Polls: 43		Average = 2.64

Because the Quebec election posed a challenge for all the firms that were involved in covering voter intentions (as demonstrated in Table 2; see also Durand (2018)), a second calculation was done to see if Quebec might be distorting the scores in Table 3. When we remove the six polls

for the Quebec provincial election, and then examine the average differences between all the remaining polls and the outcomes, the average difference for Table 3 drops from 2.64 to 2.24.[12]

Comparing Methodologies

As a final part of this paper, I examine the extent to which the different survey modes used for polling in recent Canadian elections produce different levels of accuracy. Here again, we examine the polls that were conducted during the final five days of elections held from 2015 to 2018. On average, all 43 polls had a difference figure of 2.64 when comparing all the polls to the final outcome for the victorious parties. By breaking out the polls according to the three categories of survey modes used, it is possible to examine whether or not each of the three types of survey modes exceeded or did not exceed the combined average difference figure of 2.64 for all 43 polls.

Table 4 shows that those polls that were based exclusively on an online mode were generally less accurate than the polls that were based on surveys using other modes, including IVR and those involving at least a portion of the respondents being surveyed through live telephone interviewers. Half of the online polls exceeded the average difference figure of 2.64. Polls using IVR did fairly well, with two-thirds (67%) of the IVR polls doing better than the average figure. The polls that tended to have a higher rate of accuracy were those that included live telephoning as a significant component of the surveying methodology. These were polls conducted by Ipsos, Pollara, and Nanos. Only one of these polls was less accurate than the average, which was an Ipsos poll conducted for the Quebec election, an election in which all participating firms had greater difficulty. While at first these results may show that the mode has an impact on accuracy, spread across the three categories the 43 polls get spread thinly. Therefore, when the results are tested for statistical significance, a chi-square calculation shows that the results are not statistically significant ($p>.05$). This does not mean there are no

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[12] The extent to which Canadian online panels have sufficient numbers of francophone members, specifically those who only speak french, needs further study.

differences, it simply means that more elections need to be added to the sample before statistically-valid conclusions can be fully drawn.

Table 4: Survey Modes and Accuracy to Electoral Outcomes

	Online	IVR	RDD & RDD/Online
More Accurate than Average (<2.64)	8 (50%)	14 (67%)	5 (83%)
Less Accurate than Average (>2.64)	8 (50%)	7 (33%)	1 (17%)
Total Polls (N=43)	16 (100%)	21 (100%)	6 (100%)

Conclusion

This paper provides an overview of the more prevalent ways by which election polling is now conducted in Canada. It demonstrates that the traditional approach to conducting surveys via live telephone interviewing has now been mostly replaced by the advent of new and generally reliable methods in the form of online surveys and IVR. In terms of which mode provides the most reliable results, at this time there is no hard evidence that any particular mode is definitely "the best." With that being said, the results do indicate a possible pattern that those polls which were based on random sampling, that is, those using IVR and live interviewers, tended to perform better and that the challenge to the industry is that the less expensive option of using pre-recruited panels may be less reliable. Furthermore, the hybrid approach of blending RDD with online polling appears to be a reliable approach for achieving reliability while controlling fielding costs. Further research is needed for studying the manner by which firms in Canada acquire their samples and the extent to which they are representative of the population under study, that is, the voters.

Now that online surveys and IVR interviews have become the norm in Canadian election polling, going forward it will be possible to obtain larger samples of polls and compare these with outcomes. Unfortunately, due to their relatively recent widespread use in Canadian elections, it

is not possible to go backwards in time to build up the sample of online and IVR polls. A follow-up study is planned based on polls done from 2015 to 2020.

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