MIXED-MODE SAMPLING FOR PUBLIC OPINION RESEARCH: MUCH MORE THAN A PLAN B

Sébastien Dallaire

Senior Vice President, Ipsos Canada

GAME CHANGERS

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IPSOS AND POLITICAL POLLING

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POLITICAL POLLING AT IPSOS, A GLOBAL TEAM EFFORT (1)

- Ipsos believes **electoral polling is a very important activity** because it is part of the electoral process.
  - It brings relevant information on what is happening in an election campaign to the public.
  - Well done, and well communicated, this is good for democracy.
- For several reasons, it's becoming much **harder to do accurate electoral polls**.
  - The political environment is more volatile, which makes it harder to capture the rapid changes that happen during the electoral campaigns.
  - Audience harder to reach and more divided politically, socially
  - Constantly changing telecommunications landscape
- Even with the best methods and teams, there is **always a level of uncertainty and risk of errors**.
  - Nonetheless, we always strive to conduct our polling with the maximum level of rigor, based on our global expertise, which is why at Ipsos this is not exclusively a local activity.

POLITICAL POLLING AT IPSOS, A GLOBAL TEAM EFFORT (2)

- Globally, the **Head of Election Research** is responsible for working with the countries on forward planning, and all electoral projects are monitored during execution.
  - At Ipsos, the Global Head of Election Research is Oliviero Marchese.
- Following a local election campaign, **a systematic post-election evaluation is conducted** locally, with involvement from the global Ipsos team.
  - Furthermore, scientific programs are proposed to continuously improve methods and share lessons learned.
- At Ipsos **we look at political polling as a continuous learning process** as opposed to being event-driven, with the aim of building knowledge and expertise across the company.

SINGLE MODE OR MIXED-MODE?

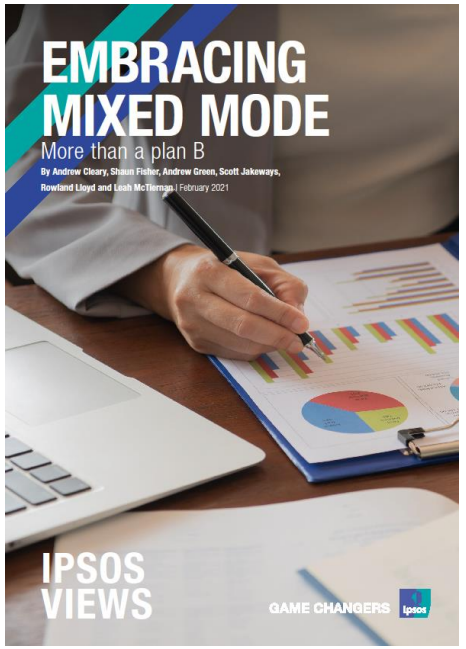
2

HOW DO WE CHOOSE THE CORRECT MODE?

- At Ipsos, our global breadth and depth of operational capabilities allows us to take a "**mode agnostic**" approach to research.
- The research design drives the decision of the appropriate data collection method, not the reverse. Keys: question types, sample size, target population.

  https://www.ipsos.com/en/embracing-mixed-mode-research

- That is about starting from the research need, not from the data collection method which is most easily available.
- A tailored approach to data collection is needed, taking in consideration:
  - Specificity of each country
  - Potential sample coverage errors
  - Political environment that can lead to measurement error because of desirability effects.



MIXED-MODE AT IPSOS, BETTER THAN A PLAN B

- In the end, the **choice of mixed versus single mode is a complex one**.
- In pre-election polling, mixed-mode initially tried to deal with coverage error, as different profiles of voters had a tendency to respond to different data collection methods.
- The approach also proved useful at mitigating measurement errors, like interviewer related effects.
- Nevertheless, such benefits must be evaluated in each country, taking in consideration the specific geography, technological environment, culture and political circumstances.
- Pro-active use of mixed-mode can help research to address necessary trade-offs, in the context of providing the highest quality while focusing against the research project's main priorities:
  - representativeness
  - measurement validity
  - consistency
  - speed
  - cost

MIXED-MODE TO IMPROVE SAMPLE COVERAGE

- A cell-oriented sample design.

Face-to-face	Social-grade			
Gender * Age	A	B	C	D/E
18-24				
25-34				
35-44				
45-54				
55-64				
65+				

Telephone	Social-grade			
Gender * Age	A	B	C	D/E
18-24				
25-34				
35-44				
45-54				
55-64				
65+				

Online	Social-grade			
Gender * Age	A	B	C	D/E
18-24				
25-34				
35-44				
45-54				
55-64				
65+				

Mixed-mode	Social-grade			
Gender * Age	A	B	C	D/E
18-24				
25-34				
35-44				
45-54				
55-64				
65+				

- A good design can correctly cover all the sample cells…yet different data-collection modes can bring different respondent profiles for the same set of sample cells.
- Mixed-mode can compensate uncontrolled difference(s) in respondent profiles, by sourcing the sample cells in a more balanced way whenever it is possible.

MIXED-MODE TO MITIGATE MEASUREMENT ERROR

- Measurement error can vary across survey modes (interviewer vs self-administered).
- Interviewer-administered surveys:
  - less privacy and anonymity leads to acquiescence and/or social desirability.
  - Both effects can severely impact election polling, e.g. turnout estimates, past vote recall and voting intention.

Interviewer administered	Social-grade			
Gender * Age	A	B	C	D/E
18-24				
25-34				
35-44				
45-54				
55-64				
65+				

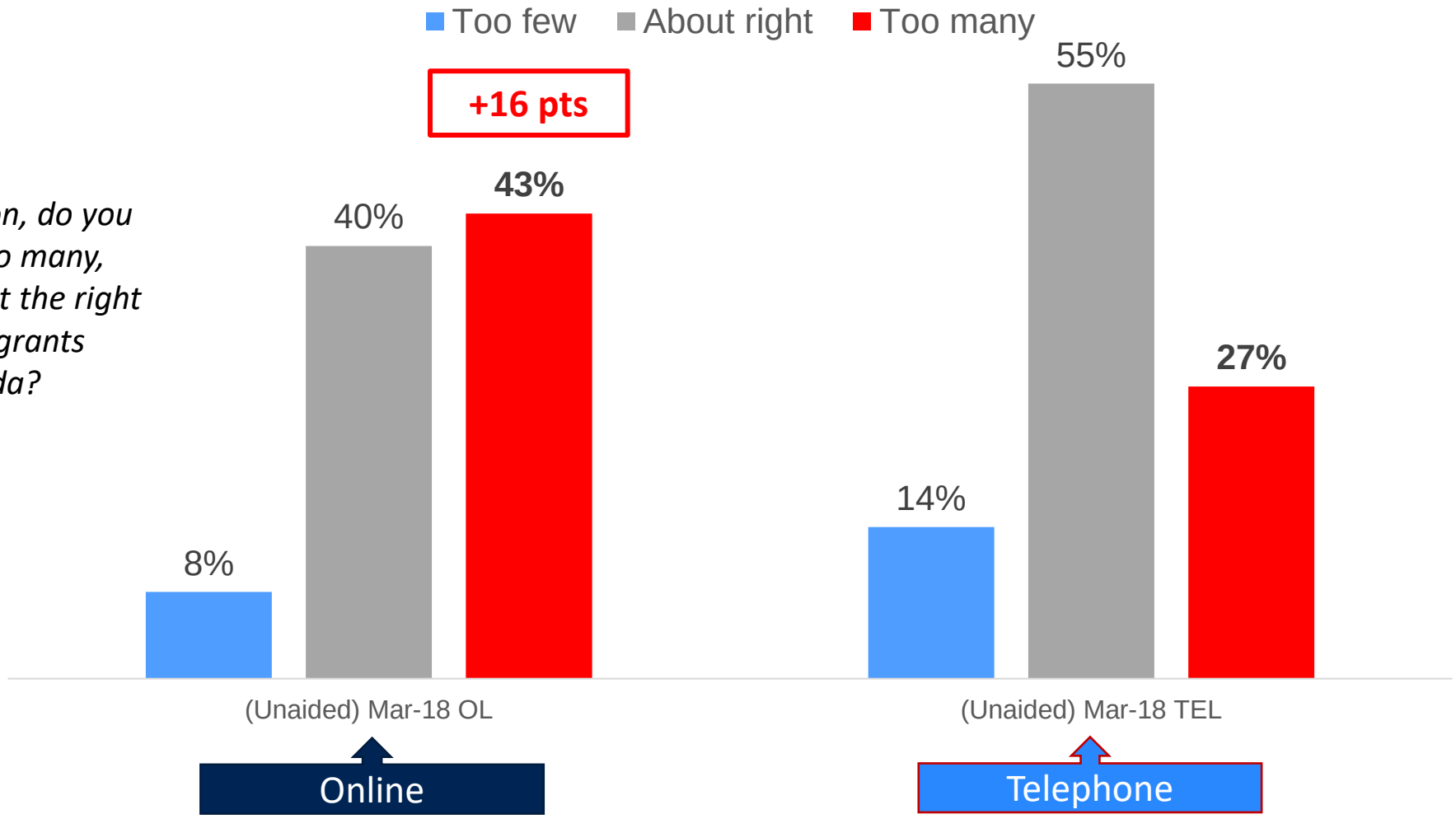
Self-administered	Social-grade			
Gender * Age	A	B	C	D/E
18-24				
25-34				
35-44				
45-54				
55-64				
65+				

- Whether the answer is **spoken, written, or typed** can also affect responses: timing, the level of thought, and amount of detail provided.
- Experience can help understanding measurement bias, although a preliminary analysis of the political market is needed.

Mixed-mode	Social-grade			
Gender * Age	A	B	C	D/E
18-24				
25-34				
35-44				
45-54				
55-64				
65+				

CASE IN POINT: ONLINE RESPONDENTS LESS POSITIVE ABOUT CANADA'S IMMIGRATION LEVELS

Q. *In your opinion, do you feel there are too many, too few, or about the right number of immigrants coming to Canada?*



Source: IRCC Tracking Study: March 2018. Base: *Telephone 1,000 Online 1,004.* Available online through the Government of Canada Public Opinion Research Directorate Portal.

CORE CHALLENGES OF MIXED MODE POLLING

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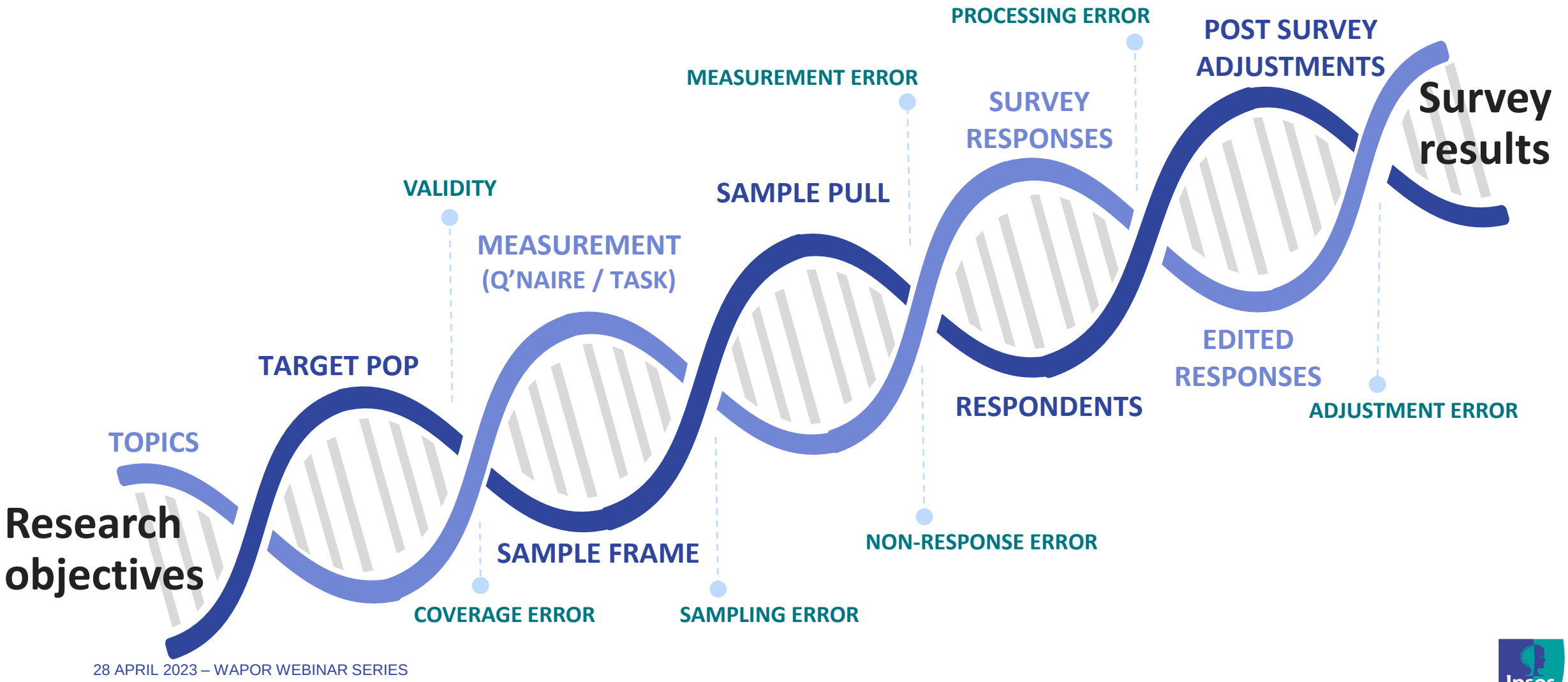
OUR CHALLENGE: REPRESENTATION & MEASUREMENT

- Representation and measurement issues are often intertwined. Comparing results for a set of cells can help to appreciate and possibly to mitigate mode-effect(s).



Survey life cycle from a quality perspective [Robert M. Groves et al. , Survey Methodology, Wiley, 2009]

SPECIFIC CHALLENGES OF MIXED-MODE

- **Worrying signals around the world**.
  - **Social composition of samples becoming more problematic than ever**, especially online (we often struggle to cover the most precarious segments of our societies)
  - **The lack of representation is not necessarily visible** through the usual stratification and control criteria (region, rural/urban, socio-demos, etc.).
  - **Especially hard for sub-national representation**: online panels not designed to provide (enough) localized sample. RDD does not always enable proper targeting of localized respondents.
- **Mixed mode seems to increasingly emerge as a good option** to address representation and measurement tradeoffs. But **several specific challenges** make it difficult to implement:
  - **How to calibrate the share of each data collection mode?** What kind of sample procedure can help to decide what the share of each data collection mode should be?
  - Beyond the usual quota control, **what kind of benchmarks should be used to evaluate the representation** of the mixed-mode solution?

CALIBRATING SAMPLE BLEND IN MIXED-MODE DATA COLLECTION

- **There is limited knowledge on how to calibrate the share of each data collection mode**, and decisions are frequently taken following some kind of rule of thumb: experience over theory.

- **Our Serbian team has explored using the Generalized Reduced Gradient (GRG) method to optimize the sample blend.** This method minimizes the distance between two distributions (e.g., predicted vs. actual results of an election), and can be used to optimize the proportion of each mode.

- **The Serbian experience looks like a solid base for a more formalized approach of sample blend calibration, and we are evaluating the use of the GRG method in more countries, and in different research contexts, beyond election research.**

- We are working with Ipsos Global Science Org. to evaluate – and possibly improve - the existing procedure, investigate the interaction with weighting schemes, and finally **produce a robust, scientifically sound methodology to piece together the multiplicity of elements that the sample design must assemble to reconstitute the reality of target population.**

- **The idea is to define a two-step procedure: weighting first within each mode, then compute an optimal weight between modes,** as this approach appears to be more robust when samples from different data sources are paired or at least weighted to make them comparable on relevant criteria (e.g., region * rural/urban, gender * age, employment status, etc.).

OPTIMIZING SAMPLE BLEND.
A CASE FROM CANADA [1/2] *(ex post facto)*

CAN FED 2015	ONLINE col %	CATI col %	**ACTUAL (TARGET)**	**SOLVER**	sq error	chi distance
The Conservative Party	28	35	**31,9**	33,1	1,3	0,0
The Liberal Party	39	38	**39,5**	38,3	1,5	0,0
The New Democratic Party	25	20	**19,7**	21,4	2,8	0,1
The Bloc Québécois	4	4	**4,7**	4,0	0,5	0,1
The Green Party	5	4	**3,4**	4,3	0,8	0,2
Unweighted	0,60	0,40		COEF sum	1,00	
Weight from Solver	**0,28**	**0,72**		CHI2SQ	0,6	
				resSq	6,9	

CAN FED 2019	ONLINE col %	CATI col %	**ACTUAL (TARGET)**	**SOLVER** (weights 2015)	sq error	chi distance	Call Decision	sq error
The Conservative Party	30	36	**34,4**	34,3	0,0	0,0	33	2,0
The Liberal Party	32	31	**33,1**	31,3	3,3	0,1	31	4,4
The New Democratic Party	20	16	**15,9**	17,1	1,5	0,1	18	4,4
The Bloc Québécois	7	6	**7,7**	6,3	2,0	0,3	7	0,5
The Green Party	7	6	**6,5**	6,6	0,0	0,0	6	0,3
People's Party	2	4	**1,6**	3,4	3,4	2,1	3	2,0
Other	1	1	**0,8**	1,0	0,0	0,1	1	0,0
Unweighted	0,65	0,35		COEF sum	1,00			
Solver 2015	**0,28**	**0,72**		CHI2SQ	2,6			
				resSq	**10,3**			**13,5**

- **Applying** the optimal combination of sample sources' **weights computed on Federal election 2015 to the blend of Federal election 2019 …**
- brings a sum of square errors lower than the one computed on the released "call poll".
- Interesting enough, initial weights (before calibration) and optimal weights are very different.
- The present case clearly shows how strong the mode effect can be.

OPTIMIZING SAMPLE BLEND.
A CASE FROM CANADA [2/2] *(ex post facto)*

CAN FED 2019	ONLINE col %	CATI col %	**ACTUAL (TARGET)**	**SOLVER**	sq error	chi distance
The Conservative Party	30	36	**34,4**	34,2	0,1	0,0
The Liberal Party	32	31	**33,1**	31,3	3,2	0,1
The New Democratic Party	20	16	**15,9**	17,2	1,8	0,1
The Bloc Québécois	7	6	**7,7**	6,3	1,9	0,3
The Green Party	7	6	**6,5**	6,6	0,0	0,0
People's Party	2	4	**1,6**	3,4	3,2	2,0
Other	1	1	**0,8**	1,0	0,0	0,1
Unweighted	0,65	0,35		COEF sum	1,00	
Weight from Solver	**0,31**	**0,69**		CHI2SQ	2,5	
				resSq	10,2	

CAN FED 2021	ONLINE col %	CATI col %	**ACTUAL (TARGET)**	**SOLVER**	sq error	chi distance	Call Decision	sq error
The Conservative Party	30	35	**34,0**	33,5	0,3	0,0	32	4,0
The Liberal Party	35	28	**33,0**	30,1	8,2	0,2	31	4,0
The New Democratic Party	21	20	**18,0**	20,3	5,3	0,3	21	9,0
The Bloc Québécois	7	8	**8,0**	7,7	0,1	0,0	7	1,0
The Green Party	3	3	**2,0**	3,0	1,0	0,5	3	1,0
People's Party	3	6	**5,0**	5,1	0,0	0,0	4	1,0
Other	2	1	**1,0**	1,3	0,1	0,1	1	0,0
Unweighted	0,60	0,40		COEF sum	1,00			
Solver 2019	**0,31**	**0,69**		CHI2SQ	1,2			
				resSq	**15,0**			**20,0**

- **Applying** the optimal combination of sample sources' **weights computed on Federal election 2019 to the blend of Federal election 2021 …**
- brings a sum of square errors lower than the one computed on the released "call poll".
- Interesting enough, initial weights (before calibration) and optimal weights are very different.
- The present case clearly shows how strong the mode effect can be.

IDENTIFYING RELEVANT BENCHMARKS,
TO EVALUATE SAMPLE REPRESENTATION BEYOND USUAL SOCIO-DEMOS

- As already mentioned, the lack of representation of our sample is not necessarily detectable through the usual stratification and control criteria (region, rural/urban, socio-demos, etc.).
- Beyond the usual quota control, **additional points of reference must be found to evaluate the quality of representation our sample provides.**
- **The adoption of a set of benchmarks** covering structures of attitudes, readership and more generally media behaviors, social positions related to the structuration of the employment **can open new perspectives of analysis and provide decisive points of reference to evaluate the quality of representation of our samples.**

AN EXAMPLE OF POSSIBLE BENCHMARK FROM FRANCE [1/2]

For a rapid adoption of the « class of employment », to better apprehend casualization of labor and to identify precarious segments of society

- In 2020 the French National Institute of Statistics (INSEE) significantly redefined its categorization of the occupational status, promoting an innovative solution.
  - On one side, the detailed list of occupations was updated to better reflect the employment environment and trends, still keeping a good level of comparability over time with the previous nomenclature (at aggregated level, 13 professional categories).
  - One the other side, a social categorization was built to complement the historical one - the “class of employment” – which brings **a frame of analysis for the social positions, taking in consideration the emerging divides in the structure of occupations**.

Webinaire instituts.pdf

AN EXAMPLE OF POSSIBLE BENCHMARK FROM FRANCE[2/2]

For a rapid adoption of the « class of employment », to better apprehend casualization of labor and to identify precarious segments of society

- Addresses the **need to better represent the divides which have a growing impact in the structuration of the employment and the determination of the social structure:**
  - **salaried employees vs. independent workers, highly vs. less qualified, regular vs. casual workers, working in the public vs. private sector, in production vs. service orientation.**
  - It aims to support the analysis of the transformation our society has been going through the last decades.
- The adoption of the “class of employment” frame, combined with a better categorization of our territories **can open a new perspective of analysis and a decisive benchmark** for the quality of representation of our samples.

OPERATIONAL CHALLENGES OF MIXED PHONE AND WEB

- Need two operations' teams: phone and online
  - Two separate internal launch processes: kick-off meetings, planning, work-schedules, etc.
  - Two programming teams
- Different questionnaire formats.
  - Preestablished formats for online surveys to deal with allocation and reallocation needs.
  - Reading versus listening to question wording
  - Read all choices, but show them all as well?
  - Different programming approach and software.

OPERATIONAL CHALLENGES OF MIXED PHONE AND WEB (2)

- Fieldwork management differs by mode
  - Stratification of email invites: timing and subsample management.
  - Random daily phone calls vs daily quota management online
  - Yet: balanced final sample across modes
- Necessitates daily planning and management of phone calls and emails.

IN PRACTICE: LONGER FIELD TIMES AND MORE EXPENSIVE

- Online survey generally cheaper
  - More expensive means less frequent.
  - Fewer questions by phone than online
  - Equal samples, or uneven?
- Two teams means more quality control time and complex data tabulation.
  - Two data files to merge post facto
  - Phone fieldwork generally longer
  - Complex weighting challenges (as discussed)
- Not possible to do for smaller firms without combined fieldwork capabilities.

A DIFFERENT KIND OF MIXED-MODE: THE KNOWLEDGE PANEL®

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MIXED MODE APPLIED TO RECRUITMENT AND FIELDWORK?

- KnowledgePanel® is an online panel recruited through probabilistic means.
  - In the U.S. and U.K: recruited via scientifically developed addressed-based sampling.
  - Panel is more representative of the overall population.
  - Offline respondents provided with tablet and internet access.
  - Used for political surveys in the U.S. for past two years.
- Brings significant advantages.
  - No mode effect for fieldwork
  - Offline representation
  - Faster fieldwork compared to mixed-mode or phone
- More R&D needed to better understand impact on voting intentions.

ART AND SCIENCE OF POLLING

5

ART & SCIENCE OF POLLING

- Mixed-mode surveys require a greater level of in-house expertise.
- Researchers need to fully understand the strengths and limitations of the modes they combine.
- Statistical theory helps us to measure and reduce sampling error. Real life is more complex.
- The "art" of the pollster, survey practitioner, is to appreciate and understand
  - the causes generating representation and measurement errors
  - their relative importance
  - their effects on survey results
  - the relative costs of the measures aimed to mitigate the errors
- Practicing such an "art" implies more error modeling, combined with a deep understanding of the sources of error.
- Mixed-mode can be part of the framework, as it can help improving sample coverage and mitigating measurement error, as long as
  - We can adopt a robust procedure to calibrate the share of each data collection mode
  - We identify country specific benchmarks to evaluate the representation of the mixed-mode sample

CONTRIBUTORS

- Oliviero Marchese, Global Director, Election Research
- Gilbert Saporta, Emeritus Professor, CNAM, Paris
- Rich Timpone, Head of Global Science Org., Ipsos
- Marko Uljarevic, Public Affairs Director, Ipsos Serbia
- Aleksandar Zoric, Operations Director, Ipsos Serbia

THANK YOU

GAME CHANGERS