

Technical Appendix

Vividata Spring 2022 Study



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1. Sampling

Ipsos conducted all surveys namely, readership, other media, and product modules from 2019 to 2020. Starting 2021, Ipsos conducts the readership and other media surveys, while all product modules are conducted by B3 Intelligence.

1.1 Ipsos Sampling Approach

Given the importance of nationally representative sample, starting 2019, a hybrid approach is being used by Ipsos to recruit survey participants: currently 30% of the sample is recruited via phone and the remaining sample is recruited from online panels. More specifically, a national representative sample for approximately 75% of the total recruits is conducted and 25% of the sample are held back for “rotating sample boosts in major markets”. This hybrid approach provides better coverage of populations with a demographic balance on age, gender and household income in each market.

The main sample frame was constructed at the local market level and rolled up to a national level using Statistics Canada census DAs. For each CMA or CA, DA codes are cross-referenced to the Postal Code Conversion File (PCCF) to identify all postal codes that cover the relevant geography.

1.1.1 CATI Sample

Since 2019, the sample is a dual frame RDD sample. It is constructed using a top-down strategy. Sample is generated as a national sample and broken out to the constituent markets using a Bayesian approach. The prior information comes from sample information while the actual geography is confirmed from the respondent’s postal code using very detailed postal code definitions.

As the previous approach of recruiting 90% of the sample via landline telephones is dated, it is replaced by an approach which recognises the primacy of cell phones as the way many Canadians now communicate with each other. Sampling for this study involves drawing from dual RDD frames – 35% landlines and 65% cell phones – and inviting them to complete the online survey. This dual RDD frame regionally fine tunes the mix so that Atlantic Canada and the Prairies are a somewhat higher percentage of landlines.

Respondents from the landline RDD frame are selected via the next birthday approach, approaching a classical probability sample approach. Sample from the cell phone and landline frames is allocated out evenly over the course of a month, to ensure an even demographic coverage for publications on a weekly cycle. Spreading the recruiting phase over the course of a month also allows to maximize our reach.

1.1.2 Online Sample

Given that the number of internet users has increased rapidly over the years and most of them prefer to answer surveys online instead of using the telephone, particularly younger generation, the proportion of online sample for this study has increased to 50%. Participants’ age, sex, household income and market are controlled for to achieve a balanced sample mirroring the national census population.

Online sample has been generated from different sources to ensure long-term feasibility of this tracking program. Ipsos uses its own panel named iSay. In addition, external survey panels namely, Dynata, Cint, ROI Rocket, Leger, Lucid and Market Cube are used not only to get more sample but also wider coverage of the universe.

1.1.3 Respondent Selection

CATI Respondent selection involves the selection of the individual in each household to be interviewed. The procedure is to select the individual living in the household, who is 16 years of age or older, had the most recent birthday, and is at home when the household is contacted.

For Online sample, panel members aged 18 years or older are initially invited to participate in the survey. These respondents are asked whether there are any children under the age of 18 living in the household and their relationship to the children. If respondents are parents or legal guardians and their children are between the ages of 14 and 17 years, then respondents are asked whether their children can participate in the survey. If respondents provide consent, children aged 14 to 17 participate in the survey instead of their parents or legal guardians. Otherwise, respondents (18 years or older) who receive the initial invite continue.

1.2 Product Questionnaire Sampling Approach

B3 Intelligence, Vividata partner for product data collection, uses only online panels to conduct all eight (8) product modules. Specific demographic/geographic quotas are managed to ensure sample remains representative of Canada census distribution.

For each CMA or CA, DA codes are cross-referenced to the Postal Code Conversion File (PCCF) to identify all postal codes that cover the relevant geography.

1.2.1 Sample Providers

Online sample is generated from a large and varied pool of panels to ensure long-term feasibility of this tracking program. A good mix of sample providers is used to remove any sample bias and ensure even distribution of demographics. Sample providers being used are: *Lucid, Prodege MR, Quest MindShare, CINT*.

1.2.2 Respondent Selection

For Online sample, panel members aged 14 years or older are initially invited to participate in the survey. These respondents are asked screener questions on their age, average household income and postal codes. In the survey they are asked if they are parents or legal guardians and their children are between the ages of 14 and 17 years, if so, the respondents are asked whether their children can participate in the survey. If respondents provide consent, children aged 14 to 17 participate in the survey instead of their parents or legal guardians. Otherwise, respondents (18 years or older) who receive the initial invite continue.

2022 Spring Study Sample By Market

Market	Province	Population (14+)	2022 Spring Study Sample
Toronto	Ont	5,633,745	5,623
Montréal	Que	3,721,252	4,460
Vancouver	BC	2,398,700	2,694
Calgary	Alta	1,275,040	1,482
Ottawa/Gatineau	Que	1,251,555	1,363
Edmonton	Alta	1,233,491	1,361
Winnipeg	Man	717,985	833
Québec City	Que	710,334	956
Hamilton	Ont	683,579	1,024
Kitchener/ Cambridge/ Waterloo	Ont	489,378	727
London	Ont	471,926	869
Halifax	NS	373,903	537
St. Catharines - Niagara	Ont	367,126	573
Victoria	BC	353,687	618
Windsor	Ont	306,240	572
Saskatoon	Sask	267,550	405
Regina	Sask	215,458	334
Sherbrooke	Que	197,285	223
St. John's	NFLD	184,025	293
Trois-Rivieres	Que	140,510	220
Saguenay	Que	134,744	222
Balance Canada*		11,290,658	14,219
TOTAL CANADA*		32,418,171	39,608

* Excluding Territories

2. Data Collection

2.1 CATI Recruitment Survey

The SSPD study utilizes CATI recruitment by Ipsos to an online Readership survey followed by online Other Media surveys.

Recruitment is conducted continually throughout the year, every other day on a rotating schedule so that in each 2 week period all days are covered (excluding holidays). The recruitment survey allows for up to 7 callbacks to be conducted. The recruitment interview is limited to gaining cooperation and gathering the necessary identification information.

2.1.1 Field Period

Telephone recruitment for Q4-2021 commenced on October 01, 2021 and ended on December 30, 2021. Weekday dialling took place from 5:00pm to 9:00pm local time. On weekends, the dialling times were: Saturday 11.00am to 6.00pm and Sunday between 3.00pm and 9.00pm. Dialling was conducted from Ipsos's Call Centres.

2.1.2 Training Procedures

All field staff received extensive training prior to the start of data collection. A briefing document was developed specifically for the study and provided to each supervisor and interviewer as part of the field briefing. The briefing session, in which all field staff participated, covered the following activities:

- An overall explanation of the study
- Respondent selection procedures
- Recording call outcomes
- Effective handling and conversion of refusals
- Recruitment survey content
- Train using the Script in a training setting and are fully briefed on the study prior to dialling
- Commonly asked respondent questions

2.1.3 Quality Control

Throughout the recruitment phase, quality control procedures were continuously administered to ensure the highest standards:

- Monitoring %: 14% of Landline wave and 13% of Cell Phone wave (10% of completes in each wave)
- Daily monitoring of production and quality by the national field manager
- Daily communication between the national field manager and study manager
- Periodic monitoring of recruitment by national field manager and study manager
- If an e-mail sent to a respondent is bounced back, Ipsos listens to the recruitment recording on the same day (where possible) to check the spelling and make the correction. If Ipsos finds the email address as invalid, Call Centre places a quality assurance follow-up call explaining that the email which the respondent provided could not be delivered and attempt to rectify the problem either by correcting the spelling or obtaining an alternate email.

2.2 Readership and Other Media Surveys

2.2.1 Field Period

Online surveys for Readership are conducted among both Online recruited sample and CATI recruited sample. Online recruited respondents were invited to answer Readership survey using standard online procedure. CATI recruited respondents were recruited via phone (landline or mobile) and were sent their unique survey link via email after the screening interview. Readership surveys for Q4-2021 started on October 01, 2021 and ended on December 30, 2021.

Other Media surveys for Q4-2021 began on October 04, 2021. At the end of Readership survey, respondents were asked for their consent to send a new survey. All respondents that consented were sent an email with a link to the Other Media survey. The Other Media survey was closed about two weeks after the close of the Readership survey to maximize the number of completes.

2.2.2 Quality Control

Skews in demographics are controlled for by age, gender and household income. Measures are also put in place to look at softer data like the number of surveys a panel member has completed and the length of time they have been on the panel – both of which can be indicators of how ‘professional’ a respondent they are.

As well as this, survey responses are monitored for the speed at which they are answered, any obvious patterns of response (‘skimming’, ‘straight-lining’ etc.) and consistency of responses between questions (including the insertion of ‘trick’ questions into the survey).

2.2.3 Incentives

Incentives are provided to improve the completion rate of the Readership Survey: CATI recruits are entered into a monthly draw and online recruits earn points. All respondents who complete the Product survey receive an additional incentive.

2.3 Product Surveys

2.3.1 Field Period

Online recruitment for Product surveys –

Q4- 2021 commenced on October 01, 2021 and ended on December 22, 2021.

2.3.2 Quality Control

Throughout the recruitment phase, quality control procedures were continuously administered to ensure the highest standards:

- Daily monitoring of fielding by dedicated project manager and panel partner field managers.
- Daily communication between the panel partner field manager and study manager
- Periodic monitoring of recruitment by panel partner field manager and study manager
- Extensive bi-weekly scrubbing to ensure data is always of good quality and clean of outliers.

2.3.3 Incentives

All respondents who complete the Product survey receive an incentive facilitated by the panel partners.

3. Readership Questionnaire

All respondents complete the same magazine and newspaper readership questionnaire with appropriate customizations for randomization of magazine titles and local market newspaper data capture. National newspapers are asked of all respondents. Rotations are used to minimize order bias, including rotation of magazine and newspaper questions, and rotation of print and digital formats. Half respondents are asked about magazines first, and half about newspapers first. Half respondents are asked about print first, and half about digital first.

MAGAZINES

Magazine audience measurement in the SSPD study is based on use of a recent reading (RR) methodology. The RR procedure is designed to produce an estimate of the number of individuals who have contact with a particular issue of a publication during its issue life. All recency models set out to measure the audience of any publication by measuring the number of people who see it during the typical issue period (past week for weeklies, past month for monthlies, and so on). It can be shown that the number of people who see any issue of a publication during the issue period will be a close approximation of the real requirement, that is, the number of people who see a typical issue.

Unfortunately, with more than a handful of publications, measurement becomes onerous for the respondent, and therefore, efforts are made to reduce the interview fatigue.

Most significant is the use of a screening question to quickly establish likelihood of exposure to the survey issue and hence reduce the necessity of determining precise recall of “when read” for each magazine surveyed.

3.1 Readership Section Questions And Routing

3.1.1 Magazines

Formats/platforms measured: Printed Issue, Digital Content

Screening

An integral part of this method is a preliminary screening procedure to determine whether the respondent might have read or looked into any copy of the magazine in the past year. This question allows the opportunity of claiming occasional readership of, or familiarity with, a magazine while screening out those who, in all probability, would not qualify as average issue readers.

For each publication respondents are shown a black and white logo or title card which indicates language and frequency of publication, and asked the following question:

Have you read or looked into this publication in the past year? That is...any printed issue or digital content for this publication.

- Yes
- Not Sure
- No

Respondents who claim not to have read or looked into a copy of the magazine in the past year (i.e., who "screen-out") are classified as non-readers of that magazine and therefore not asked the recency question. The remaining respondents, those saying "yes" or "not sure" (i.e., who "screen-in") are classified as potential issue readers and are asked subsequent questions. The screening question is asked of all titles before proceeding to the language, platform, and recency and frequency questions.

Platform

For each magazine screened in, platform read (print, digital) is confirmed.

Again thinking about the past year, when you read or looked through this publication, was it print issues, digital content, or both?

Print issue

Digital content

Both print issue and digital content

Average Issue Readership

For each magazine "screened-in" the respondent is asked about the last time that any issue was read.

When did you last read or look through any printed issue for this publication?

When was the last time you accessed any digital content for this publication?

Only respondents who claim to have read or accessed the publication in the typical issue period are classified as average issue readers. As an aid to memory, for each group of print titles different time scales are presented.

Frequency

Respondents are asked the frequency of reading/accessing the magazine for each platform.

How many printed issues do you usually read or look through for this publication?

All or almost all

Most issues (about 3 in 4)

Some issues (about half)

A few issues (about 1 in 4)

Less than a few

How often do you access digital content for this publication?

Once a day or more

A few times a week

Once a week

A few times a month

Once a month

Less often

The answers to these questions enable all readers to be classified into discrete claimed reading frequencies and, for each category, a reading probability can be established.

Qualitative Readership Measures

After recency and frequency questions are asked for all magazines, those who qualify as average issue readers are asked a series of questions about their involvement with the publication:

1. Source of copy

2. Number of occasions read
3. Method used to access (online)
4. Number of times read/looked through
5. Devices used to access (online)
6. Time spent

NEWSPAPERS

Newspapers are grouped into weekday and weekend issues. Weekday readership questions are asked before weekend readership questions.

3.1.2 Newspapers

Formats/platforms measured: Printed Issue, Digital Content

Screening

Initial screening determines if respondents might have read or looked into any copy of the newspaper in the past three months. This question gives the opportunity of claiming occasional readership of, or familiarity with a newspaper, while screening out those who are unlikely to qualify as average issue readers.

For each publication respondents are shown a black and white logo or title card.

Have you read or looked through this newspaper in the past 3 months? That is...any printed issue or digital content for this newspaper.

- Yes
- Not Sure
- No

Respondents provide the answer for each platform (printed and/or digital), depending on newspaper availability on the platform.

Respondents who claim not to have read or looked into the newspaper in the past three months (i.e., who "screen-out") are classified as non-readers of that newspaper and therefore not asked the recency question. The remaining respondents, those saying "yes" or "not sure" (i.e., who "screen-in") are classified as potential issue readers and are asked subsequent questions. The screening question is asked of all titles before proceeding to the recency and frequency questions.

Average Issue Readership

For each newspaper "screen-in", audience measurement is based on "issue specific" recall.

When did you last read or look through any weekday (Monday to Friday) printed issue of this newspaper?

When did you last read or look through this newspaper's (weekend day) printed issue?

When did you last access any digital content for this newspaper?

Average issue readers are defined as read yesterday for weekday issues and read last weekend readers for weekend issues.

Frequency

All respondents are also asked the frequency of reading each newspaper measured, both weekday and weekend issues. Weekday frequency is based on claimed readership of the number read out of the last five

weekday issues; weekend frequency is based on claimed readership of the number read out of the past four specific Saturday and specific Sunday issues. Digital platforms follow the same pattern, based on claimed accessing of online content.

In a typical week, how many weekday (Monday to Friday) printed issues of this newspaper do you read or look through?

In the past month, how many (weekend day) printed issues of this newspaper did you read or look through?

How often do you access digital content for this newspaper?

Qualitative Readership Measures

Like the magazine section, average issue readers are asked a series of questions about their involvement with the publication:

1. Source of copy
2. Method used to access
3. Devices used to access
4. Time spent

3.1.3 Community Newspapers

Formats/platforms measured: Printed Issue, Digital Content.

Screening

Like daily newspapers, initial screening determines if respondents might have read or looked into any copy of the newspaper in the past three months.

For each publication respondents are shown a black and white logo or title card.

Have you read or looked through this newspaper in the past 3 months? That is...any printed issue or digital content for this newspaper.

- Yes
- Not Sure
- No

Respondents provide the answer for each platform (printed and/or digital), depending on newspaper availability on the platform.

Respondents who claim not to have read or looked into the community newspaper in the past three months (i.e., who "screen-out") are classified as non-readers of that community newspaper and therefore not asked the recency question. The remaining respondents, those saying "yes" or "not sure" (i.e., who "screen-in") are classified as potential issue readers and are asked subsequent questions. The screening question is asked of all titles before proceeding to the recency and frequency questions.

Average Issue Readership

For each community newspaper "screen-in", audience measurement is based on "issue specific" recall.

When did you last read or look through any printed issue of this newspaper?

When did you last access any digital content for this publication?

Average issue readers are defined as reading in the past week.

Frequency

All respondents are also asked the frequency of reading each community newspaper measured,

How many printed issues do you read or look through for this publication?

Qualitative Readership Measures

Average issue readers are asked a series of questions about their involvement with the publication:

1. Source of copy
2. Time spent

4. Other Media Questionnaire

All respondents who complete the readership questionnaire are asked to participate in the follow-up Other Media survey - TV, Radio/Audio, Internet, Out of Home, etc. Additional online sample is also used to invite fresh panel members to participate only in the Other Media survey to make sure that there are enough Other Media completes in each quarter, and these additional Other Media completes are used as “donor only” in data fusion to avoid spoiling the larger sample of the readership survey.

In order to reduce burden on respondents, the Other Media questionnaire is split into three modules with each respondent completing from one to three modules depending on the sample sources. A double ascertainment model is utilized to ensure that every respondent carries all data from the Other Media questionnaire. A typical ascertainment will see data from one respondent being donated to another respondent (based on compatible ascertainment variables/hooks); however, double ascertainment requires a respondent to complete double roles to donate data to other respondents and receive data from other donors.

Respondents for Other Media modules are invited from the following three sample sources:

1. CATI respondents who complete the readership survey: These readership respondents are invited to complete up to all three Other Media modules.
2. ONLINE respondents who complete the readership survey: These readership respondents are invited to complete only one Other Media module.
3. ONLINE respondents who are NOT invited to complete the readership survey: These fresh online panel members are invited to complete up to two Other Media modules

Modules are selected randomly to ensure all modules have an equal chance of coming first or second or third depending on the sample source mentioned above.

5. Product Questionnaire

The Product questionnaire is split into eight modules where respondents are asked to complete up to two out of these eight modules. To ensure that every respondent carries all data from the Product questionnaire so that there are no gaps in the data, a double ascription model is utilized. A typical ascription will see data from one respondent being donated to another respondent (based on compatible ascription variables/hooks); however, double ascription requires a respondent to complete double roles to donate data to other respondents and receive data from other donors.

Each of these eight product modules has a different theme and of varied length of interview.

- Module 1 – Health & Hygiene
- Module 2 – Body care & Hygiene
- Module 3 – Travel, Automotive & Snacks
- Module 4 – Banking, Finance, Home & Real Estate
- Module 5 – Shopping, Leisure, Gambling & Candy
- Module 6 – Beverages
- Module 7 – Food
- Module 8 – Cleaning products, Pets & Food

5.1.1 Pairing Methodology

Pairing of modules is based on an algorithmic approach, which incorporates three main variables.

- Module quota - # of completes in each module
- Module length of interview - # duration of each module
- Sample provider

Function of the algorithm is:

$$\int M_p = (M_q, M_l, S)$$

M_p = Module Pairing

M_q = Module quota

M_l = Module length

S = Sample provider

Algorithm looks at # of respondents who have completed a module, duration of module and any sample provider restrictions. This technique is data driven, whereby identity of module pairs is defined in real time at survey fielding stage.

Benefits of this technique

Randomized sampling – Being algorithmic in nature, the technique uses concept of randomization in conjunction with input variables. This ensures minimal experimental bias (hard coding module pairs). Wherever possible, pairing is defined randomly (provided module buckets are filling in evenly).

Even distribution – To ensure modules are filling up evenly, system uses the concept of least fill. This approach identifies modules where # of respondents is lowest and gives those priority in module assignment. Ensuring modules are being completed at a fairly even rate allows for more even demographic distribution. Uneven distribution of modules does have a negative impact on fielding and quota management.

Respondent experience/Data quality – Each module is of varied length (in minutes), pairing while keeping the duration in mind helps ensure overall length of interview (LOI) is kept to minimum. Respondent experience and data quality are highly correlated with length of interview. The longer the duration of surveys, the more likely that respondents after certain point in survey will start to respond without paying attention. Keeping module LOI in mind ensures two modules of longest duration are not paired together and overall interview length is similar across all respondents.

Sample provider restrictions (panel health) – To ensure data set does not suffer from sample bias, use of multiple sample providers is always recommended in long duration tracker surveys. Multiple providers ensures' bias of one provider is evened out by another. Sample providers have their own restrictions on use of their panel (e.g., not allowing surveys longer than certain duration for their panel) for the long-term health of their panel and quality data. This algorithm keeps such restrictions in mind for a balanced sample.

Pairing of these modules are rotated so that each module gets an equal chance of being the first sections completed. This is done to minimize the complexity of the data ascription and ensure completion is maximized to form the basis of the donor pool. This donor pool will then be used in the double ascription model to populate the remaining respondents without data in those sections.

6. Recent Reading

The Recent Reading (RR) model is used in SSPD questionnaire. The RR model for print adapts the title specific reading question with a qualifying period response scale tied to the print publication interval to capture the needed responses to derive the average issue readership.

RR question for magazines has seven scale points with the first three/four scale points covering the qualifying periods for the derivation of readership estimates. Exhibit 1 shows the scales used for print titles with different publication frequencies.

Exhibit 1 – Print

Frequency per year	Recent Reading Response Scale						
	1	2	3	4	5	6	7
1x - 4x	Past month	Past 2 months	Past 3 months	Past 4 months	Past 6 months	Past year	Longer ago
5x – 6x	Past week	Past month	Past 2 months	Past 3 months	Past 4 months	Past 6 months	Longer ago
7x – 9x	Past week	Past month	Past 6 weeks	Past 7 weeks	Past 2 months	Past 3 months	Longer ago
10x – 22x	Past week	Past 2 weeks	Past month	Past 5 weeks	Past 6 weeks	Past 2 months	Longer ago
23x – 52x	Yesterday	Past 2-3 days	Past week	Past 2 weeks	Past 3 weeks	Past month	Longer ago

Print Newspaper readership is measured on a three point scale for dailies and two point scale for Saturday and Sunday editions (where applicable). All readers that select the first scale point for dailies are considered an average issue reader.

Exhibit 2 –Print RR scale for newspaper titles

DAILIES	Recent Reading Response Scale		
	1	2	3
4 - 7 / week	Yesterday	2 Days ago	Longer ago
3 / week	2 Days ago	3 Days ago	Longer ago
2 / week	2 Days ago	4 Days ago	Longer ago
1/week	Past week	Longer ago	

However, for some titles recency scale doesn't provide exact qualifying interval. In those cases, factoring is applied. Exhibit 3 lists the factors to be applied to different publication intervals.

Exhibit 3 –Print RR scale and factors per frequency

Publication with frequency	Is measured in this PMB group	Theoretical qualifying interval		Analysis - If standard scale points used - then index to theoretical would be		PROPOSED QUALIFYING PERIODS All within +/- 10% index vs theoretical			
		Days	Weeks	Std. scale points (days)	Index to theoretical days	Scale points to be used	Days	Index to theoretical days	
4	4 - 6 times	91.3	13.0	90	99	Past 3 Months (90 Days)	90.0	99	
5		73.0	10.4	60	82	Past 2 Months Plus 50% Past 3 Months	75.0	103	
6		60.8	8.7	60	99	Past 2 Months (60 Days)	60.0	99	
7	7 - 9 times	52.1	7.4	49	94	Past 7 Weeks	49.0	94	
8		45.6	6.5	42	92	Past 6 Weeks	42.0	92	
9		40.6	5.8	42	104	Past 6 Weeks	42.0	104	
10	Monthly / 10 times	36.5	5.2	35	96	Past 5 Weeks	35.0	96	
11		33.2	4.7	30	90	Past Month (30 Days)	30.0	90	
12		30.4	4.3	30	99	Past Month (30 Days)	30.0	99	
13		28.1	4.0	30	107	Past Month (30 Days)	30.0	107	
14		26.1	3.7	21	81	Past 3 Weeks Plus 50% Past Month	24.5	94	
15		24.3	3.5	21	86	Past 3 Weeks Plus 50% Past Month	24.5	101	
16		22.8	3.3	21	92	Past 3 Weeks Plus 25% Past Month	22.8	100	
17		21.5	3.1	21	98	Past 3 Weeks Plus 25% Past Month	22.8	106	
18		20.3	2.9	21	104	Past 3 Weeks	21.0	104	
19		19.2	2.7	21	109	Past 3 Weeks	21.0	109	
20		18.3	2.6	14	77	Past 2 Weeks Plus 50% Past 3 Weeks	17.5	96	
21		17.4	2.5	14	81	Past 2 Weeks Plus 50% Past 3 Weeks	17.5	101	
22		16.6	2.4	14	84	Past 2 Weeks Plus 50% Past 3 Weeks	17.5	105	
23		15.9	2.3	14	88	Past 2 Weeks Plus 25% Past 3 Weeks	15.8	99	
24		15.2	2.2	14	92	Past 2 Weeks Plus 25% Past 3 Weeks	15.8	104	
25		14.6	2.1	14	96	Past 2 Weeks	14.0	96	
26		Every two weeks /	14.0	2.0	14	100	Past 2 Weeks	14.0	100
27			13.5	1.9	14	104	Past 2 Weeks	14.0	104
28	13.0		1.9	14	107	Past 2 Weeks	14.0	107	
29	12.6		1.8	14	111	Past Week Plus 75% Past 2 Weeks	12.3	97	
30	12.2		1.7	14	115	Past Week Plus 75% Past 2 Weeks	12.3	101	
31	11.8		1.7	14	119	Past Week Plus 75% Past 2 Weeks	12.3	104	
32	11.4		1.6	14	123	Past Week Plus 75% Past 2 Weeks	12.3	107	
33	11.1		1.6	14	127	Past Week Plus 50% Past 2 Weeks	10.5	95	
34	10.7		1.5	14	130	Past Week Plus 50% Past 2 Weeks	10.5	98	
35	10.4		1.5	14	134	Past Week Plus 50% Past 2 Weeks	10.5	101	
36	10.1		1.4	7	69	Past Week Plus 50% Past 2 Weeks	10.5	104	
37	9.9		1.4	7	71	Past Week Plus 50% Past 2 Weeks	10.5	106	
38	9.6		1.4	7	73	Past Week Plus 50% Past 2 Weeks	10.5	109	
39	9.4		1.3	7	75	Past Week Plus 25% Past 2 Weeks	8.8	93	
40	9.1		1.3	7	77	Past Week Plus 25% Past 2 Weeks	8.8	96	
41	8.9		1.3	7	79	Past Week Plus 25% Past 2 Weeks	8.8	98	
42	8.7		1.2	7	81	Past Week Plus 25% Past 2 Weeks	8.8	101	
43	8.5		1.2	7	82	Past Week Plus 25% Past 2 Weeks	8.8	103	
44	8.3		1.2	7	84	Past Week Plus 25% Past 2 Weeks	8.8	105	
45	8.1		1.2	7	86	Past Week Plus 25% Past 2 Weeks	8.8	108	
46	7.9		1.1	7	88	Past Week Plus 25% Past 2 Weeks	8.8	110	
47	7.8		1.1	7	90	Past Week (7 Days)	7.0	90	
48	7.6		1.1	7	92	Past Week (7 Days)	7.0	92	
49	7.4		1.1	7	94	Past Week (7 Days)	7.0	94	
50	7.3		1.0	7	96	Past Week (7 Days)	7.0	96	
51	7.2		1.0	7	98	Past Week (7 Days)	7.0	98	
52	Weekly		7.0	1.0	7	100	Past Week (7 Days)	7.0	100

For digital reading, the recency scale for all publications (newspapers and magazines) regardless of their print publication frequency is measured the same and comprises a 6-point scale:

- Yesterday*
- Past week*
- Past month*
- Past 2 months*
- Past 3 months*
- Longer Ago*

Average readership is not calculated for digital readership

6.1 Publications Measured: Magazines by Frequency and Region

Language	Publication Title	Frequency	Nat'l	Nfld / NS / PEI	NB	QC-excl Gatineau	ON (Incl. GTA ; ex Ott/ North ON)	Ottawa/ Gatineau	North ON	MB	SK	AB	BC
FRE	Urbania - digital only	0			x	x		x	x				
ENG	AMA Insider Magazine	4										x	
ENG	CAA Magazine	4		x	x		x	x	x				
ENG	CAA Manitoba	4								x			
Biling	CAA Quebec	4				x		x					
ENG	CAA Saskatchewan	4									x		
FRE	Les Affaires Plus	4			x	x		x	x				
ENG	Food & Drink	5					x	x	x				
FRE	Magazine Véro	5				x		x					
ENG	Best Health	6	x										
ENG	Canada's History	6	x										
ENG	Canadian Geographic	6	x										
FRE	Chatelaine (Fr)	6			x	x		x	x				
ENG	Cottage Life	6	x										
ENG	Our Canada	6	x										
ENG	Zoomer Magazine	6	x										
ENG	Report on Business Magazine	7	x										
ENG	Chatelaine	8	x										
ENG	Fashion Magazine	8	x										
FRE	Ricardo	8			x	x		x	x				
FRE	Clin d'oeil	9			x	x		x	x				

Language	Publication Title	Fre- quency	Nat'l	Nfld / NS / PEI	NB	QC-excl Gatineau	ON (Incl. GTA ; ex Ott/ North ON)	Ottawa/ Gatineau	North ON	MB	SK	AB	BC
ENG	ELLE CANADA	9	x										
FRE	ELLE Québec	9			x	x		x	x				
FRE	Les Idées de ma Maison	9			x	x		x	x				
ENG	Style at Home	9	x										
FRE	Bel Age Magazine	10			x	x		x	x				
ENG	Canadian House & Home	10	x										
ENG	Canadian Living	10	x										
FRE	Coup de Pouce	10			x	x		x	x				
FRE	L'actualité	10			x	x		x	x				
ENG	Reader's Digest	10	x										
FRE	Selection du Reader's Digest	10			x	x		x	x				
ENG	Maclean's	12	x										
ENG	Toronto Life	12	x										
FRE	Les Affaires	14			x	x		x	x				
ENG	Hello! Canada	45	x										

Community Newspapers and Other Publications

Title	Market / Where Distributed
Scarborough Mirror	Scarborough CSD
Mississauga News	Toronto-Mississauga
Brampton Guardian	Brampton
Niagara This Week	St. Catharines- Niagara CMA
Toronto Star Wheels	Toronto Star Saturday

7. Weighting Procedure And Population Projection

The SSPD survey weighting is designed to adjust the survey completions to account for the effects of disproportionate sampling design, differential response rate by day of week, demographics and ultimately projection to the most recent Canada population age 14 and over.

In general, the weighting structure can be summarized in 5 different stages, each executed sequentially and cumulatively:

1. Size of household
2. Sample equalization by week
3. Sample equalization by day of week
4. Personal income adjustment
5. Population projection

A final step is included to develop household projections on top of population projections.

7.1 Size of Household Weight

First stage of weighting is to align the household size characteristics of the data to the known population distribution within each market. Household size categories are:

- i) Single person
- ii) 2 persons
- iii) 3 persons
- iv) 4 or more persons

7.2 Sample Equalization by Week Weight

Due to the uneven number of completions achieved over the weeks within each quarter, a balancing weight based on 52 weeks is applied across markets to even out the pre-weighted sample.

7.3 Day of Week Equalization Weight

It is also necessary to equalize the sample contribution by each day of the week to minimize distortion to average readership estimates. At this stage, the pre-weighted sample is adjusted to achieve an equal number of weighted respondents per day. This is done within each market.

7.4 Personal Income Weight

Ipsos uses Statistics Canada Income Tax Filers and Census data to update the income distribution of the most recent census. This updated distribution is applied to the pre-weighted data to improve the currency of personal income profile of the sample. This adjustment is done within each market.

7.5 Age within Gender Population Adjustment and Projection

The last stage of weighting is to combine the adjustment due to differential response rates by demographics (age and gender) with the population growth, and project to each market's population in one single step. All secondary population adjustments/projections within market such as language in Montreal and Ottawa-Gatineau are also incorporated in this stage. This adjustment is done within each market.

7.6 Household Weighting and Projection

Household weights are established by the following four stages done within each market:

1. Conversion from people base to households
2. Alignment to census household size distribution
3. Household income distribution adjustment
4. Projection to current household estimate

7.6.1 Conversion from people base data to households

The weighted people base data is converted to households by establishing a pre-weight at the respondent level. This is done by dividing the population weight factor by the number of people (all ages) in the household for each respondent record. For example, a respondent may carry a combined sample adjustment and projection weight of 1000. If the respondent lives in a 4-persons household, then his household pre-weight will be 250 (1000/4).

7.6.2 Alignment to census household size distribution

The pre-weighted household data is then weighted to the census household distribution.

7.6.3 Household income distribution adjustment

The next step of the household weighting is to refine the weighted household data by applying the updated household income distribution. Statistics Canada Income Tax Filers data is used to create the updated census household income distribution targets for this weighting step.

7.6.4 Projection to current total household

The last step of the household weighting is the projection to the current estimate of households in each market.

7.7 Household and Population Projections

Current estimates of households and population as of July 01, 2021 are not directly available from Statistics Canada. Projections were therefore developed by Manifold Data Mining Inc.

Manifold's projections of households and population based on analyses of growth rates and population movement were compared with Statistics Canada estimates wherever possible. Adjustments were subsequently made to ensure that relationships within and across strata were generally preserved.

8. Editing And Coding

8.1 Editing

The use of computerized systems for online interviewing provides a level of ongoing editing. The programming of the questionnaire is such that subsequent questions are not presented until valid responses are entered on previous questions. This internal control ensures that the correct question routing is followed and that, when required, the randomization or rotations of stimuli are executed.

8.2 Occupation Coding

Respondents are asked the following questions to gather information for classifying their occupations:

- What is your job title? (Open-Ended)
- Describe the type of work do you do, including your field of work (Open-Ended)
- Which of these best describes your job title?
- What type of company do you work for?
- What is the most significant corporate area of business for your company or employer?
- What is the name of your company?
- How many people report to you either directly or indirectly through your subordinates?
- Which of the following areas in your company are you directly involved with?

Responses to the above questions are used to classify each respondent's occupation based on the type of job duties and work that respondent does, which is a coding system similar to the National Occupation Classification (NOC).

8.3 MOPES

This is a common acronym used to include managers, owners and professionals. Individual job titles comprising these groups are listed in the Codebook section "Occupation – Detailed Codes".

8.4 Summary Metrics

Summary Metrics –

Demos

Summary Code	Category
Age 18+	Demographics
All Measured Markets	Demographics
Major Markets	Demographics

Newspapers

Summary Code
1 Weekly Time Spent (min) – Print
2 Total Print/Digital Weekday AIR
3 Total Print/Digital Saturday AIR
4 Total Print/Digital Sunday AIR
5 Total Print/Digital Last Day Time Spent (min)
6 Print 5-Day Cume
7 Print 6-Day Cume
8 Print 7-Day Cume
9 Total Print/Digital Weekly Cume
10 Net Digital Weekly Cume

Magazines

Summary Code
1 Total Print/Digital AIR
2 Total Print/Digital Time Spent (min)
3 Net Digital Time Spent With Last Issue

Q1 Summary Metrics with Calculation Formula – Addition to current list

All Markets/All Titles – GENERIC

Summary Code	
1	Average # Print Issues/Week
2	Total Time With Any Print issue Last Saturday (hrs)
3	Total Time With Any Print issue Last Sunday (hrs)
4	Total Weekly Time With Any Print Issue (hrs)
5	Time Spent With Any Print Issue Last Day Weekday (hrs)
6	Digital Time Spent With Any Title Last Day (hrs)
7	Total Print/Digital Time Spent With Any Title Last Day hrs)
8	Read/Looked Any Yesterday
9	# of Any Print Weekday Issues Read/Looked Through
10	Read/Looked Through Any Print Saturday Issue Past Month
11	Read/Looked through Any Print Sunday Issue Past Month
12	How Last Print Issue Obtained Weekday/Saturday/Sunday
13	Devices Used to Access Digital Content
14	Print Cumes – 5 Day; 6/7 Day

All Titles – GENERIC

Summary Code	
2	Digital Time Spent with any title Last Day (hrs)
3	Device Used to Access Digital Content
4	Total Print/Digital Time spent with any Title (hrs)
5	Average # of Print issues read/month
6	Time Spent Reading Any Print Issue (hrs)
7	Time Spent With-Last Printed Issue

8.5 J.D. Power And Associates – Automotive Groupings

SEGMENT	SUB-SEGMENT
Sub-Compact	City Car Small Car Small Premium Car Small Premium SUV Small SUV
Compact	Compact Car Compact Multi-Purpose Vehicle Compact Sporty Car Compact SUV
Compact Premium	Compact Premium Car Compact Premium SUV
Midsized	Midsized Car Midsized Pickup Midsized Sporty Car Midsized SUV Minivan
Midsized Premium	Midsized Premium Car Midsized Premium Sporty Car Midsized Premium SUV
Large	Large Car Large Heavy Duty Pickup Large Light Duty Pickup Large SUV Large Van
Large Premium	Large Premium Car Large Premium SUV

2021 Segment	2021 Sub-segment	Make / Model
Compact	Compact Car	Chevrolet Cruze
Compact	Compact Car	Chevrolet Uplander
Compact	Compact Car	Dodge Dart
Compact	Compact Car	Ford Focus
Compact	Compact Car	Ford Focus Electric
Compact	Compact Car	Honda Civic/Civiv Hybrid/Insight
Compact	Compact Car	Hyundai Elantra
Compact	Compact Car	Kia Forte/Forte 5
Compact	Compact Car	Mazda 2/3/ Protegé/5
Compact	Compact Car	Mitsubishi Lancer
Compact	Compact Car	Nissan LEAF
Compact	Compact Car	Nissan Sentra
Compact	Compact Car	Scion iM
Compact	Compact Car	Subaru Impreza
Compact	Compact Car	Subaru WRX/WRX STI

2021 Segment	2021 Sub-segment	Make / Model
Compact	Compact Car	Toyota Corolla
Compact	Compact Car	Toyota Corolla Hatchback
Compact	Compact Car	Toyota Corolla Hybrid
Compact	Compact Car	Toyota Prius
Compact	Compact Car	Toyota Prius Prime
Compact	Compact Car	Volkswagen Beetle
Compact	Compact Car	Volkswagen Golf
Compact	Compact Car	Volkswagen Golf GTI
Compact	Compact Car	Volkswagen Jetta
Compact	Compact Car	Volkswagen Jetta GLI
Compact	Compact Multi-Purpose Vehicle	Ford C-Max Energi
Compact	Compact Multi-Purpose Vehicle	Ford C-Max Hybrid
Compact	Compact Multi-Purpose Vehicle	Kia Soul/Soul EV
Compact	Compact Multi-Purpose Vehicle	Nissan NV 200
Compact	Compact Multi-Purpose Vehicle	Scion xB
Compact	Compact Sporty Car	Fiat 124 Spider
Compact	Compact Sporty Car	Mazda Miata / MX-5
Compact	Compact Sporty Car	Mini Cooper
Compact	Compact Sporty Car	Nissan 370Z
Compact	Compact Sporty Car	Scion FR-S
Compact	Compact Sporty Car	Scion tC
Compact	Compact Sporty Car	Subaru BRZ
Compact	Compact Sporty Car	Toyota 86
Compact	Compact SUV	Chevrolet Equinox
Compact	Compact SUV	Ford Bronco
Compact	Compact SUV	Ford Escape
Compact	Compact SUV	GMC Terrain
Compact	Compact SUV	Honda CR-V
Compact	Compact SUV	Hyundai iONIQ5
Compact	Compact SUV	Jeep Cherokee
Compact	Compact SUV	Jeep TJ/Wrangler
Compact	Compact SUV	Kia Seltos
Compact	Compact SUV	Mazda Truck / SUV
Compact	Compact SUV	Mitsubishi Outlander
Compact	Compact SUV	Mitsubishi Outlander PHEV
Compact	Compact SUV	Mitsubishi RVR
Compact	Compact SUV	Nissan Rogue
Compact	Compact SUV	Subaru Forester
Compact	Compact SUV	Toyota RAV 4
Compact	Compact SUV	Toyota RAV 4 Hybrid
Compact	Compact SUV	Toyota RAV 4 Prime
Compact	Compact SUV	Volkswagen Taos
Compact Premium	Compact Premium Car	BMW 1 Series

2021 Segment	2021 Sub-segment	Make / Model
Compact Premium	Compact Premium Car	BMW 3 Series
Compact Premium	Compact Premium Car	BMW Active Hybrid 3
Compact Premium	Compact Premium Car	Infiniti Q50
Compact Premium	Compact Premium Car	Infiniti Q60
Compact Premium	Compact Premium Car	Kia Stinger
Compact Premium	Compact Premium Car	Lexus ES/ES Hybrid
Compact Premium	Compact Premium Car	Lexus IS
Compact Premium	Compact Premium Car	Lexus RC
Compact Premium	Compact Premium Car	Lincoln MKZ
Compact Premium	Compact Premium Car	Lincoln MKZ Hybrid
Compact Premium	Compact Premium Car	Mercedes Benz B-Class, CLA
Compact Premium	Compact Premium Car	Mercedes Benz C-Class
Compact Premium	Compact Premium Car	Volkswagen Arteon
Compact Premium	Compact Premium Car	Volvo S 60
Compact Premium	Compact Premium Car	Volvo V 60
Compact Premium	Compact Premium Car	Volvo V 60 Cross Country
Compact Premium	Compact Premium Sporty Car	Lexus RC F
Compact Premium	Compact Premium SUV	Acura RDX
Compact Premium	Compact Premium SUV	Infiniti QX50
Compact Premium	Compact Premium SUV	Lexus NX/NX Hybrid
Compact Premium	Compact Premium SUV	Lincoln MKC
Compact Premium	Compact Premium SUV	Volvo XC 60
Electric	Electric SUV	Ford Mache-E
Electric	Electric SUV	Hyundai Nexo
Electric	Electric SUV	Volkswagen ID.4
Large	Large Car	Buick Lacrosse/Allure
Large	Large Car	Chevrolet Impala
Large	Large Car	Chrysler 300/300C
Large	Large Car	Dodge Charger
Large	Large Car	Ford Taurus
Large	Large Car	Nissan Maxima
Large	Large Car	Toyota Avalon
Large	Large Heavy Duty Pickup	Chevrolet Silverado Heavy Duty 2500/3500
Large	Large Heavy Duty Pickup	Ford F-Series Super Duty 250 / 350
Large	Large Heavy Duty Pickup	RAM Heavy Duty 2500/3500
Large	Large Light Duty Pickup	Chevrolet Silverado 1500
Large	Large Light Duty Pickup	Ford F-Series Light Duty F150
Large	Large Light Duty Pickup	GMC Sierra 1500-3500
Large	Large Light Duty Pickup	Nissan Titan
Large	Large Light Duty Pickup	RAM 1500
Large	Large Light Duty Pickup	Toyota Tundra
Large	Large SUV	Nissan Armada
Large	Large SUV	Toyota Sequoia

2021 Segment	2021 Sub-segment	Make / Model
Large	Large Van	Ford Econoline
Large	Large Van	Mercedes Benz Sprinter/Metris
Large	Large Van	Nissan NV 1500 / 2500
Large	Large Van	Nissan NV 3500
Large	Large Van	RAM Pro Master
Large Premium	Large Premium Car	Audi A8
Large Premium	Large Premium Car	BMW 7 Series
Large Premium	Large Premium Car	Hyundai Equus
Large Premium	Large Premium Car	Infiniti Q80
Large Premium	Large Premium Car	Lexus LS/LS Hybrid
Large Premium	Large Premium Car	Mercedes Benz S-Class
Large Premium	Large Premium SUV	Infiniti QX80
Large Premium	Large Premium SUV	Lexus LX
Midsized	Midsized Car	Chevrolet Malibu
Midsized	Midsized Car	Chrysler 200
Midsized	Midsized Car	Dodge Avenger
Midsized	Midsized Car	Ford Fusion
Midsized	Midsized Car	Ford Fusion Energi
Midsized	Midsized car	Ford Fusion Hybrid
Midsized	Midsized Car	Honda Accord
Midsized	Midsized Car	Hyundai Sonata
Midsized	Midsized Car	Hyundai Sonata Hybrid
Midsized	Midsized Car	Kia K5
Midsized	Midsized Car	Kia Optima
Midsized	Midsized Car	Kia Optima Hybrid/Plug-in Hybrid
Midsized	Midsized Car	Nissan Altima
Midsized	Midsized Car	Subaru Legacy
Midsized	Midsized Car	Toyota Camry
Midsized	Midsized Car	Toyota Camry Hybrid
Midsized	Midsized Car	Volkswagen Passat
Midsized	Midsized Pickup	Chevrolet Colorado
Midsized	Midsized pickup	Ford Ranger
Midsized	Midsized Pickup	Hyundai Santa Cruz
Midsized	Midsized Pickup	Jeep Gladiator
Midsized	Midsized Pickup	Nissan Frontier
Midsized	Midsized Pickup	Toyota Tacoma
Midsized	Midsized Sporty Car	Chevrolet Camaro
Midsized	Midsized Sporty Car	Dodge Challenger
Midsized	Midsized Sporty Car	Ford Mustang
Midsized	Midsized SUV	Buick Enclave
Midsized	Midsized SUV	Dodge Durango
Midsized	Midsized SUV	Dodge Journey
Midsized	Midsized SUV	Ford Edge

2021 Segment	2021 Sub-segment	Make / Model
Midsize	Midsize SUV	Ford Explorer/Sport Trac
Midsize	Midsize SUV	Ford Flex
Midsize	Midsize SUV	Ford Freestyle/Taurus X
Midsize	Midsize SUV	Hyundai Palisade
Midsize	Midsize SUV	Hyundai Santa Fe
Midsize	Midsize SUV	Jeep Grand Cherokee
Midsize	Midsize SUV	Kia Sorento
Midsize	Midsize SUV	Kia Telluride
Midsize	Midsize SUV	Mazda CX-5/7/9
Midsize	Midsize SUV	Nissan Murano
Midsize	Midsize SUV	Nissan Pathfinder
Midsize	Midsize SUV	Subaru Ascent
Midsize	Midsize SUV	Subaru Outback
Midsize	Midsize SUV	Toyota 4 Runner
Midsize	Midsize SUV	Toyota Highlander
Midsize	Midsize SUV	Toyota Highlander Hybrid
Midsize	Midsize SUV	Toyota Venza
Midsize	Midsize SUV	Volkswagen Atlas
Midsize	Midsize SUV	Volkswagen Atlas Cross Sport
Midsize	Minivan	Chrysler Pacifica/Pacifica Hybrid
Midsize	Minivan	Chrysler Town & Country
Midsize	Minivan	Chrysler Sebring
Midsize	Minivan	Dodger Caravan / Grand Caravan
Midsize	Minivan	Honda Odyssey
Midsize	Minivan	Kia Sedona
Midsize	Minivan	Toyota Sienna
Midsize Premium	Midsize Premium Car	Audi A7
Midsize Premium	Midsize Premium Car	BMW 5 Series
Midsize Premium	Midsize Premium Car	Hyundai Genesis
Midsize Premium	Midsize Premium Car	Infiniti Q70
Midsize Premium	Midsize Premium Car	Mercedes Benz E-Class
Midsize Premium	Midsize Premium Car	Volvo V 90
Midsize Premium	Midsize Premium Sporty Car	Chevrolet Corvette
Midsize Premium	Midsize Premium Sporty Car	Dodge Viper
Midsize Premium	Midsize Premium Sporty Car	Lexus LC/LC Hybrid/LC Convertible
Midsize Premium	Midsize Premium Sporty Car	Nissan GTR
Midsize Premium	Midsize Premium SUV	Acura MDX
Midsize Premium	Midsize Premium SUV	Infiniti QX60
Midsize Premium	Midsize Premium SUV	Lexus GX
Midsize Premium	Midsize Premium SUV	Lexus RX/RX Hybrid/RX L Hybrid
Midsize Premium	Midsize Premium SUV	Lincoln MKX
Midsize Premium	Midsize Premium SUV	Volvo XC 90
Sub-Compact	City Car	Fiat 500/500C

2021 Segment	2021 Sub-segment	Make / Model
Sub-Compact	City Car	Fiat Abarth
Sub-Compact	City Car	Scion iQ
Sub-Compact	Small Car	Chevrolet Sonic
Sub-Compact	Small Car	Ford Fiesta
Sub-Compact	Small Car	Hyundai Accent
Sub-Compact	Small Car	Kia Rio Sedan/Rio Hatchback
Sub-Compact	Small Car	Mitsubishi Mirage
Sub-Compact	Small Car	Nissan Micra
Sub-Compact	Small Car	Toyota Yaris
Sub-Compact	Small Car	Nissan Versa
Sub-Compact	Small Premium Car	Audi A3
Sub-Compact	Small Premium SUV	Audi Q3/Q4
Sub-Compact	Small Premium SUV	BMW X1
Sub-Compact	Small Premium SUV	Infiniti QX30
Sub-Compact	Small Premium SUV	Lexus UX/UX Hybrid
Sub-Compact	Small Premium SUV	Volvo XC 40
Sub-Compact	Small SUV	Buick Encore
Sub-Compact	Small SUV	Chevrolet Trax
Sub-Compact	Small SUV	Fiat 500L/ 500X
Sub-Compact	Small SUV	Ford EcoSport
Sub-Compact	Small SUV	Hyundai Kona
Sub-Compact	Small SUV	Hyundai Tucson
Sub-Compact	Small SUV	Hyundai Venue
Sub-Compact	Small SUV	Jeep Compass
Sub-Compact	Small SUV	Jeep Patriot
Sub-Compact	Small SUV	Jeep Renegade
Sub-Compact	Small SUV	Kia Niro/Niro Plug-in Hybrid/Niro EV
Sub-Compact	Small SUV	Kia Sportage
Sub-Compact	Small SUV	Mini Countryman
Sub-Compact	Small SUV	Nissan Kicks
Sub-Compact	Small SUV	Nissan Qashqai
Sub-Compact	Small SUV	Subaru Crosstrek
Sub-Compact	Small SUV	Toyota C-HR
Sub-Compact	Small SUV	Volkswagen Tiguan
Unclassified	Unclassified	Acura ILX/RLX/TLX
Unclassified	Unclassified	Other Acura
Unclassified	Unclassified	Alfa Romeo (Any)
Unclassified	Unclassified	Audi A4/A5/A6
Unclassified	Unclassified	Audi Q5/Q7/Q8
Unclassified	Unclassified	Other Audi
Unclassified	Unclassified	BMW X3/X5/X6
Unclassified	Unclassified	Other BMW
Unclassified	Unclassified	Other Buick

2021 Segment	2021 Sub-segment	Make / Model
Unclassified	Unclassified	Any Cadillac
Unclassified	Unclassified	Other Chevrolet
Unclassified	Unclassified	Other Chrysler
Unclassified	Unclassified	Other Dodge
Unclassified	Unclassified	Fiat 500 Turbo
Unclassified	Unclassified	Other Fiat
Unclassified	Unclassified	Other Ford
Unclassified	Unclassified	Other GMC
Unclassified	Unclassified	Honda Fit/HR-V/Pilot
Unclassified	Unclassified	Other Honda
Unclassified	Unclassified	Hummer (Any)
Unclassified	Unclassified	Other Hyundai
Unclassified	Unclassified	Other Infiniti Car
Unclassified	Unclassified	Other Infiniti Truck / SUV
Unclassified	Unclassified	Jaguar (Any)
Unclassified	Unclassified	Other Jeep
Unclassified	Unclassified	Other Kia
Unclassified	Unclassified	Landrover (Any)
Unclassified	Unclassified	Other Lexus Car
Unclassified	Unclassified	Other Lexus SUV
Unclassified	Unclassified	Other Lincoln
Unclassified	Unclassified	Other Mazda
Unclassified	Unclassified	Mercedes Benz GLE, GLE Coupe, GLS, G-Class
Unclassified	Unclassified	Mercedes Benz GLA, GLC / GLK, GLC Coupe
Unclassified	Unclassified	Mercedes Benz SL, CLS, AMG GT, S-Cab, S-Coupe, E-Cab, E-Coupe
Unclassified	Unclassified	Mercedes Benz SLC /SLK, C-Cab, C-Coupe
Unclassified	Unclassified	Other Mercedes-Benz Car
Unclassified	Unclassified	Other Mercedes-Benz Truck / SUV
Unclassified	Unclassified	Other Mini
Unclassified	Unclassified	Other Mitsubishi
Unclassified	Unclassified	Other Nissan
Unclassified	Unclassified	Oldsmobile (Any)
Unclassified	Unclassified	Porsche (Any)
Unclassified	Unclassified	Other RAM
Unclassified	Unclassified	Other Scion
Unclassified	Unclassified	Other Subaru
Unclassified	Unclassified	Tesla (Any)
Unclassified	Unclassified	Other Toyota
Unclassified	Unclassified	Other Volkswagen
Unclassified	Unclassified	Other Volvo

9. Data Processing

9.1 Quality Procedures

All key processes are validated in the programming stage by performing QC on the programming logic. We then perform a separate output QC step to verify the result matches by comparing the output variables with the input variables.

All processes are reviewed for efficiency and increased automation.

Detailed review of all process documents, checklists and quality control steps.

At all major stages of data production, all input data is compared to the output and all variances in the data. Any exceptions or omissions are reviewed, modified if necessary and/or escalated for resolution.

Ipsos begins creating the tables and documents required for verification and quality control as early as possible.

A detailed project plan outlining all processing and quality control tasks is used. The key milestones are summarized in a schedule, which includes the time required or due date to complete each task, the time required or due date to perform quality control for each task, and the process and tools used to verify each step.

9.2 Data Fusion – Dealing with Missing Values

9.2.1 Introduction

Audience measurement of today must deal with the paradox of survey research: media owners and agencies want to know more-and-more, but respondents are less-and-less willing to participate in long and sometimes repetitive questionnaires. The solution lies in making questionnaires more attractive by making a shorter set of questions to be asked. By making a random selection of sections (blocks of questions) instead of asking the complete questionnaire we shorten the length for individual respondents, but we keep the complete list of variables of interest asked to some respondents. The missing information for the not asked sections must however be filled with data fusion techniques.

The other reason for missing data is survey nonresponse (e.g., refusal to sensitive questions or non-response to follow-up surveys).

In the Vividata project both forms of missing patterns occur. We have missing values for respondents who didn't answer income questions. In addition, we have missing values for other media questions (which are asked following the readership survey) as other media modules are not completed by all readership respondents. Similarly, we have missing data for product surveys as every respondent is invited to complete up to two out of the eight product modules.

Data fusion is the general term for dealing with missing values, but other terms are used as well. Ascription, or row-wise fusion is the technique to copy a complete record of information from a donor (with answers) to a recipient (with missing responses). Imputation, or column-wise fusion, use all available information on donors to model/predict the value, which is given to the recipients.

Each method name reveals how data is ascribed. For each data fusion process, respondents are categorised into two groups: donors (those who answer questions) and recipients (those who receive answers from donors). Donors and recipients are matched using hooks (predictors / critical variables). Ideally, we have more donors than recipients in a project, so there is room to choose.

Starting 2021, there are two unique groups of respondents answering either the readership and other media surveys or the product surveys, which have to be combined into one database to report. Ipsos uses a fusion approach that includes the following three kinds of fusion:

Column-Wise Fusion: Variable by variable using a CHAID tree to find the best donors and this is used for the income variables.

Unconstrained Row-Wise Fusion: A distance function is used to match respondents between donors and recipients using hooks (predictors and critical variables). This technique is used to fuse Other Media modules and Product modules.

Constrained Row-Wise Fusion: A distance function is used to connect the two data sets namely, readership including other media surveys and product surveys by matching hooks. Respondents' weights are split to donate data to respect currency of readership (including other media) and product data. For instance, Donor-1 and Receptient-1 is a perfect match between the two data sets, but they carry a weight of 3.6 and 1.1, respectively. In this case, there is 2.5 weight still left from Donor-1 to be donated.

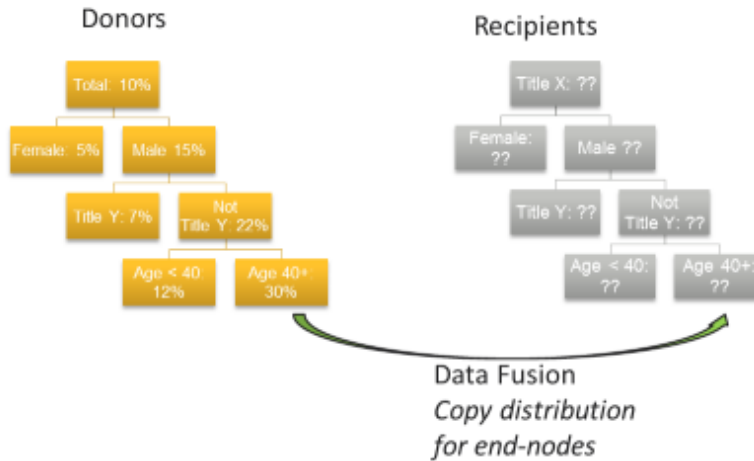
The data fusion process involves the following steps:

- Firstly, a column-wise fusion is performed for income measures (Household & Personal) and a row-wise fusion on the other media data.
- A constrained row-wise fusion is used to connect the hook variables of readership (including other media) and product surveys
- The connected data splits the weights of the readership data to "stretch" it to the sample target determined by Vividata
- Lastly, the regular (unconstrained) row-wise fusion is performed on the product data per module.

Following subsections provide details on Column-wise Fusion, Unconstrained Row-wise Fusion, Constrained Row-wise Fusion, Selection of Predictors and Critical Variables, and Success Criteria:

enough predictor to split them, the process ends. This leaves with a set of groups who have matching values based on the path in the tree they followed.

Column-wise Chaid based fusion: analyzing discriminating factors



These respondents should have a similar set of answers to the dependent variable, typically a minimum and a maximum number of recipients per donor is set. Often the minimum is zero and the max depends on the ratio of donors to recipients. This minimum and maximum also affect the formation of the groups which is one of the reasons that the minimum is usually set to zero. Some of the respondents in these groups have answered the question that needs to be filled out, in order to keep results realistic we “give” one of these real values at random to someone who is missing this value. That is the column-wise fusion (ascription) process. With smart planning this technique can be used to shorten questionnaires in order to provide the full set of results and answers without needing to ask all the questions.

Some examples of typical predictors (that were also used in this fusion process) would be: Gender, Age, # of kids in households, Level of education, and Employment status. These are all quite typical segmenting factors that go some way to being able to predict all sorts of things in market research.

9.2.3 Row-Wise Fusion [Unconstrained]

Row-wise fusion is the most common form of ‘ascription’ of missing values. Row-wise fusion is used when a large section (or a complete questionnaire) of answers is missing from respondents. A set of predictors are chosen from a set of common variables to define the best match between a donor (with data) and a recipient (with missing data). As a result, a portion of the row from the donor will then be completely donated to the recipient. For example, some respondents don’t answer the portion of a survey about the drinks they enjoy. A suitable match is found, and the recipient is given all the answers on drinks enjoyed from the donor. To make this process accurate it is important to find the smallest set of important predictors for each section. If too many predictors are used it is unclear on which combination of predictors a donor is matched to a recipient. Predictors are combined in a distance function in order to be able to find the closest distance between donor and recipient.

Some predictor variables are identified as critical. Critical variables are an important aspect of row-wise fusion. As whole sections are provided to recipients, ascribed data would follow the survey structure fully. A list of all predictors and critical variables can be found below.

9.2.4 Row-Wise Fusion [Constrained]

Constrained row-wise fusion is a special case of 'ascription' of missing values. Constrained row-wise fusion is used when two separate surveys need to be connected. Again, a set of predictors is chosen from a set of common variables to define the best match between the two surveys (all respondents for the first survey to all respondents for the second survey). Both surveys represent the same greater universe of the Canadian population, but each survey with a different weighting system. Matches are found using the same distance method as the unconstrained method, but this time the weights are split to match the donor/recipient as the weights of donor and recipient are unlikely to be identical. The leftover weight is kept being donated to another respondent, unless it falls below the minimum threshold.

The number of critical variables and predictors are kept to a minimum in the constrained fusion as well to avoid diluting the effect of the individual predictors or making the donor pools too small.

9.2.5 Selection of Predictors and Critical Variables

Each unique respondent across all surveys is asked the following hooks:

- Market
- Province/Region
- Gender
- Age
- How many people are living or staying at your current address?
- How many children under the age of 18 are living in your household?
- What is your employment status?
- Household income before taxes
- What language do you most often speak at home now?
- What is the highest level of education you have obtained?
- What is your personal income before taxes?
- Which of these best describes your job title?
- Which of these devices are owned by you or other members of the household?
- Which of these devices did you personally use in the past month?
- When did you last read or look into any magazine printed or digital edition, either at home or somewhere else?
- When did you last read or look into any daily newspaper or community newspaper, printed or digital, either at home or somewhere else?
- Who does most of the grocery shopping in your household?
- How do you usually get the community newspaper copy?
- On a TYPICAL DAY, how much time do you personally spend watching TV on any device or any screen?
- Mobile Phone: Amount personally spent per month
- On a TYPICAL DAY, how much time do you personally spend on the internet?
- Number of times you personally binge watched (watched 3 or more episodes of the same show in one sitting) on any screen or any device in the past month
- What is your current marital status?
- Does your family own or rent your home?
- What type of construction is your house?
- On a TYPICAL DAY, how much of the TV time is usually spent streaming TV or video?
- Excluding today, when was the LAST Time you accessed social media on any device (e.g. Facebook, Twitter, etc.) via a browser or an App?
- Internet Purchasing: Amount personally spent in past month
- When did you last listen to radio or any other audio content on any device at any location?
- Have you downloaded any apps (free and paid for) for mobile phone or tablet in the past month?

However, all these hooks are not used as predictors or critical variables. In each quarter, correlation and random forest analyses are conducted to identify the most important hooks and use the top 10 or so depending on sample size and ratio of donors to recipients. Accordingly, predictors or critical variables may change quarter to quarter depending on data.

Critical variables are variables that keep the fusions to occur within certain groups (e.g., only males are matched to males, females to females). Any critical variables that have to be demoted to partial critical variables are then added as a predictor decided by a random forest analysis. Every predictor is given a larger weight to match more on this variable specifically.

9.2.6 Success criteria

There are several ways to evaluate the quality of the fusion. For Row-wise ascription we can compare the distribution of some key variables of donors and recipients. When we compare the characteristics of the donors and recipients and they are identical we can call this a perfect match. For some (ordinal) variables we not only consider exact matching as perfect but also when there is only one category difference. It is not possible to have a perfect match on all variables, so we can also see that for some (less important) variables the magnitude of the match is lower.

9.3 Quintiles / Terciles

Quintiles and Terciles are established for publications and broadcast media, respectively. In the Quintile or Tercile analysis respondents are ranked in descending order of total hours tuned, hours spent on the internet, or aggregate magazine or newspaper readership with the list of respondents in each case then broken into equal fifths, or thirds. (All Quintiles or Terciles except internet are established on weighted data using a base of individuals 18 years of age and over. All respondents 14 years of age and over are, however, assigned to the defined Quintiles.)

Proportional Quintiles or Terciles for each medium have been established for Total Canada, English Canada and French Canada. Additionally, subscribers may custom access data using any definition of viewing/listening hours or readership—respondents' aggregate scores for each medium have been written to the data file and can be accessed through computer analysis.

9.3.1 Broadcast Terciles

A hypothetical case illustrating the methodology behind the Tercile grouping is shown below:

Example:

Respondent "A" stipulates that he watches television 2 to 4 hours per day.

From this information it can be determined that Respondent "A" watches a total of 21 hours of television in an average week:

2 to 4 Hours Per Day	3 Hours
X 7 Days	X 7
<hr/>	
Total Viewing Time/Week	21 Hours

This procedure is followed for all respondents. The respondents are ranked in descending order of hours tuned, and the list is broken into equal thirds, or Terciles.

The parameters of each of the established broadcast Terciles are shown below:

Television (Weekly Watching—Total Canada)

Tercile	Range (Hours Per Week)	Proportion Of Population 18 Years And Over %
1	< 10.50	46.5
2	10.51 – 21.00	33.4
3	21.01 +	20.1

Television (Weekly Watching—English Canada)

Tercile	Range (Hours Per Week)	Proportion Of Population 18 Years And Over %
1	< 10.50	48.0
2	10.51 – 21.00	32.5
3	21.01 +	19.5

Television (Weekly Watching—French Canada)

Tercile	Range (Hours Per Week)	Proportion Of Population 18 Years And Over %
1	< 10.50	40.1
2	10.51 – 21.00	37.1
3	21.01 +	22.8

Radio Terciles are established in a similar manner.

Radio (Weekly Listening—Total Canada)

Tercile	Range (Hours Per Week)	Proportion Of Population 18 Years And Over %
1	< 0.00	19.9
2	0.01 – 3.50	30.7
3	3.51 +	49.4

Radio (Weekly Listening—English Canada)

Tercile	Range (Hours Per Week)	Proportion Of Population 18 Years And Over %
1	< 0.00	19.3
2	0.01 – 3.50	30.6
3	3.51 +	50.1

Radio (Weekly Listening—French Canada)

Tercile	Range (Hours Per Week)	Proportion Of Population 18 Years And Over %
1	< 0.00	22.2
2	0.01 – 3.50	31.1
3	3.51 +	46.7

9.3.2 Publication Quintiles

Magazines

From issue readership and frequency of reading information, it is possible to assign respondents to publication quintiles based on their aggregate average monthly exposure to all magazines.

In order to determine the aggregate score for a particular respondent, it is necessary to calculate the probability of reading on the basis of a reading frequency classification.

Consider this hypothetical illustration for Publication "A".

Reading Frequency Classification	Number Of Respondents	Average Issue Readers	Reading Probability*
All Or Almost All	1000	875	0.8750
Most (About 3 In 4)	500	350	0.7000
Some (About Half)	500	225	0.4500
A Few (About 1 In 4)	500	100	0.2000
Occasionally	500	50	0.1000
Never	1000	25	0.0250

* Reading probabilities were calculated on a base of individuals 14 years of age and older.

A similar procedure is carried out for each publication in the survey.

Each publication also has an issue frequency factor. For example, a monthly publication has a factor of 1.00 (issues per month), and a publication that publishes 10 times a year has a factor of 0.833. (In our example, if publication "A" is published weekly, it has an issue frequency factor of 4.33.)

The average monthly exposure for each publication can now be calculated for each respondent. If a particular respondent claims to read "Most (3 in 4)" issues of publication "A", the reading probability score multiplied by the issue frequency score produces the average monthly exposure to publication "A", i.e., $(0.7000 \times 4.33) = 3.031$. This procedure is followed for every magazine in the survey. An array of the sum of the average monthly exposure scores for each respondent is used to establish SSPD Publication Quintiles.

It should be noted that the quintile into which a respondent falls does not necessarily relate to readership of any individual magazine. For example, a respondent may fall into the "lightest" reading quintile, yet still be a reader of 4 out of 4 issues of a particular magazine.

Magazine Quintiles—Total Canada

Quintile	Range (Issues Per Month)	Proportion Of Population 18 Years And Over %
1	< 0.00	34.6
2	0.001 – 0.320	17.3
3	0.321 – 0.871	16.3
4	0.872 – 2.255	16.1
5	2.256 +	15.7

Magazine Quintiles—English Canada

Quintile	Range (Issues Per Month)	Proportion Of Population 18 Years And Over %
1	< 0.000	34.6
2	0.001 – 0.321	17.3
3	0.322 – 0.871	16.0
4	0.872 – 2.291	15.6
5	2.292 +	16.5

Magazine Quintiles—French Canada

Quintile	Range (Issues Per Month)	Proportion Of Population 18 Years And Over %
1	< 0.000	34.5
2	0.001 – 0.305	16.4
3	0.306 – 0.768	15.8
4	0.769 – 1.626	16.1
5	1.627 +	17.2

Magazine (Users Only)—Total Canada

Quintile	Range (Issues Per Month)	Proportion Of Population 18 Years And Over %
1	< 0.278	20.1
2	0.279 – 0.577	19.6
3	0.578 – 1.168	20.3
4	1.169 – 2.707	19.8
5	2.708 +	20.2

Magazine (Users Only)—English Canada

Quintile	Range (Issues Per Month)	Proportion Of Population 18 Years And Over %
1	< 0.284	19.9
2	0.285 – 0.577	19.7
3	0.578 – 1.204	20.2
4	1.205 – 2.938	20.2
5	2.939 +	20.0

Magazine (Users Only)—French Canada

Quintile	Range (Issues Per Month)	Proportion Of Population 18 Years And Over %
1	< 0.254	19.9
2	0.255 – 0.577	20.3
3	0.578 – 1.042	19.5
4	1.043 – 2.061	20.1
5	2.062 +	20.2

Newspapers

Claimed frequency, on average, of reading specific daily newspaper during the week (1 to 5 issues) and of reading Saturday issues (1 to 4 issues over the past 4 weeks) and Sunday issues (1 to 4 issues over the past 4 weeks) are used to determine an aggregate 7 day reading score for each respondent.

In each case, the calculation involves adding the weekday, Saturday and Sunday readership factors derived from responses to each of the specific newspaper readership questions as indicated in the below table. The newspaper that generated the highest number of issues read per week by the respondent is the assigned value to the respondent for the purpose of quintile computation.

Newspaper Quintiles – Factors

		Factor
Weekday Issues (On Average)	Never	0.00
	Not Sure	0.50
	1 Day	1.00
	2 Days	2.00
	3 Days	3.00
	4 Days	4.00
Saturday Issues (Past 4 Weeks)	5 Days	5.00
	None	0.00
	1	0.25
	2	0.50
	3	0.75
Sunday Issues (Past 4 Weeks)	4	1.00
	None	0.00
	1	0.25
	2	0.50
	3	0.75
	4	1.00

Newspaper Quintiles—Total Canada

Quintile	Range (Issues Per Week)	Proportion Of Population 18 Years And Over %
1	< 0.000	67.4
2	0.001 – 1.000	9.0
3	1.001 – 2.250	7.7
4	2.251 – 4.750	7.7
5	4.751 +	8.2

Newspaper Quintiles—English Canada

Quintile	Range (Issues Per Week)	Proportion Of Population 18 Years And Over %
1	< 0.000	68.8
2	0.001 – 1.000	8.1
3	1.001 – 2.250	7.4
4	2.251 – 5.000	8.4
5	5.001 +	7.3

Newspaper Quintiles—French Canada

Quintile	Range (Issues Per Week)	Proportion Of Population 18 Years And Over %
1	< 0.000	61.5
2	0.001 – 0.875	9.0
3	0.876 – 1.500	10.3
4	1.501 – 4.375	9.5
5	4.376 +	9.7

Newspaper (Users Only)—Total Canada

Quintile	Range (Issues Per Week)	Proportion Of Population 18 Years And Over %
1	< 0.875	19.7
2	0.876 – 1.500	22.5
3	1.501 – 3.250	20.4
4	3.251 – 5.500	18.4
5	5.501 +	19.0

Newspaper (Users Only)—English Canada

Quintile	Range (Issues Per Week)	Proportion Of Population 18 Years And Over %
1	< 0.875	18.7
2	0.876 – 1.500	21.3
3	1.501 – 3.250	21.2
4	3.251 – 5.500	19.2
5	5.501 +	19.6

Newspaper (Users Only)—French Canada

Quintile	Range (Issues Per Week)	Proportion Of Population 18 Years And Over %
1	< 0.750	22.2
2	0.751 – 1.375	19.0
3	1.376 – 2.500	20.0
4	2.501 – 5.250	19.4
5	5.251 +	19.4

9.3.3 Digital Quintiles

In order to develop quintiles for digital reading of magazines and newspapers, the frequency scale for each digital publication is used as follows to calculate the number of times a month each digital publication was engaged with. The factors used, relative to the survey scale, are shown below for each metric.

Digital magazine frequency	Factor applied/digital visits
Once A Day Or More	35 times per month
A Few Times A Week	10 times per month
Once A Week	4 times per month
A Few Times A Month	2.5 times per month
Once A Month	1 time per month
Less Often	0.5 times per month

These numbers of digital visits/exposures for each title read were aggregated for each respondent for magazines and newspapers separately to get their individual Total number of digital visits. The distribution of Total visits was split into (approximate) fifths to develop the digital quintiles as follows:

Digital Magazine—Total Canada

Quintile	Range (Issues Per Month)	Proportion Of Population 14 Years And Over %
1	< 0.00	45.3
2	0.01 - 1.00	12.8
3	1.01 - 4.00	13.4
4	4.01 - 13.50	13.8
5	13.51 +	14.7

Digital Magazine—English Canada

Quintile	Range (Issues Per Month)	Proportion Of Population 14 Years And Over %
1	< 0.00	45.3
2	0.01 - 1.00	12.7
3	1.01 - 4.00	13.4
4	4.01 - 13.50	13.5
5	13.51 +	15.1

Digital Magazine—French Canada

Quintile	Range (Issues Per Month)	Proportion Of Population 14 Years And Over %
1	< 0.00	45.5
2	0.01 - 1.00	12.8
3	1.01 - 4.00	13.6
4	4.01 - 12.50	14.4
5	12.51 +	13.7

Digital Magazine (Users Only)—Total Canada

Quintile	Range (Issues Per Month)	Proportion Of Population 14 Years And Over %
1	< 1.00	23.3
2	1.01 - 3.00	18.5
3	3.01 - 7.50	18.5
4	7.51 - 22.00	19.9
5	22.01 +	19.8

Digital Magazine (Users Only)—English Canada

Quintile	Range (Issues Per Month)	Proportion Of Population 14 Years And Over %
1	< 1.00	23.2
2	1.01 - 3.00	18.6
3	3.01 - 8.00	19.4
4	8.01 - 23.50	18.6
5	23.51 +	20.2

Digital Magazine (Users Only)—French Canada

Quintile	Range (Issues Per Month)	Proportion Of Population 14 Years And Over %
1	< 1.00	23.5
2	1.01 – 3.00	18.1
3	3.01 – 8.00	20.0
4	8.01 – 16.00	18.0
5	16.01 +	20.4

Digital Newspaper—Total Canada

Quintile	Range (Issues Per Month)	Proportion Of Population 14 Years And Over %
1	< 0.00	34.8
2	0.01 – 2.50	17.1
3	2.51 – 10.00	16.2
4	10.01 – 35.00	16.9
5	35.01 +	15.0

Digital Newspaper—English Canada

Quintile	Range (Issues Per Month)	Proportion Of Population 14 Years And Over %
1	< 0.00	36.9
2	0.01 – 2.00	15.0
3	2.01 – 8.50	16.5
4	8.51 – 26.00	15.6
5	26.01 +	16.0

Digital Newspaper—French Canada

Quintile	Range (Issues Per Month)	Proportion Of Population 14 Years And Over %
1	< 0.00	26.1
2	0.01 – 6.50	18.3
3	6.51 – 23.00	17.3
4	23.01 – 70.00	19.4
5	70.01 +	18.9

Digital Newspaper (Users Only)—Total Canada

Quintile	Range (Issues Per Month)	Proportion Of Population 14 Years And Over %
1	< 2.00	21.2
2	2.01 – 6.50	19.5
3	6.51 – 18.00	20.2
4	18.01 – 41.00	19.4
5	41.01 +	19.7

Digital Newspaper (Users Only)—English Canada

Quintile	Range (Issues Per Month)	Proportion Of Population 14 Years And Over %
1	< 1.50	19.3
2	1.51 – 4.50	18.9
3	4.51 – 11.50	20.3
4	11.51 – 34.50	20.5
5	34.51 +	21.0

Digital Newspaper (Users Only)—French Canada

Quintile	Range (Issues Per Month)	Proportion Of Population 14 Years And Over %
1	< 4.50	18.8
2	4.51 – 16.50	21.5
3	16.51 – 35.50	19.8
4	35.51 – 80.00	20.0
5	80.01 +	19.9

9.3.4 Internet Terciles

Internet Terciles are established in a similar manner as Television or Radio Terciles are developed. The parameters of each of the established Internet Terciles are shown below:

Internet (Weekly Time Spending—Total Canada)

Tercile	Range (Hours Per Week)	Proportion Of Population 14 Years And Over %
1	< 10.50	26.0
2	10.51 – 21.00	34.7
3	21.01 +	39.3

Internet (Weekly Time Spending—English Canada)

Tercile	Range (Hours Per Week)	Proportion Of Population 14 Years And Over %
1	< 10.50	24.0
2	10.51 – 21.00	34.9
3	21.01 +	41.1

Internet (Weekly Time Spending —French Canada)

Tercile	Range (Hours Per Week)	Proportion Of Population 14 Years And Over %
1	< 10.50	34.3
2	10.51 – 21.00	33.5
3	21.01 +	32.2

Mobile Internet (Weekly Time Spending—Total Canada)

Tercile	Range (Hours Per Week)	Proportion Of Population 14 Years And Over %
1	<= 3.50	31.1
2	3.51 - 10.5	27.6
3	10.51 +	41.3

Mobile Internet (Weekly Time Spending—English Canada)

Tercile	Range (Hours Per Week)	Proportion Of Population 14 Years And Over %
1	< 3.50	30.1
2	3.51 - 10.50	27.0
3	10.51 +	42.9

Mobile Internet (Weekly Time Spending —French Canada)

Tercile	Range (Hours Per Week)	Proportion Of Population 14 Years And Over %
1	< 3.50	35.3
2	3.51 - 10.50	30.0
3	10.51 +	34.7

10. Special Circumstances And Adjustments

The following revisions were made to the Readership Questionnaire that affect the Spring 2022 SCC Release.

10.1 Publication Deletions

- Magazines
 - Air Canada enRoute
 - Good Times
 - Professionally Speaking
- Newspapers
 - None

10.2 Publication Additions

- Magazines
 - None
- Newspapers
 - None

10.3 Publication Logo Revisions

- Magazines
 - Maclean's
- Newspapers
 - None

10.4 Publication Frequency Revisions

- Magazines
 - None
- Newspapers
 - None

10.5 Publications Regional Revisions

- None

10.6 Publication Name Change

- None

10.7 Publication Type Change

- None

10.8 Publication – Other Titles Reported On a Past 12 Month Basis

- Magazines
 - Financial Post Magazine

- InStyle
- NOW
- People
- Real Simple
- Sports Illustrated
- The Hockey News
- Today's Parent
- Vancouver Magazine
- Western Living
- Newspapers
 - Cape Breton Post
 - The Chronicle Herald
 - The Guardian
 - The Telegram
 - Times Colonist
 - La Presse