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Design and Conduct of the Cost of Justice: Survey

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THE COST
OF JUSTICE

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Canadian Forum on Civil Justice ◆ Forum canadien sur la justice civile

"This research ... by the Canadian Forum on Civil Justice will be essential in helping us understand the true extent of the problem of cost and how it impacts on the justice system. I believe that it will prove to be of great assistance to ... identify concrete solutions to the problem of access to justice."

— The Right Honourable Beverley McLachlin, P.C., Chief Justice of Canada (2011)

The Canadian Forum on Civil Justice is a national not-for-profit organization dedicated to civil justice reform and access to justice research and advocacy. Established by the Canadian Bar Association and affiliated with Osgoode Hall Law School, the CFCJ envisions an accessible, sustainable and effective justice system for all Canadians.

Overview of the Cost of Justice project. The Cost of Justice project (2011-2017) examines the social and economic costs of Canada's justice system. It is guided by two questions: What is the cost of delivering access to justice? And what is the cost of not delivering access to justice? Comprised of leading researchers investigating various dimensions of access to justice and cost across the country, the Cost of Justice project is producing empirical data that will inform the future of access to justice in Canada and abroad. The lead research team includes: Trevor C.W. Farrow (Principal Investigator), Nicole Aylwin, Les Jacobs, Lisa Moore, and Diana Lowe.

Social Sciences and Humanities Research Council of Canada

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Canada

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Study Description

The "Everyday Legal Problems and the Cost of Justice in Canada" survey ("CoJ survey")[1] is a national everyday legal problems survey carried out as part of the Canadian Forum on Civil Justice's Cost of Justice project (CFCJ).[2] The CoJ survey was conducted by the Institute for Social Research (ISR), York University, on behalf of the CFCJ, between September 2013 and May 2014. The 3,051 main study interviews were completed with randomly selected adults from randomly selected households over land line telephones. An additional set of 212 cell phone interviews were also conducted (discussed further below). The interviews averaged just over 21 minutes in length and the response rate was 42%. This technical report briefly outlines the design and conduct of the survey.

Sample

The sample was designed to represent the adult population (18 years of age and older) who speak one of Canada's official languages, English or French, and reside in private homes in the ten Canadian provinces (thus excluding the territories). The small proportion of households in Canada without telephones and those households that only have cell phones (estimated to be one in five households) were excluded from the main sample population.[3]

To select individual survey respondents, a two-stage probability selection process was utilized. The first stage involved the selection of households by randomly selecting telephone numbers. The ideal sampling frame for the survey would have been a complete listing of all residential telephone numbers in Canada. Unfortunately, such a listing does not exist. To select numbers, ISR employs a modified form of random digit dialling (RDD). All telephone numbers in Canada consist of an area code, a "central office code" or exchange (the first three digits of the telephone number), and a suffix or "bank" (the last four digits of the number). A list of most telephone numbers in Canada can be constructed from CD-ROM versions of telephone books and other commercially available lists of telephone numbers. Numbers from these sources are included in the sampling frame. A computer is then used

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[1] For an overview and summary of the main findings of the CoJ survey, see Trevor C.W. Farrow *et al.*, *Everyday Legal Problems and the Cost of Justice in Canada: Overview Report* (Toronto: Canadian Forum on Civil Justice, 2016).

[2] See Canadian Forum on Civil Justice, "Cost of Justice", online: CFCJ <http://www.cfcj-fcjc.org/cost-of-justice>.

[3] According to Statistics Canada, 21% of Canadian households are cell phone only households. See Statistics Canada, *The Daily*, "Residential Telephone Service Survey, 2013" (Ottawa: Statistics Canada, 2014), online: <http://www.statcan.gc.ca/daily-quotidien/140623/dq140623a-eng.htm>.

to generate a random sample of telephone numbers from this list.

As well as household telephone numbers, this RDD sample includes "not-in-service" and "non-residential" telephone numbers. Typically, non-household numbers are identified the first time the interviewer calls. Most of an interviewer's subsequent efforts are then directed at encouraging an informant from the household to provide information about the number of adults living in the household, and after randomly selecting a respondent, completing the interview.

The second stage of the sample selection process was the random selection of a respondent from the selected household. If there was more than one eligible person in the household, the person with the next birthday was selected as the survey respondent.[4] The birthday selection method is used as it ensures a random selection of respondents and is a much less intrusive way to start an interview than asking about the number, ages or gender of people in the household in order to help with selecting the respondent, thus making it easier for the interviewer to secure the respondent's cooperation.

Given the study design and selection process, the CoJ survey sample was not a simple random sample. The sample is both clustered and stratified and thus falls into the class of what are now commonly called "complex samples." It is clustered because the probability of an adult member of the household being selected for an interview varies inversely with the number of people living in that household; and it is stratified because the likelihood of being interviewed varied by province of residence (residents of the smallest provinces have a greater chance of being interviewed). In order to provide unbiased estimates, it is necessary to correct for these unequal probabilities of selection.

Weighting to correct for unequal probabilities of selection, stratification, and other factors in order to improve sample estimates is common in survey research.[5] In a household with only one adult, this person has a 100% chance of selection; in a two-adult household each adult has a 50% chance of selection, and so on. Analyses based on unweighted estimates are therefore biased: members of one-adult households are over-represented, and households with two or more adults are under-represented. The household weights are based on household size in the sample and in the population with one-person households having a weight of one-half that of two-person households, and two-person households having a weight of twice that of one-person households, and three-person households having a weight of three times that of one-person households, etc. – all to correct for these unequal probabilities of selection.

In order to allow for provincial and/or regional analysis, smaller provinces are slightly over- represented and larger provinces are slightly under-represented in the CoJ survey sample. For example, Ontario has 38.3% of the population but 35.2% of the sample, whereas Prince Edward Island has 0.4% of the population but 2.4% of the sample. Because the sample distribution is not exactly proportional to the population size (pps) of the provinces, the data must be weighted before national estimates are derived. Weights are essentially obtained by dividing the proportion of households in the province by the proportion of the households in the sample for that province. Provinces that are under-represented

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[4] For a review of the birthday selection method, see: O'Rourke and Blair, 1983. For full citations here, and for others in this report, see the bibliography (below).

[5] For further discussions of weights, see: Groves *et al*., 2009, c 10; Lessler and Kalsbeek, 1992, c. 8; Kalton, 1983, c. 10; Babbie, 1992, c. 5.

are weighted up and provinces that are over-represented are weighted down (for example, the Ontario weight is 1.0872).

Post stratification, by age and gender, is also included in the weighting scheme for the CoJ survey. Ten gender (female/male) and age (18-35, 36-45, 46-65, 66-75 and 76 and older) strata have been created. Unlike the household and province weights, which correct for unequal probabilities of selection, post stratification is designed to correct for variation in response rates among the age/gender groups. Young men are the most under-represented group in the CoJ survey sample and are weighted up whereas women between 56 and 65 are the most over-represented group and they are weighted down.

In order to produce national estimates it is advisable to correct for the unequal probabilities of selection at the household stage, the unequal probabilities of selection based on province of residence as well as post stratification. A CSAPLAN (Complex Sample Plan) accompanies the CoJ survey data file. The CSAPLAN weights to the population (and excludes the cell phone interviews). For example, in the unweighted data file a frequency count indicated that 603 or 21.7% of 3,051 Canadians reported consumer problems in the last three years (derived variable consum_probs_binary in the data file). When the data is weighted the figure is 22.6%, representing 5,328,257 Canadians. Note that the change in the percentage figure between the unweighted and weighted data is minimal.

Table 1. Frequency Count for Consumer Problems: Unweighted and Weighted Data

Problem Type	Unweighted Data		Weighted Data	
Reported Consumer Problem	Frequency Count	Valid Percent	Population Estimate	Valid Percent
No (none)	2,388	78.3	18,262,439	77.4
Yes (one or more)	663	21.7	5,328,257	22.6
Total	3,051	100.0	23,590,697	100.0

Data Collection

In order to maximize the chances of getting a completed interview from each household in the CoJ survey sample, call attempts were made during the day and the evening – for both week and weekend days. Although almost 60% of the interviews in the CoJ survey were completed in three or fewer call attempts, just under 10% of the completed interviews required ten or more calls (and 1% of the interviews were completed on the twenty-fifth or subsequent call). The variable "attempts" within the data file indicates the number of call attempts required for each completion in the data file.

In addition to making numerous call attempts and spreading these attempts over day, evening and weekend time slots, efforts were made to "convert" refusers in the CoJ survey. Most respondents and/or households who refused to participate when initially contacted by an interviewer were contacted a second time. Often, several call attempts were required to reach refusers. Typically refusal conversion call attempts were made at least 12 weeks after the initial refusal. Interviewer success in conversions is a mixture of skill (only the best interviews make the calls) and serendipity (as a more cooperative person may answer the telephone or the selected respondent may have had a better day and be more willing to participate). The number of converted refusals in the CoJ survey data file is 619, which is 20% of all interviews. The variable "refusals" indicates when the interview was completed

after an initial refusal (i.e., a conversion).

The careful attention to the number and timing of call-backs and refusal conversions is designed to increase the response rate, thereby improving sample representativeness. Many researchers have found that respondents who are 'hard-to-reach' and those who 'refused' have characteristics that are somewhat different from typical survey responders.[6]

Response Rate

There are numerous ways to calculate response rates in survey research.[7] The method used in this project is conservative; most other ways of calculating the response rate would produce inflated values. The response rate was defined as the number of completed interviews divided by the estimated number of eligible households times 100%. Using this formula the response rate for the CoJ survey was 42%, which is within the typical range for carefully conducted academic surveys,[8] and certainly substantial for the purposes of this survey.

Many organizations would not include "eligibility not determined" numbers (i.e., always 'busy' and 'never answered' numbers) in the denominator for the response rate calculations on the argument that few of these numbers would be eligible households.[9] This version of the response rate, sometimes called a completion rate, calculated as completions/known eligibles is 44%. Other organizations calculate response rates as the number of completions over the number of completions plus refusals. This version of the response rate, which is sometimes known as the participation rate, is 47%.

Questionnaire and Data Processing

The questionnaire was structured to determine the number of respondents who had experienced 84 specific legal problems – or at least problems that had the potential to become legal in scope – in the last three years. Respondents were told the problems had to be serious and not easy to fix. In the questionnaire, the 84 problems were grouped into 17 types and there was a section of the questionnaire for each problem type. For most problem types the first question in the section asked respondents if they had the problem in the last three years. For example, for the questionnaire section dealing with 'Wills and Incapacity' the screening question asked: "In the last three years, that is since [month of the interview] 2011, have you had any serious problems involving a will, or taking care of financial or health issues for a person who was not able to look after themselves?"

Respondents who answered "no'" to the screening question skipped to the next section (problem type). Those who answered "yes" were asked about four specific problems:

- settling a will;

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[6] See Dunkelberg and Day, 1973; Fitzgerald and Fuller, 1982; and McDonald, 1979.

[7] See e.g. Dillman, 2000; Smith, 1995; Groves, 1989; and Groves and Lyberg, 1988.

[8] See reports on declining response rates by: Ornstein, 2013; Curtin, Presser and Singer, 2005; and Groves, Dillman, Eltinge and Little, 2002.

[9] See Groves and Lyberg, 1988 for a review of different computation methods for 'response' rates.

- settling an inheritance in which there was no will;

- managing financial matters for someone who was unable to do so; and

- managing the medical care of someone.

The problem groups with the short form name (used in the Overview Report[10]) and the variable name in the data file, as well as the percentage of respondents reporting affirmatively for each problem type, are detailed in Table 2 (and are listed in the order in which they were asked in the survey).

Table 2. Problem Types

	Problem Type (Short Form Name)	Variable Name	Population Estimate	Weighted Percent	Unweighted Number
1	Consumer	consum_probs_binary	5,328,257	22.6	663
2	Employment	employ_probs_binary	3,869,398	16.4	450
3	Debt	debt_probs_binary	4,902,209	20.8	587
4	Social Assistance	soc_probs_binary	282,610	1.2	34
5	Disability Assistance	dis_probs_binary	374,533	1.6	45
6	Housing	house_probs_binary	584,198	2.5	67
7	Immigration	imm_probs_binary	176,013	0.7	21
8	Discrimination	discrim_probs_binary	1,250,149	5.3	148
9	Treatment by Police	police_probs_binary	435,373	1.8	45
10	Criminal Charges	crim_probs_binary	98,818	0.4	11
11	Family (Relationship Breakdown)	famlaw_probs_binary	1,093,314	4.6	125
12	Family (Other)	family_probs_binary	123,183	0.5	13
13	Wills & Incapacity	wills_probs_binary	755,896	3.2	104
14	Personal Injury	pi_probs_binary	585,181	2.5	74
15	Medical Treatment	medtreat_probs_binary	609,917	2.6	79
16	Threat of Legal Action	lawyer_probs	359,467	1.5	43
17	Neighbours	neigh_probs	2,302,852	9.8	285

Computer Assisted Telephone Interviewing (CATI) was used for data collection in the CoJ survey. With CATI, interviewers read questions from a computer screen and enter answers directly into a series of computer files for processing. CATI software automates skip patterns so that interviewers do not have to determine the next appropriate question to ask, and allows the questionnaire to determine which questions are asked.

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[10] See Farrow *et al., Everyday Legal Problems and the Cost of Justice in Canada: Overview Report, supra* note 1.

Essentially the questionnaire consisted of five sections:

1. the 'front end" questions, where interviewers introduced the survey, randomly selected the respondent and spoke to the respondent about the ethical guidelines under which the survey was completed;

2. the four 'warm-up' questions about the justice system that were designed to be easy to understand and easy to answer;

3. the 240 'problem' questions, where respondents were asked about having 84 specific legal problems as well as the year the problem started, and when appropriate, how much money was involved with the problem;

4. the 200 'follow-up' questions, where respondents were asked if they tried to solve the problem, the outcome of their efforts, the costs of their efforts, the effect of the problem on their health and economic circumstances, etc.; and

5. the 25 socio-demographic questions.

For the first 446 interviews,[11] respondents were asked the follow-up questions for up to three problems. When a respondent had more than three problems they were asked about the three most serious problems. A disadvantage of asking respondents to report on the most serious problems was the skewed nature of the reporting. Few respondents reported on less common types of problems. Also, the average length of the questionnaire was deemed excessive and in the remaining interviews (2,605), respondents were asked follow-up questions for up to two, rather than three problem types. Also, for the remaining data collection, procedures were put in place to maximize the number of times the follow up questions were asked about less common problem types. The variable "firstprob_followup" identifies the problem that was being considered in the first set of follow-up questions, and the variable "secondprob_followup" identifies the second problem considered by the respondent in the interview.[12]

In total, follow-up questions were asked for 1,407 respondents.[13] This number is lower than the number of respondents who reported problems because respondents who reported seven or more specific problems were not asked the follow up questions. This procedure was adopted as part of the data collection rules in order to mimic procedures used by members of the research team in similar previous studies, thus facilitating comparisons over time.[14] The number of respondents who reported one or more specific problems in each of the problem types is detailed in Table 2 above. Four of the problem types (Consumer, Debt, Employment and Neighbours) accounted for approximately 70% of all problems reported in the survey. The number of cases is quite small for many problem types. Adding similar

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[11] In this and the following paragraph, unweighted numbers are used for purposes of this methodology description as we are referring to the number of interviews, not the ultimate results of the survey.

[12] Version 1 from the variable 'version' identifies the 446 interviews completed before the changes were made. Because some interviews were started before the change in the questionnaire but completed at a later date, the date for which each version of the questionnaire was used is not perfectly clean.

[13] See *supra* note 11.

[14] For a recent discussion of other legal needs surveys, see Nicole Aylwin and Mandi Gray, "Selected Annotated Bibliography of National and Regional Legal Needs Surveys" (Toronto: Canadian Forum on Civil Justice, 2015), online: CFCJ <http://www.cfcj-fcjc.org/sites/default/files//CFCJ%20Cost%20of%20Justice%20Project%20-%20Selected%20Annotated%20Bibliography.pdf>.

problem types together (e.g. for the two types of family problems) is possible when seeking to compare broader ranges of problem types.

Missing Data

With considerable frequency, whether or not a respondent is asked a question is conditional on answers to previous questions. For some problem types the first question was a 'screening' one. For example, when a respondent said they had not worked in the last three years they were not asked the questions about problems with their employment. Thus these employment questions have missing values for that respondent. Similarly, if a respondent was employed but said they did not have a specific employment problem, they were not asked when the problem started, nor how much money was involved, so these respondents also have missing data for these questions. Respondents who reported no problems were asked none of the follow up questions and also have missing data for these questions. And respondents who had employment problems but reported more than seven problems in total were not asked the follow up questions. In this example we have four different reasons why the follow up questions about employment have missing data.

Respondents who did not try to solve their problem were asked fewer follow up questions than respondents who tried to solve their problem. Respondents who reported that they incurred financial costs in their efforts to solve their problem were asked more questions than respondents who did not incur costs. The only way to fully understand the counts for any question in the survey is to carefully work through frequencies for each question and to follow the questionnaire. The number of combinations is too large to warrant an explanation for every variable in the data file.

Derived Variable

A number of derived variables have been added to the data file, which are designed to assist with survey analysis. There is a series of variables (cons1c_$cats, cons2c_$cats, etc.) where the raw cost data for each question has been collapsed into categories. There are also two series of derived variables for the problem types. The first counts the number of problems in each group (consum_probs, employ_probs, etc.). The second divides respondents into two groups: those who had, and those who did not have the problem (consum_probs_binary, employ_probs_binary, etc.).

There are several derived variables where the number of problems is counted – the critical one is "NOofProblems", which counts the number of problems for each respondent. The other problem counts have been used for specialized analysis and have been left in the data file to facilitate reviews of that work.

Text Answers

There were places in the questionnaire where a respondent could add a response other than those provided. For these "other specify" responses the text answers usually could be coded into an existing category, and on occasion additional codes were created. The only completely open ended question that required a substantive number of text answers was the question about organizations contacted for assistance in solving a problem. The text responses for the respondents answering this question were coded into several categories and added to the data file.

Cell Phone Sample

As noted above (and detailed in footnote 2), an increasing number of Canadian households no longer

have land lines. While the elimination of land lines can be found for households with people of all ages, it is much more common in younger households – those with no one over 30 years of age. In order to determine if, and the extent to which, people who reside in cell phone only households were different from residents in households with land lines, a supplemental sample of just over 212 interviews was completed in cell phone only households.

Because cell phones are mostly used by a single individual rather than a household, there was no random selection of the respondent. Further, in order to keep the cell phone interviews short, respondents were only asked about a subset of the problem questions and the demographic questions. The detailed follow-up questions about how they tried to solve the problem, the outcome and costs of their efforts and the effect of the problem on their health and economic circumstances were not asked.

Cell phone type A respondents (117 respondents) were asked about the following problems: Consumer, Debt, Treatment by Police, Criminal Charges, Family, and Wills & Incapacity. Cell phone type B respondents (95 respondents) were asked about the following problems: Employment, Social Assistance, Disability Assistance, Housing, Immigration, Discrimination, Personal Injury, Medical Treatment, Threat of Legal Action, and Neighbours.

Table 3. Frequency Count for First Consumer Question (cons_1a) - Non-Weighted Data (Including Cell Phone Interviews)

Abbreviated Question	Response	Frequency Count	Percent	Valid Percent
Spent money on a large purchase and did not get what you paid for	Yes	221	6.8	7.0
	No	2,917	90.0	92.7
	Not sure / refused	10	0.3	0.4
	Cell B interview	95	2.9	-
	Total	3,263	100.0	100.0

The variable "phonetype" will allow the analyst to select either the land line or the cell phone interviews. This is recommended for most analysis, and it is important to note that the cell phone interview weights are not included in the weighting scheme as very different and unknown probabilities of selection were employed for this subset of the survey sample. The frequency count above shows that the 95 cell phone interviews that used version B of the cell phone questionnaire were not asked the cons_1a questions (nor any of the other consumer problem questions).

Results show that there are no problem types where land line respondents were more likely to report problems than cell phone respondents, and for a number of problem types cell phone respondent reporting figures were larger. One of the largest (and statistically significant) differences was for debt related problems. Cell phone respondents (40%) were twice as likely as land line respondents (approximately 20%) to report that they had debt related problems such as personal bankruptcy, being harassed by a collection agency, unfairly refused credit, asked to pay incorrect charges by a financial institution or utility company, etc. Of course cell phone use and potential debt problems are both often associated with younger ages, and the mean age for the cell phone respondents was 36 years of age whereas it was 55 years of age for land line users. A full review of the relationship between the two

samples and problem reporting will be further explored by the CoJ survey team. At this stage, it is sufficient to note that any improvement in sample representativeness by adding cell phone respondents would, if anything, increase the rates of problems reported.

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