

Survey Research Data Analysis: 101 And Beyond



Presented by
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WHEN:

Wednesday May 15th

Part 1: 9:30 AM – 12:00 PM
Part 2: 1:00 PM – 3:30 PM

Thursday May 16th

Part 3: 9:30 AM – 12:00 PM
Part 4: 1:00 PM – 3:30 PM

WHERE:

M3 4206

WHO SHOULD ATTEND:

Faculty and grad students interested in survey research; Participants are not expected to know about survey sampling, but should have some knowledge of basic statistical concepts (ideally have taken at least one course in statistics).

Please register by emailing

j95lam@uwaterloo.ca

Attendance is first come, first served.

Fee:

University of Waterloo Students/Post-Docs	\$125
University of Waterloo Faculty/Staff	\$250
External Students/Post-Docs	\$150
External Faculty/Staff/Other	\$400

Payment information to be sent after registering.

Coffee will be served;
lunch will not be provided.

This workshop provides a crash course on using statistical methods and software when conducting data analysis in survey research.

Though the workshop will not go into mathematical details and proofs, it will provide some reasoning and intuition behind the key formulas used in survey sampling. It will also look at various examples using the statistical software SAS (free to students, faculty and staff at the University of Waterloo). In addition to illustrating basic data analysis techniques, those examples aim to provide guidance on some of the pitfalls of analysing survey data. Part 3 is a practical hands-on opportunity for participants to conduct basic data analysis using SAS on their own laptop.

Topics to be covered:

Part 1: (May 15th, 9:30 AM – 12:00 PM)

- 1- Introduction (vocabulary, notation, and basic concepts)
- 2- Sampling designs and selection probabilities
- 3- Introduction to sampling weights

Part 2: (May 15th, 1:00 PM – 3:30 PM)

- 4- Estimating a population total (i.e., Horvitz-Thompson estimator)
- 5- Estimating a population mean (i.e., Hajek estimator)
- 6- Estimating a population proportion
- 7- Selection bias and other non-sampling errors

Part 3*: (May 16th, 9:30 AM – 12:00 PM)

- 8- Introduction to SAS University Edition, basic SAS commands and procedures
- 9- Using the SURVEYFREQ and SURVEYMEANS procedures

10- Basic data manipulations, better looking output (e.g., formats, titles, footnotes) and ODS

* In Part 3, participants will conduct basic data analysis using SAS University Edition (free to students, faculty and staff at the University of Waterloo). Hence, participants must bring their own laptop and install SAS University Edition. Installation instructions will be provided, but in person help will also be available from 3:30 to 4:30 pm on day 1.

Part 4: (May 16th; 1:00 PM – 3:30 PM)

11- Variance estimator and confidence interval for the Horvitz-Thompson and Hájek estimators

12- Rao-Scott Chi-Square test and introduction to analytical inference from survey data