

RESUME

JEAN-FRANÇOIS BEAUMONT

Senior Statistical Advisor, Statistics Canada

E-mail: Jean-Francois.Beaumont@statcan.gc.ca

PROFESSIONAL EXPERIENCE

SENIOR STATISTICAL ADVISOR, Statistics Canada, August 2020 to today

CHIEF RESEARCHER, Statistics Canada, February 2008 to August 2020

SENIOR METHODOLOGIST, Statistics Canada, October 1999 to February 2008

Main activities

- Lead research and development on different topics related to activities relevant to national statistical offices such as data integration methods and small area estimation;
- Provide frequent statistical advice to methodologists and employees from other Branches of Statistics Canada, or from other organizations, through consultations, exchanges of emails, collaboration on projects and active participation in different technical committees;
- Manage the development of SAS-based statistical computer tools (e.g., SEVANI, Small Area Estimation System, Robust estimation system);
- Manage the development and production of small area estimation strategies;

- Keynote speaker at the 2025 Italian Conference on Survey Methodology
- Invited to give the 2022 Morris Hansen Memorial Lecture
- Invited to give the opening address of the Colloque francophone sur les sondages in 2018
- Invited to give the Presidential Address of the Survey Methods Section of the Statistical Society of Canada in 2008
- Delivered invited presentations in different statistical conferences (Joint Statistical Meetings, Statistical Society of Canada, International Statistical Institute, Statistics Canada's Symposium, Small Area Estimation, International Conference on Establishment Surveys, Colloque francophone sur les sondages, among others);
- Taught different courses (small area estimation, nonresponse and imputation, robust estimation, weighting, and approaches to inference) presented in different countries (Canada, France, Brazil, South Africa, Ireland, Hong Kong, and Morocco);
- Invited for one week in 2009 as a consultant for the U.S. Census Bureau for a project on outlier-robust estimation;

- *Survey Methodology* Journal
 - Editor (since January 2021)
 - Associate Editor (2010-2020)
 - Assistant Editor (2000-2010)
- Associate editor: *Metron* (since 2019);

- Chair of the Methodology Research and Development Program since 2022
- Program Chair of the 2014 Statistics Canada Symposium;
- Elected member of the ISI;
- Vice-chair of the Program Committee on the ISI 2023 World Statistics Congress;
- Member of the Panel on Implications of using Multiple Data Sources for Major Survey Programs of the National Academies of Sciences, Engineering and Medicine;
- Chair of an MA-04 researcher selection board;
- Chair of the Committee on Quality Measures;
- Coordinator of the interchanges with the U.S. Census Bureau in 2005, 2007 and 2009;
- President of the Survey Methods Section of the Statistical Society of Canada (2021-2022);
- Secretary of the Survey Methods Section of the Statistical Society of Canada (2005 - 2007);
- Member of the Prix Jean-Claude Deville 2022-;
- Member of the Groupe Enquête de la Société française de statistique 2019-;
- Member of several scientific committees (e.g., Colloque francophone sur les sondages).
- Managed production and development work for the Workplace and Employee Survey (2004-2006) and development of imputation and estimation methods in the Labour Force Survey (1999-2004).

Main research and development topics

Small Area Estimation; Data integration methods; Inference approaches; Bootstrap variance estimation; Outlier-robust estimation; Adaptive data collection; Analysis of survey data; Variance estimation in the presence of imputation; Weighting and calibration.

CONSULTANT/RESEARCHER, University of Southampton, UK, May 2004 to August 2004

Main activities

Consultation on outlier issues for the Office for National Statistics; Development of a SAS macro for robust estimation; Research on weight smoothing.

METHODOLOGIST, Statistics Canada, August 1996 to October 1999

Main activities

Development of a confidentiality strategy for administrative data; Support to analysts working with the Longitudinal Administrative Database, Research on non-ignorable non-response.

STATISTICIAN, Centre de Foresterie des Laurentides, January 1996 to August 1996

Main activities

Development of models to estimate the growth curve of black spruce, which led to a paper in *Forest Science*; Design and conduct a simulation study to evaluate different back-transformation methods in regression analysis after a logarithmic transformation.

EDUCATION

MASTERS IN STATISTICS, Université Laval, January 1994 to April 1996

Topic: Variance estimation in the presence of imputation in surveys

CERTIFICATE IN COMPUTER SCIENCE, Université Laval, January 1993 to December 1993

BACCALAUREATE IN ACTUARIAL SCIENCE, Université Laval, September 1989 to December 1992

REFEREED PAPERS PUBLISHED IN JOURNALS OR BOOKS

Beaumont, J.-F., Bosa, K., Brennan, A., Charlebois, J., and Chu, K. (2024). Authors' response to comments on "Handling non-probability samples through inverse probability weighting with an application to Statistics Canada's crowdsourcing data": Some new developments on likelihood approaches to estimation of participation probabilities for non-probability samples. *Survey Methodology*, 50, 123-141.

Beaumont, J.-F., Bosa, K., Brennan, A., Charlebois, J., and Chu, K. (2024). Handling non-probability samples through inverse probability weighting with an application to Statistics Canada's crowdsourcing data. *Survey Methodology*, 50, 77-106.

Medous, E., Goga, C., Ruiz-Gazen, A., Beaumont, J.-F., Dessertaine, A., and Puech, P. (2023). QR prediction for statistical data integration. *Survey Methodology*, 49, 385-410.

Beaumont, J. F. (2023). The History and the Impact of the Survey Methodology Journal. *The Survey Statistician*, 88, 40-45.

Beaumont, J.-F., Bocci, C., and St-Louis, M. (2023). Bootstrap estimation of the conditional bias for measuring influence in complex surveys. *Journal of Survey Statistics and Methodology*, 11, 393-411.

Medous, E., Goga, C., Ruiz-Gazen, A., Beaumont, J.-F., Dessertaine, A., and Puech, P. (2023). Many-to-one indirect sampling with application to the French postal traffic estimation. *The Annals of Applied Statistics*, 17, 838-859.

Beaumont, J.-F., and Émond, N. (2022). A bootstrap variance estimation method for multistage sampling and two-phase sampling when Poisson sampling is used at the second phase. *Stats*, 5, 339-357.

Beaumont, J.-F., and Haziza, D. (2022). Statistical inference from finite population samples: a critical review of frequentist and Bayesian approaches. *The Canadian Journal of Statistics*, 50, 1186-1212. <http://doi.org/10.1002/cjs.11717>.

Ferri-Garcia, R., Beaumont, J.-F., Bosa, K., Charlebois, J., and Chu, K. (2022). Weight smoothing

- for nonprobability surveys. *TEST*, 31, 619-643.
- Neusy, E., Beaumont, J.-F., Yung, W., Hidiroglou, M., and Haziza, D. (2022). Non-response follow-up for business surveys. *Survey Methodology*, 48, 95-117.
- Beaumont, J.-F., and Rao, J.N.K. (2021). Pitfalls of making inferences from non-probability samples: Can data integration through probability samples provide remedies? *The Survey Statistician*, 83, 11-22.
- Lesage, É., Beaumont, J.-F., and Bocci, C. (2021). Deux diagnostics locaux pour évaluer l'efficacité du meilleur prédicteur empirique issu de modèle de Fay-Herriot. *Survey Methodology* (to appear in 2021).
- Favre-Martinoz, C., Haziza, D., and Beaumont, J.-F. (2021). Efficient nonparametric estimation for skewed distributions. *The Canadian Journal of Statistics*, 49, 471-496.
- Beaumont, J.-F. (2020). Are probability surveys bound to disappear for the production of Official Statistics. *Survey Methodology*, 46, 1-28.
- Beaumont, J.-F., and Rao, J.N.K. (2019). Comments on: Deville and Särndal's calibration: revisiting a 25 years old successful optimization problem. *TEST*, 28, 1071-1076.
- Hidiroglou, M.A., Beaumont, J.-F., and Yung, W. (2019). Development of a Small Area Estimation System at Statistics Canada. *Survey Methodology*, 45, 101-126.
- Favre-Martinoz, C., Ruiz-Gazen, A., Beaumont, J.-F., and Haziza, D. (2017). Robustness in survey sampling using the conditional bias approach with R implementation. *Studies in Theoretical and Applied Statistics*, Springer, 3-13, 2017.
- Haziza, D., and Beaumont, J.-F. (2017). Construction of weights in surveys: a review. *Statistical Science*, 32, 206-226.
- Beaumont, J.-F., and Haziza, D. (2016). A note on the concept of invariance in two-phase sampling designs. *Survey Methodology*, 42, 319-323.
- Favre-Martinoz, C., Haziza, D., and Beaumont, J.-F. (2016). Robust inference in two-phase sampling designs with application to unit nonresponse. *Scandinavian Journal of Statistics*, 43, 1019-1034.
- Lavallée, P., and Beaumont, J. F. (2016). Weighting: Principles and practicalities. C. Wolf, D. Joye, TW Smith, Y.-C. Fu (Herausgeber): *The SAGE Handbook of Survey Methodology*, SAGE, London, 460-476.
- Beaumont, J.-F., Béliveau, A., and Haziza, D. (2015). Clarifying some aspects of variance estimation in two-phase sampling. *Journal of Survey Statistics and Methodology*, 3, 524-542.
- Beaumont, J.-F., Haziza, D., and Ruiz-Gazen, A. (2015). Mesures d'influence et robustesse en sondages. Chapitre 9 de *Méthodes robustes en statistique*, Eds : J.-J. Droesbeke, G. Saporta et C. Thomas-Agnan, Technip.
- Favre-Martinoz, C., Haziza, D., et Beaumont, J.-F. (2015). A method of determining the winsorization threshold, with an application to domain estimation. *Survey Methodology*, 41, 57-77.
- Lavallée, P. and Beaumont, J.-F. (2015), Why We Should Put Some Weight on Weights. *Survey Methods: Insights from the Field, Weighting: Practical Issues and 'How to' Approach*, Invited article, Retrieved from <http://surveyinsights.org/?p=6255>.
- Beaumont, J.-F. (2014). The Analysis of Survey Data Using the Bootstrap. In *Contributions to Sampling Statistics*, F. Mecatti et al. (eds.), Springer International Publishing, Switzerland, 53-63.

- Beaumont, J.-F., Fortier, S., Gambino, J., Hidirolou, M., and Lavallée, P. (2014). Some of Statistics Canada's Contributions to Survey Methodology. In *Statistics in Action, A Canadian Outlook*, Edited by J.F. Lawless, Chapter 2, The Statistical Society of Canada, Chapman & Hall.
- Beaumont, J.-F., Haziza, D., and Bocci, C. (2014). An Adaptive Data Collection Procedure for Call Prioritization. *Journal of Official Statistics*, 30, 607-621. <http://dx.doi.org/10.2478/JOS-2014-0040>
- Beaumont, J.-F., Haziza, D., and Ruiz-Gazen, A. (2013). A Unified Approach to Robust Estimation in Finite Population Sampling. *Biometrika*, 100, 555-569.
- Beaumont, J.-F. (2012) Discussion of "Calibrated Bayes, an Alternative Inferential Paradigm for Official Statistics" by R. Little. *Journal of Official Statistics*, 28, 335-339.
- Beaumont, J.-F., and Charest, A.-S. (2012). Bootstrap Variance Estimation With Survey Data When Estimating Model Parameters. *Computational Statistics and Data Analysis*, 56, 4450-4461.
- Beaumont, J.-F., and Patak, Z. (2012). On the Generalized Bootstrap for Sample Surveys With Special Attention to Poisson Sampling. *International Statistical Review*, 80, 127-148.
- Beaumont, J.-F., and Bissonnette, J. (2011). Variance Estimation under Composite Imputation: The Methodology Behind SEVANI. *Survey Methodology*, 37, 171-179.
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- Beaumont, J.-F., and Bocci, C. (2009). A Practical Bootstrap Method for Testing Hypotheses from Survey Data. *Survey Methodology*, 35, 25-35.
- Beaumont, J.-F., and Rivest, L.-P. (2009). Dealing with Outliers in Survey Data. In *Handbook of Statistics, Sample Surveys: Theory, Methods and Inference*, Vol. 29, Chapter 11, Ed. D. Pfeffermann and C.R. Rao, Elsevier BV.
- Beaumont, J.-F. (2008). A New Approach to Weighting and Inference in Sample Surveys. *Biometrika*, 95, 539-553.
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- Beaumont, J.-F. (2000). An Estimation Method for Nonignorable Nonresponse. *Survey Methodology*, 26, 131-136.
- Beaumont, J.-F., Ung, C.H., et Bernier-Cardou, M. (1999). Relating Site Index to Ecological Factors in Black Spruce Stands: Tests of Hypotheses. *Forest Science*, 45, 484-491.