

Time series modelling in repeatedly conducted sample surveys

Citation for published version (APA):

Balabay, O. (2016). *Time series modelling in repeatedly conducted sample surveys*. [Doctoral Thesis, Maastricht University]. Datawyse / Universitaire Pers Maastricht. <https://doi.org/10.26481/dis.20160511ob>

Document status and date:

Published: 01/01/2016

DOI:

[10.26481/dis.20160511ob](https://doi.org/10.26481/dis.20160511ob)

Document Version:

Publisher's PDF, also known as Version of record

Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

[Link to publication](#)

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

www.umlib.nl/taverne-license

Take down policy

If you believe that this document breaches copyright please contact us at:

repository@maastrichtuniversity.nl

providing details and we will investigate your claim.

PROPOSITIONS (STELLINGEN)

BELONGING TO THE PH.D. THESIS

TIME SERIES MODELLING IN REPEATEDLY CONDUCTED SAMPLE SURVEYS

BY OKSANA BALABAY

1. The time series model-based inference should become a standard tool in repeatedly conducted surveys for variance reduction and for dealing with level breaks caused by survey redesigns. (Chapters 2, 3, 4, and 5)
2. "You can't fix by analysis what you bungled by design," - R.J. Light, J.D. Singer, J.B. Willett. But you can fix things screwed up by a survey redesign. (Chapters 2 and 5)
3. "The current paradigm [of official statistics] generally employs direct design-based estimates in large samples, and model-based estimates in small samples," - R.J. Little. This inferential schizophrenia related to deciding on how large "large" and "small" are supposed to be, should not bother those working with repeatedly conducted surveys, since even series based on large samples can benefit from borrowing strength over time and optionally over space too. (Chapters 2 and 5)
4. Most reduction in design-based variances with the help of time series models comes from borrowing strength over time, with an additional variance reduction due to borrowing strength over space. (Chapter 2)
5. National statistical institutes should not discard data accumulated over time. This treasure can be easily converted into money saved for the tax-payers' benefit.
6. "By a small sample, we may judge of the whole piece,"- from "Don Quixote" by Miguel de Cervantes, Ch.4.
7. "According to the latest official figures, 43% of all statistics are totally worthless,"- A. Brilliant. Hopefully, the confidence interval bands around this "estimate" are wide.
8. "The death of one man is just death, the death of two millions is a statistic," - E.M. Remarque.
9. In the ocean of data, it has become increasingly easy for politicians, marketing managers and even health scientists to use "statistics as a drunken man uses lampposts - for support rather than for illumination" (attributed to Andrew Lang (1844-1912)). The task of academicians is to create awareness about biases and errors resulting from such misguiding practices and to propose reliable alternatives to them.
10. "Democracy is an abuse of statistics" (J.L. Borges), in the sense that it hinges on the notion of the majority opinion whose estimate is distorted by a self-selection bias due to voluntary attendance, not to mention such "systematic measurement errors" as falsifications.
11. "Education is the most powerful weapon which you can use to change the world" (N. Mandela), but it is, at the same time, a more dangerous weapon than propaganda in evil hands.