Book Review

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Mario Callegaro, Reginald P. Baker, Jelke Bethlehem, Anja S. Göritz, Jon A. Krosnick, Paul J. Lavrakas (Eds). *Online Panel Research: A Data Quality Perspective*. 2014. Chichester, UK: John Wiley and Sons. ISBN: 978-1-119-94177-4, 508 pp., £55.00.

Online Panel Research. A Data Quality Perspective by Mario Callegaro, Reg Baker, Jelke Bethlehem, Anja S. Göritz, Jon A. Krosnick, and Paul J. Lavrakas is an edited volume that brings together state-of-the-art findings on various aspects of online panel research. It presents evidence on a diverse set of research questions on detecting and correcting for different kinds of errors arising in online panels. The book also gives advice on practical aspects of conducting online panels and new developments regarding web panel software.

The book is a valuable addition to and extension of the existing literature on online surveys. Other books in this area typically focus on survey design and on the practical implementation of web surveys (see for example Couper 2008 and Tourangeau et al. 2013). *Online Panel Research* is different in two main respects: firstly, while previous literature has a broad focus on all kinds of web survey research, this book concentrates exclusively on survey methodological research on online panels; secondly, this book focuses particularly on errors and biases in online panels.

In structural terms the book follows a Total Survey Error logic (see Groves et al. 2009). It is a compact collection of findings on the most important issues in online panel research including studies from various countries. The book is very comprehensive and highly instructive for survey methodological research, and is particularly valuable for survey practitioners either already conducting or still aiming to build an online panel.

However, there are some caveats that the reader should be aware of: first, the book is generally written from a commercial data collection rather than an academic perspective. This becomes apparent in the language used in several chapters and section introductions throughout the book where "customer" and "client" interests are emphasized and survey "companies" (see p. 9) are addressed. Second, most chapters apply a limited definition of representativeness, that is, the authors assume that online panels need only be representative of the online population. The reason for this might be that most online panels simply do not include non-Internet users. Some probability-based online panels aim to be representative of the general population and include previously offline persons (so-called offliners) by providing them with the necessary equipment. This aspect of increasing representativeness by including offliners is not discussed in the book, not even

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in Chapter 2, where panels with and without the inclusion of offliners are compared in terms of their data quality (see p. 26).

The book is structured logically. It begins with a general introduction followed by one section each on coverage, nonresponse, measurement error, weighting adjustments, special domains (such as smartphone usage in online panels), and operational issues (such as online panel software). Each section contains a short introduction written by the editors of the book. In the following, we briefly discuss each section in turn.

The general introduction contains a brief overview of topics and steps important in online panel research. It lists state-of-the-art findings with additional references to more detailed literature. This section consists of two chapters. The first, written by the editors of the book, is especially helpful regarding the collection of standards, associations' guidelines, and advisory groups presented. Chapter 2 by Callegaro et al. provides a detailed overview of studies comparing online panels to other panels and benchmark surveys. This chapter also offers a rich typology of comparison studies on data quality (in particular on measurement error) and provides a range of examples.

The coverage section contains Chapter 3 by Struminskaya et al. and Chapter 4 by Grönlund and Strandberg, which both assess the representativeness of online panels. While Chapter 3 offers valuable and detailed practical insights into the design and implementation of an online panel as well as recent findings on the representativeness of probability-based online panels, Chapter 4 focuses on the effect of panel attrition on the representativeness of panel survey results. Both chapters are highly instructive and transparent regarding the models estimated and the conceptual as well as analytical decisions taken. In Chapter 5, McCutcheon et al. provide the results of a survival analysis model of members in a multimode consumer panel. The analysis is very easy to follow, especially because of the helpful graphical presentation of results.

The nonresponse section of the book is very diverse in terms of the questions raised and the methods used to assess nonresponse. In Chapter 6, Lugtig et al. present an instructive latent class analysis to investigate the different behavioral patterns involved in panel attrition. Göritz presents results of logistic regression analyses, including hypotheses on and indicators of survey nonresponse, in Chapter 7. All variables are examined regarding their influence on the starting propensity as well as the completion propensity of a survey wave within a panel. In Chapter 8, Keusch et al. provide insight into the motives and value characteristics of participants in a nonprobability online panel. Among other findings, they show how important both intrinsic and extrinsic motivation is to participation, concluding that both types of motives need to be addressed and encouraged by the panel provider. In Chapter 9, Scherpenzeel and Toepoel present various experimental studies to assess the effect of nonmonetary incentives and encouragement strategies on panel participation. They conclude that survey practitioners should not take for granted that feedback and small acknowledgments have a significant positive effect on panel retention.

In the measurement error section, Hillygus et al. in Chapter 10 provide evidence on a wide range of indicators concerning the response behavior of professional respondents, that is, respondents participating in multiple panels. In Chapter 11, Greszki et al. focus on the magnitude and intensity of the effect that speeders have on data quality. Unfortunately, this study compares two panels which differ from one another in more than one respect,

which limits the generalizability of their results. Both chapters offer rich descriptions of the underlying theories and methods used to assess measurement error.

The chapters on measurement error are followed by a section on weighting adjustments. In Chapter 12, Steinmetz et al. take a very thoughtful and critical view of propensity-weighting adjustments. They show the advantages and challenges of using reference surveys to calculate propensity weights for nonprobability panels. Their description of the process of applying weights is very detailed and easy to understand. However, they generalize their results on the representativeness of one specific panel (the Dutch WageIndicator Survey) to all nonprobability panels, although their panel may well attract a very specific group of panelists (see p. 286). Chapter 13 by Zhang gives an overview of imputation approaches and their advantages and disadvantages. Zhang gives detailed instructions on when and how to use imputations, as well as providing interesting insights into the impact of such imputation procedures on the representativeness of results (see p. 305).

The next section contributes to understanding how nonresponse and measurement error interact. The analyses in Chapter 14 by Malhotra et al. and Chapter 15 by Roberts et al. complement one another as they both look at the interdependence between nonresponse error and measurement error. In particular, they study the effects of nonresponse reduction in the recruitment phase. Chapter 14 focuses on the comparison between hard-to-recruit and easy-to-recruit respondents and their response behavior. The authors of this chapter use various different indicators of measurement error (pp. 326). Chapter 15 looks at the long-term effects of nonresponse reduction strategies. Their findings on the correlation between recruitment effort and conditioning during the later panel waves are particularly informative (p. 356).

The special domains section of this book consists of two very different chapters. Drewes in Chapter 16 presents interesting findings about smartphone users, their attitudes towards smartphones and web surveys, and the differences in their response behavior compared to users of conventional web devices, such as PCs and laptops. In Chapter 17, Napoli et al. report alarming facts concerning the history and development of Internet ratings panels (see e.g., pp. 388). Internet ratings panels systematically collect data on their participants' online behavior. They use special hardware and software to capture Internet usage patterns directly. The authors of this chapter conclude that to date the findings reported by these panels are not reliable and not representative of the online population (see p. 402) and frequently collect very sensitive information without explicitly informing their panelists (see for example p. 389 and p. 397).

The last section of the book covers new procedures for solving practical problems involved in conducting online panels. In Chapter 18, Macer provides information on recent developments regarding web panel software. The chapter covers software solutions for the complete survey process, from questionnaire development and panel management to monitoring panelists. In the subsequent chapter, Baker et al. provide evidence on the effectiveness of procedures to validate panelists' identities. Although the authors show that unvalidated respondents tend to produce data with a little lower quality than validated respondents, the authors conclude that respondent validation may lead to smaller and less representative samples without the answer quality being substantively better (see p. 450).

Therefore every researcher has to decide for themselves whether these procedures can and should be applied to their specific online panel project.

This edited volume serves as a very valuable introduction to online panel research, since it provides comprehensive information on the definitions, typologies, guidelines, and basic formulae necessary for starting research on online panels as well as building a new online panel. Our primary criticisms concern the definitions of representativeness adopted and the commercial perspective portrayed in some of the chapters. Nonetheless, the book is an important addition to the survey methodological literature, because it offers state-of-the-art research in the field of online panel research. We thus highly recommend this book to academic survey methodologists and practitioners in the field of online panels alike.

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