

Random and Non-Random Measurement Error in HRM Research: Measuring and Explaining Differences in Management-Worker Representative Responses in WERS2004

By

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Indicative Abstract

Large scale organisationally based surveys such as the 2004 Workplace Employment Relations Survey (WERS2004) provide a unique opportunity to gain a deeper and more systematic understanding of the nature and operation of contemporary organisations and related employment systems. One potential problem with these surveys, though, is that they typically rely on the responses of a limited number of key informants in each unit to build a picture of organisational properties of interest. Much of the substantive American survey based research on the link between human resource (HR) practices and firm performance, for instance, uses a single respondent to rate and describe HR practices for an entire organisation (Huselid, 1995; Delery and Doty, 1996; Huselid et al., 1997). There is considerable evidence to suggest, however, that single respondent measures of HR practices have low reliability in that they contain large amounts of measurement error (Gerhart et al., 2000; Wright et al., 2001). What is less clear, though, is whether the measurement error commonly associated with single respondent measures of HR practices is random or non-random in nature. This is a key issue since, as Gerhart et al. (2000) have demonstrated analytically, the nature of the error involved (i.e. whether random or systematic) makes a major difference to the potential interpretation of observed links between HR practices and various types of outcomes.

The aim of the present paper is to contribute to this area of inquiry through a detailed analysis and comparison of management and worker representative (WR) responses to a principal set of 45 matched items/questions in WERS2004. Valid responses on the full set of matched survey items are available for both management and WR respondents across a subset of 459 establishments that were covered in the survey. The 45 matched items include both factual questions asking respondents whether or not, for instance, there are formal procedures for dealing with collective disputes at the workplace, as well as more subjective questions requiring respondents to rate on a three-point scale, for example, management's general approach to trade unionism at the establishment.

Specifically, the aim of the study is fourfold. First, is to review and summarise existing work dealing with the issue of interrater reliability and associated

measurement error in HRM survey-based research. The second is to present a clear conceptualisation of interrater reliability and associated notions and measures of interrater agreement and bias to be used in the analysis of the matched management-WR data from WERS2004. Third, is to identify and describe possible empirical regularities in the data in terms, specifically, of patterns of interrater reliability, as well as agreement and bias, between management and WR respondents across the set of 45 matched survey items in the sample of 459 WERS2004 establishments included in the analysis. And fourth, is to develop a general explanatory model of interrater reliability/agreement that can be used to try to explain observed patterns of reliability/agreement in the WERS2004 data. The core aim is to try to understand the extent to which differences in responses between management and WE respondents are predictable (i.e. non-random) and whether, therefore, any potential rater-related measurement error and bias in the WERS2004 data is, itself, likely to be either random or systematic. The analytical and policy implications of the results are then considered, both in general terms and in terms of the WERS2004 survey in particular.