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Common Method Variance in International Business Research: Further Reflections

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We want to thank Harold Doty and Marina Astakhova (Chap. 21, this volume) for their excellent commentary on our *JIBS* (2010) editorial on common method variance (CMV), which is reprinted as Chap. 20 (this volume). We would like to support in particular their suggestions for reviewers. After reflecting on this insightful commentary, we like to take the opportunity to add the following elements to the debate.

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In the nine years since our *JIBS* piece appeared, CMV has moved from a problem facing psychology researchers to a challenge recognized by all social scientists. Scholars have extended the CMV literature to disciplines such as entrepreneurship (Tehseen et al. 2017), international marketing (Jean et al. 2016) and public administration (George and Pandey 2017).

As Doty and Astakhova (Chap. 21, this volume) observe, CMV has become a controversial issue. While the consensus is that CMV exists (Schwartz et al. 2017), scholars differ in their views as to whether CMV matters a little or a lot (George and Pandey 2017) – or even is simply an "urban legend" (see Spector 2006; for a contrary view, see Schwartz et al. 2017). Some authors also argue that both uncommon method variance (UMV) and CMV should be considered, and at the level of the individual variable, rather than the method (Spector et al. 2019).

The "politicization" of the dialogue on CMV was something that we did not expect when we wrote our editorial. We had attempted to provide a balanced assessment, noting that CMV might need to be tolerated in IB research, especially when investigating empirical phenomena where data are scarce (as is often the case in IB research in general and developing countries in particular). Moreover, we noted that large readily available datasets such as ORBIS and Compustat had their own problems. As *JIBS* editors, we wanted to encourage primary-data sourced, quantitative IB studies to take CMV seriously. We recommended that authors carefully consider whether CMV is potentially a problem, and contemplate whether and how to remediate the issue, but we did not intend to discourage them with the "big stick" of CMV supposedly invalidating empirical results "by definition".

We continue to believe, and cannot emphasize enough, that many CMV issues can be avoided or minimized through making appropriate *ex ante* research design decisions. Systematically considering alternative designs, such as experimental and longitudinal ones, in combination with focused econometric identification strategies is key. Of course, this does not imply that the single-respondent–one-shot survey design should be ruled out altogether. On the contrary, for specific research questions, this design is still useful. As an illustration, let us use the example of studying self-identified victims of perceived opportunism in international business transactions (dependent variable), where we assess the

antecedents or drivers of opportunism. The suggestion by reviewers that researchers should also survey the perpetrators who engaged in opportunism makes little sense. A credible study of victims does not require validating their views by surveying those who made them victims. At the same time, often other research designs would have been more powerful, including multi-person and/or multi-period survey ones. For example, in Urbig, Terjesen, Procher, Muehlfeld and van Witteloostuijn (2016), the dependent variable is based on a lab experiment, with information on the independent variables collected through a survey, whereby both measurements are separated by a time lag.

Before measuring anything (which in our field usually involves collecting secondary data), a researcher should analyse *why* s/he wants to know *what*, and what the answers to why and what imply for measures. As a field of study, we probably do not devote sufficient attention to this issue. Let us address the question of measures by making an analogy with the uses of a river. When we ask the question as to whether we can wade from one bank of the river to the other, we can answer this question by measuring the maximum depth of the river in the season of maximum flow, not its average depth at a random point in time. However, if we want to build a reliable bridge over the river, we should again consider the season of maximum flow, b ut t his t ime m easure t he d istance b etween t he t wo banks. If we seek to estimate the risk of overflowing, we need to measure the maximum flow itself, rather than focusing on the depth of the river or the distance between the banks. Finally, if we want to find out what area can be irrigated on a continuous basis thanks to the river, we should measure the average flow, rather than the maximum flow. And so on. This issue of why and what may seem trivial, but it is not. The principle that a researcher should start by carefully considering why s/he is collecting what data before starting to do so is often violated, we fear. But by doing this carefully, issues of CMV can often be avoided or minimized as well.

In our editorial, we recommended that both *ex ante* and *ex post* approaches be deployed to handle CMV; that *ex ante* approaches are preferable; and that *ex post* solutions should involve multiple methods and tests. Schwartz et al. (2017) recently reached similar conclusions to ours in their empirical tests of CMV, whereby they found that the Harmon single-factor test did not detect CMV and that the best approach

was an *ex ante* design approach coupled with using instrumental variables in two-stage least squares (2SLS) to obtain consistent estimates. Antonakis, Bendahan, Jacquart and Lalive (2010) similarly recommended using 2SLS to handle CMV. It is also possible that the addition of non-linear, mediation and moderation relationships to the estimated model will increase complexity beyond what any respondent would reasonably be aware of at the time of the survey (Podsakoff et al. 2003; Siemsen et al. 2010; and Podsakoff et al. 2012).

Thinking ahead, we know that CMV is often associated with single-respondent–one-shot survey designs. But to what extent are other designs (potentially) affected by CMV? We find this question particularly interesting in the context of the data science revolution, which is likely to have an impact on IB research as well. For instance, to what extent is – or can – CMV be associated with measures based on text analysis of scraped data? One of the authors recently did his first "data science" paper (van Witteloostuijn and Kolkman 2018) and was intrigued by what we can now do with data science techniques, particularly machine learning algorithms; however, we are still in the middle of the process of finding out all the pros and cons of such techniques, with CMV being a possible issue.

We think that the CMV challenge provides an additional argument as to why the IB field needs more replication of different types (cf. Walker et al. 2019), whereby we should to the extent possible study a research question through different designs, methods and measures – apart from using different samples.

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