Supporting replication research in management journals: Qualitative analysis of editorials published between 1970 and 2015

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1. Introduction

Replications – research directed primarily at repeating earlier studies (Frankfort-Nachmias & Nachmias, 1996) – are well institutionalized within the realm of natural sciences but are often seen as problematic in the area of social sciences in general (Dewald, Thursby, & Anderson, 1986; Kepes, Bennett, & McDaniel, 2014; Makel & Plucker, 2014) and management science in particular. Although they may contribute to the estimation of effect sizes (Hunter, 2001), theory development (Tsang & Kwan, 1999; Uncles & Kwok, 2013), weeding out of spurious findings (Haenlein, 2012; Honig, Lampel, Siegel, & Drnevich, 2014; Kenworthy & Sparks, 2016), and dealing with research misconduct (Atwater, Mumford, Schriesheim, & Yammarino, 2014; Honig et al., 2014; Leung, 2011), the number of such studies appearing on the pages of management journals is considered to be low.

Given the recently growing popular interest in the so-called “replication problem” in the social sciences (Lucas, Morrell, & Posard, 2013; Wilson, Smoke, & Martin, 1973) and the increasingly heated debates in adjacent fields such as psychology (Open Science Collaboration, 2015; Gilbert, King, Pettigrew, & Wilson, 2016; Wright & Sweeney, 2016) and economics (Chang & Li, 2015; Dewald et al., 1986; Duvendack, Palmer-Jones, & Reed, 2015), this issue is likely to become more salient in our field (Bettis, Ethiraj, Gambardella, Helfat, & Mitchell, 2016; Bettis, Helfat, & Shaver, 2016; Ethiraj, Gambardella, & Helfat, 2016). What is more, while the number of published replications in psychology (Makel, Plucker, & Hegarty, 2012) and economics (Duvendack et al., 2015) is still rather low, both of the sciences seem to be well-advanced in diagnosing the problem and offering solutions to it (Motyl et al., 2017), while management science can be perceived as lagging behind.

This is particularly troubling because having enough replication studies published in management journals may bring positive consequences for the practitioners who would like to use research results for the purpose of improving organizations (Barends et al., 2017). Specifically, the idea of the evidence-based management (Briner, Denyer, & Rousseau, 2009; Rousseau, 2012) is founded on the assumption that managerial decisions should be based on systematic assessment of the available scholarly results, including replication of prior findings. However, the dearth of replication research in our area of study is highlighted as one of the factors that potentially undermines the feasibility of evidence-based management (Kepes et al., 2014).

The importance of replication research has been recently highlighted by growing interest in the challenges associated with the so-called “search for asterisks” (Bettis, 2012), that is, by repeating
statistical tests aimed at identifying “statistically significant” correlations and by hypothesizing after results are known (HARKing (Kerr, 1998)), Simmons, Nelson, and Simonshon’s (2011) pivotal paper on p-hacking shows convincingly that by adjusting the research design and by selective reporting of findings (for instance, by excluding or including certain subsets of data or by controlling or not for covariates), “significant” results can be obtained under almost any circumstances. In a nutshell, the management literature may be populated by studies that report exaggerated levels of significance, and one potential solution to this problem is supporting replication research.

Thus far, the research on replications in management science has been confined to three streams: (a) discussion of the relevance of replication research, (b) research of the frequency of replications appearing in print, and (c) surveys of editors’, reviewers’, and authors’ attitudes toward such studies. Surprisingly, thus far, nobody has examined how the editors of management journals frame the issue of replication research when they communicate with their readers through editorials. This seems to constitute a significant gap in our understanding of the problem because editorials constitute an important vehicle for communicating the journal’s policy (Day, 2007). The framing of the problem provided in editorials likely affects the probability of conducting and submitting replication studies to journals and impacts the perception of replication research held by the members of the scholarly community.

Drawing on an analysis of 67 editorials mentioning the issue of replication research published between 1970 and 2015 by 44 top management journals, I fill that gap by showing how editors provide symbolic and substantial support for replication research, although often combining that support with cues suggesting that replication studies are inferior to other kinds of research.

2. Past research

2.1. Relevance of replication research

As it is going to be shown in the empirical part of this paper, the relevance and uses of replication research have been a matter of debate within the community of management scholars. Before proceeding to the analysis of editorials covering the issue, some basic ideas regarding the definition of replication research, its forms, and relevance for the advancement of management science have to be presented.

While the concept of replication may appear as rather straightforward, studies intended at replicating previous results may take various forms. For instance, Lykken states that replications can be literal, operational, and conceptual. The first two types are about replicating all features of the original study, such as “sampling procedure, experimental conditions, measuring techniques, and methods of analysis” (with or without the help of the original researcher) (Lykken, 1968, p. 155), while in the conceptual type, the effort is focused on replicating the finding with the use of different methods, samples, measurements, etc. Along the same lines, Schmidt (2009) differentiates between direct and conceptual replications. A more fine-grained typology — considering that replication may amount just to the repetition of analysis of the data collected by the author of the original study — has been provided by Tsang and Kwan (1999). In their view, replications may take six forms, ranging from checking of analysis (same data set, same measurement, and analysis) to generalization and extension (different population, different measurement, and/or analysis). Building on Tsang & Kwan’s contribution, Bettis, Helfat, et al. (2016) provided an interesting discussion of the relevance of replication research for the advancement of management science. The six kinds of replications envisioned by Tsang and Kwan are divided into two categories: narrow replications and quasi-replications. The former entail replications that adopt a research design same as that of the original study and either the same data and sample or a different sample but drawn from the population used in the original study. The latter entails all replication efforts that use either different population or different research designs. According to Bettis et al. (2016), quasi-replications are the most valuable, as they allow assessment of robustness and generalizability of findings provided by the original studies. However, quasi-replications are more likely to bring valuable contributions when only one element of the original study design is altered (Ethiraj et al., 2016) because it allows to evaluate the impact of the changed feature on the results. Studies that alter many features at once are not likely to shed light on reasons why the new results are different from the original ones (Bettis, Helfat, et al., 2016).

The recently amplified interest in replication research can be linked to growing consensus that management science, similar to other social sciences, may be facing a credibility crisis (Bergh, Sharp, Aguinis, & Li, 2017; Byington & Felps, 2017). Multiple tests conducted in search for asterisks (Bettis, 2012) allowing for hypothesizing after results are known (Kerr, 1998); p-hacking, that is, adjusting the statistical analysis and reporting to show “statistically significant results” (Simmons, Nelson, & Simonshon, 2011) and outright fraud (Bedeian, Taylor, & Miller, 2010; Byington & Felps, 2017) may bring considerable threats to management science (Bosco, Aguinis, Field, Pierce, & Dalton, 2016; Hollenbeck & Wright, 2017). A relatively recent survey of 1940 scholars associated with 104 PhD-granting management journals of AACSB International accredited business schools conducted by Bedeian et al. (2010) revealed that a significant fraction of the surveyed faculty believes that questionable research practices are very common. For instance, 91.9% of respondents know about cases in which their colleagues developed hypotheses after results were known. Nearly 80% believe that colleagues withheld methodological details or results and 77.6% are aware of cases when scholars selected only the data supporting their hypothesis. In a similar vein, an analysis comparing PhD dissertations with journal articles produced on their basis shows that the ratio of supported to unsupported hypotheses more than doubled between these two accounts of the same study (O’Boyle, Banks, & Gonzalez-Mulé, 2017), illustrating how researcher degrees of freedom (Simmons et al., 2011) can affect results. By the same token, in their overview of studies aimed at discovering the prevalence of questionable research practices (QRP), Banks, Rogelberg, Woznyj, Landis, and Rupp (2016) established that 91% of the analyzed studies found evidence of such practices. Engagement in questionable research practices has been explained by the inadequate training of researchers, the pressures to publish in top journals, and the requirements voiced by editors and reviewers (Butler, Delaney, & Spoelstra, 2017). As replication research allows to verify earlier studies and to control for sampling error, lack of internal validity, and fraud (Schmidt, 2009), the rising concerns associated with the prevalence of questionable research practices naturally lead to increased focus on replication research.

What is more, the management science’s heightened interest in the means of dealing with credibility crisis can be seen as a part of a wider phenomenon encompassing all branches of science, including natural sciences such as biology. The evidence suggesting engagement in questionable research practices has been found in social and natural sciences (Fanelli, 2009, 2010, 2011) including biomedical sciences (Ioannidis, 2005), neuroscience (Vul, Harris, Winkelman, & Pashler, 2009), economics (Brodie, Ie, Sangnier, & Zylberberg, 2016), and psychology (John, Loewenstein, & Prelec, 2012). In the face of these discoveries, the scientific community reacted with various initiatives aimed at
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