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Are we overconfident in executive overconfidence research? An examination of the convergent and content validity of extant unobtrusive measures

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ABSTRACT

Building understanding of overconfident executives is central to a growing literature that spans a number of disciplines. Much of this research has utilized unobtrusive, or indirect, measures to assess executive overconfidence from secondary data sources. We analyze the convergent and content validity of seven extant unobtrusive measures of executive overconfidence. The results of our analyses indicate that these measures do not exhibit adequate convergence, suggesting that existing measures are not measuring the same construct. Further, we administer a sort task to academic colleagues to assess whether scholars believe that the seven measures are adequately assessing the intended construct. The results of our sort task indicate that scholars did not categorize any of the seven measures as sufficient for measuring overconfidence. We conclude with suggestions for future research to address the inadequate convergent and content validity found in our assessment of extant measures of executive overconfidence.

1. Introduction

Executive overconfidence, defined as executives' tendency to inflate or overestimate their own abilities (DeBondt & Thaler, 1995; Malmendier & Tate, 2005), is central to a growing, cross-disciplinary research stream focused on how executives affect the behaviors of organizations. Because of limitations with direct measurement when gathering data from executives (Hambrick & Mason, 1984) and the lack of a validated instrument for use in direct inquiries (Hayward & Hambrick, 1997; Hiller & Hambrick, 2005) as well as the benefits of secondary data, scholars have developed multiple "unobtrusive" measures (Webb, Campbell, Schwartz, & Sechrest, 1966) from secondary data to assess executive overconfidence (Bollaert & Petit, 2010; Hill, Kern, & White, 2012). The utilization of multiple unobtrusive measures to assess executive overconfidence presents two problems. First, it can be difficult to interpret results across studies using different measures, and comparisons may not be reliable if the measures do not exhibit adequate convergent validity or agreement with respect to the construct they are attempting to assess (Campbell & Fiske, 1959; Churchill, 1979; Jacoby, 1978; Venkatraman & Grant, 1986). Accordingly, if measures lack convergent validity, the nomological validity, or degree to which measures of a construct exhibit the expected statistical relationship with other constructs, will likewise be inadequate (Jacoby, 1978; Lubatkin, Merchange, & Srinivasan, 1993). Second, existing measures of executive overconfidence are criticized as lacking content validity (Bollaert & Petit, 2010; Hiller & Hambrick, 2005; Jin & Kothari, 2008), or the degree to which the measures adequately assess the construct (Churchill, 1979; Hinkin, 1998).

Despite concerns associated with a lack of both convergent and content validity of unobtrusive measures of executive overconfidence, scholars have yet to provide evidence as to whether these measures exhibit adequate agreement or whether they adequately assess the construct. For the executive overconfidence research stream to continue to develop as well as to assure that we can have confidence in interpretations from existing and future research alike, it is essential to understand whether extant measures agree with respect to what they are attempting to measure, and further whether these measures are adequately measuring what they attempt to measure. The purpose of this paper is to assess the convergent and content validity of extant unobtrusive measures of executive overconfidence.

The results of our assessment of convergent validity of extant unobtrusive measures of executive overconfidence suggest that these measures do not exhibit adequate convergence. Further, we present an evaluation of content validity using scholarly raters that suggests that the extant unobtrusive measures of executive overconfidence are not adequately assessing the construct. Cumulatively, these findings

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confirm concerns with respect to the validity of unobtrusive measures of overconfidence (Bollaert & Petit, 2010; Hiller & Hambrick, 2005; Jin & Kothari, 2008). In addition, since extant measures of executive overconfidence do not exhibit adequate convergent or content validity, interpretations within the existing research stream should be viewed with caution. Because research on executive overconfidence continues to generate interest among scholars, we conclude with suggestions for moving this line of research forward. The suggestions we offer may also be of benefit to scholars interested in utilizing unobtrusive methods to assess other psychological constructs as well.

2. The construct of overconfidence

Overconfidence is a heuristic bias defined as individuals' tendency to overestimate their own abilities (e.g., DeBondt & Thaler, 1995; Hiller & Hambrick, 2005; Malmendier & Tate, 2008). The upward bias in the assessment of their own abilities affects how individuals view and respond to the situations they face (Busenitz & Barney, 1997; Malmendier & Tate, 2005). While psychologists have long utilized the pejorative term “overconfidence” in reference to the tendency of individuals to inflate estimates of their abilities (Meehl, 1957; Oskamp, 1965), scholars also refer to the construct as “hubris” (Hayward & Hambrick, 1997; Roll, 1986), utilizing a term originating from ancient Greece. The traditional definition of hubris utilized by ancient Greek scholars is that hubris is an individual trait defined by “a disposition of overconfidence” (Cairns, 1996, p. 1; see also Dickie, 1984). Given this view of hubris, it is perhaps not surprising that several scholars employ the terms “overconfidence” and “hubris” interchangeably (Hayward, Shepherd, & Griffin, 2006; Li & Tang, 2010; Malmendier & Tate, 2008) or that scholars who use the term “hubris” implicitly link to overconfidence by phrasing the definition of hubris as exaggerated self-confidence (Hayward & Hambrick, 1997; Hiller & Hambrick, 2005; Li & Tang, 2010). Indeed, as Li and Tang (2010, p. 45) note, both overconfidence and hubris refer to the tendency of “decision makers to overestimate their own abilities” and research by Hill et al. (2012, p. 188) has confirmed Li and Tang's view by providing examples of the equivalent use of the terms in the literature, concluding that both terms are employed in reference to “the tendency of individuals to overestimate their abilities.” While we employ the term “overconfidence” exclusively for clarity, we highlight the practice of referring to overconfidence as hubris to link to the literature that employs the latter term. Further, to assess convergent and content validity of executive overconfidence measures adequately, we need to include measures referring to both overconfidence and hubris because in practice the two terms are used to refer to the same construct.

3. Method

3.1. Identifying extant measures

To identify measures of executive overconfidence, we conducted a literature review using computerized search tools and the keywords “overconfidence” and “hubris.” We then reviewed the references of the identified articles to locate additional research. Our search resulted in over 250 research papers. The papers were reviewed to identify empirical tests where executive overconfidence was assessed using unobtrusive measurement; our review produced seven unobtrusive measures that provide the basis of our study. Two extant articles in the executive overconfidence/hubris literature identify the same seven measures (Bollaert & Petit, 2010; Hill et al., 2012); thus, we have confidence that our search resulted in a reasonably comprehensive list of extant measures.

3.2. Sample

Since data requirements differ across unobtrusive measures of executive overconfidence, we chose a sample that would eliminate as many confounds as possible. For several reasons, we selected publicly traded firms operating in the United States as our sample. First, because we need company data to calculate certain unobtrusive measures of executive overconfidence, publicly traded firms were essential since private firms are not required to disclose this information. Second, one measure requires comments made by media members in reference to an executive. Since large firms systematically receive more coverage in the media (Gans, 2005), using large firms in concert with smaller firms may constitute a naturally occurring selection bias. To avoid the concern that the media-based measure of executive overconfidence will systematically vary by firm size and subsequently bias measurement and analyses, we selected only firms with a minimum revenue threshold of $1 billion dollars. Third, because uncertainty in a firm's industry may affect various overconfidence measures, we used only firms that operate in industries that exhibit relatively little dynamism to enhance comparability (Cameron, Whetten, & Kim, 1987). We identified 103 firms in the year 2000 meeting our requirements; incomplete data on nine firms result in a final sample of 94 firms.

For each of the unobtrusive measures of executive overconfidence, we replicated the methodology of the original authors with the CEO as the focal executive. Given that our first purpose is to assess convergent validity of extant measures, we remained agnostic on the quality of any measure and rather replicated prior approaches. As such, we withheld comments on the strengths and weaknesses of each measure until after our analyses were complete.

3.3. Measures of executive overconfidence

3.3.1. Executive language use

Using letters to shareholders during the focal year and two preceding years, a count of the number of sentences that included personal statements in reference to the organization was divided by the total number of sentences to measure executive language use (Rovenpor, 1993).

3.3.2. Media comments

We replicated Hayward and Hambrick (1997) and coded how the media viewed the CEO using nationally distributed newspaper and magazine articles about the CEO. Specifically, the rating scale we employed is: $3 =$ the article is unequivocally favorable; $2 =$ the balance of the article was favorable but included some unfavorable remarks; $1 =$ the article was neither favorable nor unfavorable; $-1 =$ the balance of the article was unfavorable but included some favorable remarks; $-2 =$ the article was unequivocally unfavorable; and $0 =$ the CEO receives no media coverage. We summed the scores for all articles to arrive at our measure based upon media comments. As in the method we replicate, we omitted articles that quote or name the CEO only. The Dow Jones Factiva database for magazines and newspapers, which included more articles than either Lexis/Nexis or ABI, served as our source for articles because the broader source may alleviate some concern over selection bias of articles.

3.3.3. Recent organizational performance

We replicated the Hayward and Hambrick (1997) measure using such recent organizational performance as stockholder returns (stock price appreciation over the preceding year plus the dividend yield) divided by the initial stock price.

3.3.4. Organizational investments

Malmendier and Tate (2005, p. 2661) argue and find empirical support for the notion that overconfident CEOs “overestimate the returns to their investment projects” and thus that the investment level of the