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Knowledge, compensation, and firm value: An empirical analysis of firm communication[☆,☆☆]

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ABSTRACT

Knowledge is central to managing an organization, but its presence in employees is difficult to measure directly. We hypothesize that external communication patterns reveal the location of knowledge within the management team. Using a large database of firm conference call transcripts, we find that CEOs speak less in settings where they are likely to be relatively less knowledgeable. CEOs who speak more are also paid more, and firms whose CEO pay is not commensurate with CEO speaking have a lower industry-adjusted Tobin's Q. Communication thus appears to reveal knowledge.

1. Introduction

Organizational decisions require knowledge, which is typically spread throughout the organization. Consequently, a primary goal of organizational design is to ensure that the employee with the appropriate knowledge influences the relevant decision (e.g., Brickley et al., 2009, Ch. 12; Horngren et al., 2012, Ch. 22). Prior studies have measured an employee's

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☆☆ The conference call data and supplementary appendix to this paper can be downloaded at: http://webuser.bus.umich.edu/feng/.

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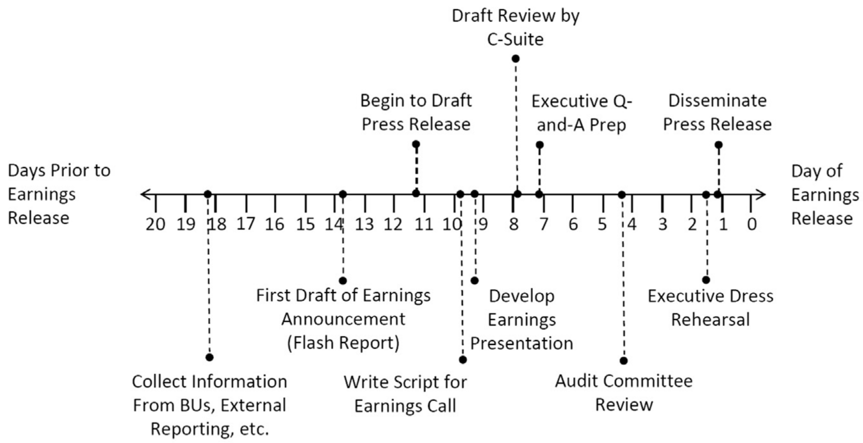

Fig. 1. Sample Timeline for Management's Preparation for Earnings Conference Calls.
Source: Corporate Executive Board IRO Survey, July 2009.

knowledge only indirectly through his or her job description or job title (e.g., Aggarwal and Samwick, 2003; Ortega, 2009). This study measures relative employee knowledge by studying employee communication patterns in a large sample of firms.

We are not the first to assert that communication is revealed knowledge – i.e., the person communicating is the person with the knowledge. Organizational theories and case studies have long relied on communication patterns such as internal memos and face-to-face meetings to showcase how knowledge arises and is distributed among employees in a firm (e.g., Aghion and Tirole, 1997; Simons, 2000). These case studies typically have unparalleled access to internal communications of the organization under study, an access inconceivable for a large sample of firms.

Our study's key innovation is to recognize that there is a publicly available management communication setting, namely earnings conference calls, that can illuminate patterns of knowledge within the management team. Most publicly traded firms host earnings conference calls each quarter during which managers describe the performance and strategy of the firm and field a question-and-answer session with analysts (Kimbrough, 2005). These meetings offer critical windows for analysts and investors to observe and update their views of the management teams and evaluate their investment decisions, and thus carry high financial stakes (Matsumoto et al., 2011). As a result, conference calls present a setting in which significant information is communicated, project performance is evaluated, and costly consequences result if the task is performed poorly. Therefore, management is under significant pressure to communicate effectively, and firms approach this event with diligent preparation (Fig. 1 presents a typical timeline representing the extent of management preparation for earnings conference calls).

The nature of these meetings illustrates the complex nature of value-relevant knowledge, the myriad forms it assumes, and the difficulties in transmitting and interpreting it. In conference call settings, knowledge appears in forms ranging from tangible information (Bushee et al., 2003) to word choice (Larcker and Zakolyukina, 2012) to the vocal inflections and tone affected reflexively by executives when talking (Mayew and Venkatachalam, 2012). We hypothesize that one way for management to increase its effectiveness at communicating and explaining decisions to stakeholders is to permit the most informed management team member to speak – i.e., we argue that communication patterns reflect the relative location of knowledge in the management team, over and above formal titles.

Our empirical tests of the above hypothesis proceed in three interrelated steps. We begin by obtaining machine-readable texts of 17,419 earnings conference calls from 2003–2007 and measure the cross-sectional variation in communication patterns of the management team. We find that the CEO speaks less relative to her subordinates in firms with a high level of R&D expenditures or a large employee base, situations where theory predicts that information is too specialized or too voluminous for one person such as the CEO. The CEO also speaks less relative to her subordinates when she is new to the position and is likely less informed. By contrast, the CEO speaks more when she has more ability to acquire knowledge faster or has technical skills specifically related to the earnings conference call task, i.e., when the CEO is highly educated or has an accounting background. Similar results obtain for other executives' speaking patterns as well. Overall, these results suggest that communication indeed reveals knowledge.[1]

We next conduct two tests of the economic consequences to further establish our communication-based measure of relative knowledge. Our first test shows that communication patterns are related to pay patterns. Theory suggests that management team members with more knowledge optimally have a bigger impact on decisions (directly or indirectly), for which they receive relatively more pay (Baiman et al., 1995). This is what we find. CEOs who communicate more are paid

[1] Note that our hypotheses and tests throughout the paper pertain to relative levels of knowledge within the management team, not absolute levels of knowledge across management teams. Total levels of knowledge of management teams may vary in the cross-section of firms (i.e., some management teams may be more informed on the whole than other management teams), but that variation is not pertinent to our hypotheses.