**ONLINE APPENDIX**

**Further Information on PSDM Programs**.

Our preliminary interviews with top managers and consultants revealed specific procedures in PSDM programs that aligned strategic input with top executives’ pre-determined strategies. First, the consultants who developed these programs emphasized the importance of encouraging “trusted” lower-level managers to “set the example” by providing input early in the process. Such trusted managers were more likely to share the perspectives of top executives on strategic issues facing the firm, and hence their opinions can create an impression among other employees that top executives’ strategic decisions incorporated input from lower-level managers. Second, the interviewees suggested that consultants sometimes anonymously comment themselves on input provided by lower-level managers, especially early in the process, with the ostensible purpose of reinforcing participation and increasing engagement (this procedure is sometimes referred to as “salting” participation). In communicating with lower-level managers, consultants may also make comments that are sympathetic to top management’s pre-determined strategy, and may reinterpret critical comments about top management’s strategy as issues to address in the implementation process, rather than as concerns about the strategy itself. Third, consultants typically assume responsibility for summarizing or “aggregating” the input, which provides another opportunity to discount critical comments or (re)interpret such comments as concerns about how to properly implement a strategic option, rather than as criticism of the strategic option itself. These procedures can make lower-level managers feel that their overall input is aligned with top executives’ (pre-determined) strategies and that these strategies were influenced by their collective input.

**Measures to Increase the Survey Response Rate**.

To increase the quality of the survey data and maximize participation rates, we conducted a pretest of the questionnaire that entailed in-depth interviews with 12 current or former CEOs and 13 top managers from firms in the population. We used feedback from the interviews to revise the layout and instructions of the questionnaire, and to refine the wording of individual questions (Fowler 2014). We obtained the endorsement of a well-known and respected corporate leader and a management consulting firm with an excellent reputation in the area of strategic leadership and governance. The invitation to participate framed the survey as part of an ongoing program of research on strategic leadership and governance involving faculty of several leading business schools, noting that thousands of managers and directors had participated in prior surveys (Greer et al. 2000, Fowler 2014).

**Other Data Sources**.

We obtained demographic and board membership data on CEOs, other top managers and directors from multiple sources, including *BoardEx*, *Capital IQ*, *Compact Disclosure, Marquis’* *Who's Who*, *The Dun and Bradstreet Reference Book of Corporate Management*, *The Social Register*, annual reports, and proxy statements. We used *COMPUSTAT* and *CRSP* for firm financial data. Data on analysts’ earnings forecasts and stock recommendations, and the size of their employers, came from the I/B/E/S database. Data on acquisition activity were obtained from *Securities Data Company* (*SDC*) and *COMPUSTAT*, and data on institutional ownership came from Thompson-Reuters.

**Additional Examples of Decoupling**.

A firm was coded as decoupling in the first quarter of 2012 (quarter “q”) because (1) the CEO had indicated in quarter q-3 of 2011 that top management considered whether to exit one of its product segments or enter a new European market, and decided in favor of both options, (2) the CEO indicated in quarter q that top management adopted a PSDM program and solicited input from managers and staff about whether to pursue either of these options, and (3) later surveys indicated that top management did not subsequently (re)consider either decision. As another example, a firm was coded as decoupling in the second quarter of 2010 (quarter “q”) because (1) the CEO had indicated in quarter q-2 of 2009 that top management considered whether to (a) focus its marketing and advertising more heavily on millennial customers, (b) expand into Southeast Asia, and (c) stop providing one of its traditional, core services, and decided in favor of the first two options and against the third, (2) the CEO indicated in quarter q that top management adopted a PSDM program and solicited input from managers and staff about whether to pursue these options, and (3) later surveys indicated that top management did not subsequently (re)consider their initial decisions.

**Additional Information on Measure of Communication about the Use of Crowdsourcing Technology**.

Our interviews and responses to open-ended survey questions revealed that CEOs tended to highlight the use of crowdsourcing technology in two ways: they framed the programs as “crowdsourcing enabled”, and/or they explicitly described crowdsourcing technology as integral or central to the program. Such rhetoric is consistent with descriptions of “highlighting” in impression management theory. As discussed above, Goffman described highlighting as a framing technique that presents a specific, culturally legitimate characteristic as integral or central to the whole (1959: 19).

**Survey Scale Items and Interrater Reliability**.

*Highlighting the use of crowdsourcing technology in a PSDM program in communicating with analysts* 1

|  |  |
| --- | --- |
| Items | Weighted Kappa |
| 1. “In describing the program to [security analyst], to what extent did you highlight the use of crowdsourcing technology in soliciting input?” [5-point scale: not at all…somewhat…very much so] | .92 |
| 2. “In describing the program to [security analyst], to what extent did you make it clear that crowdsourcing technology is integral to the program?” [5-point scale: not at all…somewhat…very much so] | .91 |
| 3. “In describing the program to [security analyst], to what extent did you make it clear that crowdsourcing technology is a key element of the program?” [5-point scale: not at all…somewhat…very much so] | .89 |
| 4. “In communicating with [security analyst], I have sought to portray crowdsourcing technology as a key component of the program.” [5-point agree-disagree scale] |  |
| 5. “In communicating with [security analyst], I have tried to make it clear that crowdsourcing technology is integral to the program.” [5-point agree-disagree scale] |  |

1 The wording of each item as shown is from the CEO survey; the wording was altered appropriately for the analyst survey. Interrater reliability could not be assessed for items 4 or 5.

**Selection Equation from Heckman Model**\*

|  |
| --- |
| **Independent variables** |
| **1. Friendship ties between the focal firm’s CEO and the CEOs of other firms that adopted and decoupled a PSDM program** | 0.477•••(0.047) |
| 2. (Low) prior analysts’ earnings forecasts | 0.316•••(0.018) |
| 3. (Low) prior analysts’ stock recommendations | 0.481•••(0.061) |
| **4. Friendship ties to CEOs of other firms that adopted and decoupled a PSDM program X (low) earnings forecasts** | 0.318•••(0.011) |
| **5. Friendship ties to CEOs of other firms that adopted and decoupled a PSDM program X (low) stock recommendations** | 0.380•••(0.027) |
| 6. Institutional ownership | 0.950•••(0.228) |
| 7. Log of total sales | 0.098•••(0.028) |
| 8. Formal board independence from management | -0.513•(0.255) |
| 9. Board appointments held by the CEO | -0.086(0.058) |
| 10. Return on assets | -3.121•••(0.638) |
| 11. Friendship ties between the CEO and the board | -1.664•••(0.162) |
| 12. Announcement of a diversifying acquisition | 0.401(0.209) |
| Constant | 0.601•(0.240) |

\*Results are provided for the first model estimating earnings forecasts. The results for other models of analysts’ appraisals were very similar. • p < .05; •• p < .01; ••• p < .001; t-tests are two-tailed, standard errors are in parentheses. Dummies for industry, quarter, and consultant are included.

**Robustness Checks**

 **The moderating effect of CEO tenure.** To the extent that there is greater uncertainty about the quality of a CEO’s leadership early in their tenure (Graffin et al. 2013), we should expect the symbolic value of disclosing PSDM programs to be especially high for new CEOs. In models that included the full set of controls, there were positive and statistically significant interactions between (low) CEO tenure and (i) disclosure of a PSDM program in communicating with security analysts and (ii) highlighting the use of crowdsourcing technology in the PSDM program on earnings forecasts and stock recommendations. Simple effects indicated that the independent variables were still strongly associated with analyst appraisals for CEOs with relatively long tenure (e.g., greater than average for the sample), but that the relationships were especially strong for relatively new CEOs.

**The moderating effect of quarterly earnings guidance**. To the extent that quarterly earnings guidance indicates transparency and reduces the information asymmetry faced by security analysts (Park & Patterson 2021), we might expect the symbolic value of disclosing PSDM programs to be greater for firms that do *not* provide quarterly earnings guidance. We examined this possibility by testing interactions between earnings guidance and the independent variables on analyst appraisals. We developed a dichotomous measure that indicates whether the focal firm issued earnings guidance for at least three of the four previous quarters (Park & Patterson 2021). With the full set of control variables included, there were positive and statistically significant interactions between the absence of quarterly earnings guidance and (i) disclosure of a PSDM program in communicating with security analysts and (ii) highlighting the use of crowdsourcing technology in the program on earnings forecasts and stock recommendations. Simple effects indicated that the independent variables were still strongly associated with analyst appraisals for firms that did provide quarterly earnings guidance.

**Analyst reactions as third-order inferences**. It might be suggested that analysts react positively to CEO communication about PSDM programs, not because they perceive the programs to promote the quality of decision-making, but because they provide a legitimate rationale to investors and others for issuing more positive forecasts and recommendations. In effect, analysts’ reactions might reflect a “third-order inference” about how others will perceive PSDM programs, rather than a first-order inference about the actual implications of the programs for decision making (Uzzi and Lancaster 2004, Correll et al. 2017: 297, Sharkey & Kovács 2018). While behavioral reactions to impression management often reflect some combination of first-order and third-order inferences (Goffman 1961), the latter are unlikely to be the main driver of analysts’ reactions to communication about PSDM programs, for two reasons. First, our supplemental analyses provided relatively direct corroboration that CEO communication about PSDM programs led to more positive analyst perceptions of firm leadership. Although survey responses can be influenced by social desirability bias, previous studies indicate that security analysts, in responding to comparable survey questionnaires, are typically willing to express personal reservations they may have about corporate policies that receive favorable market reactions (Zhu and Westphal 2011). Second, there is considerable evidence that analysts who render inaccurate earnings forecasts are more vulnerable to adverse career outcomes (Jensen 2004), and our supplemental analyses showed that the independent variables were associated with over-optimistic earnings forecasts by analysts. However, there would be value in further research that explores the conditions under which the reactions of information intermediaries such as security analysts to symbolic management is influenced third-order vs. first-order inferences.

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