Do CEOs Receive the Pay They Deserve? A New Vantage on a Familiar Question

Adam J. Wowak
University of Notre Dame
353 Mendoza College of Business
Notre Dame, IN, U.S.A. 46556
Phone: +1 (574) 631-8614
Email: awowak@nd.edu

Michael J. Mannor
University of Notre Dame
365 Mendoza College of Business
Notre Dame, IN, U.S.A. 46556
Phone: +1 (574) 631-3298
Email: mmannor@nd.edu

Craig Crossland
University of Notre Dame
328 Mendoza College of Business
Notre Dame, IN, U.S.A. 46556
Phone: +1 (574) 631-0291
Email: craigcrossland@nd.edu

Accepted at *Management Review*

November 2, 2017

ABSTRACT

Purpose – This commentary explores the implications of Aguinis and colleagues' study, and in particular their claim that the inconsistency between CEO pay and CEO performance is reflective of a fundamental injustice. In doing so, the authors highlight issues regarding the meaning of fairness in the context of CEO pay, the extent to which CEOs can personally affect firm performance, and the challenges in ascertaining whether CEOs are overpaid, underpaid, or appropriately paid.

Design/methodology/approach – The authors employ a conceptual approach, integrating research on executive compensation and managerial discretion to lend nuance to Aguinis and colleagues' arguments and findings.

Findings – The main takeaway of the commentary is that CEO pay fairness is a complex and multifaceted matter that can be difficult to broadly characterize. The evidence offered by Aguinis and colleagues regarding power law distributions and the weak overlap between CEO pay and CEO performance is compelling, but questions about income inequality and pay fairness rarely lend themselves to straightforward answers. Some caution is thus warranted when evaluating Aguinis and colleagues' conclusion that the U.S. CEO labor market is pervasively unfair.

Originality/value – The authors urge scholars who build on the work of Aguinis and colleagues to pay heed to the challenges in reconciling the twin concepts of CEO pay and CEO performance.

Aguinis and colleagues (In press) begin their study with a simple yet provocative question: Do CEOs receive the pay they deserve? In other words, do their actions or demonstrated capabilities warrant a particular level of compensation? A simple neoclassical model suggests that, over the long term, a CEO's compensation is warranted if it is equivalent to the CEO's marginal product, or "the excess of a firm's total profit under that person's direction over what it would be under the direction of the best alternative executive, plus the amount that would have to be paid to secure the latter's services" (Gomez-Mejia, Tosi, & Hinkin, 1987: 52). The greater the marginal product, the greater the pay, or so goes the logic. The intuitive nature of this premise makes it all the more surprising that researchers have struggled to find strong support for it, with the collective evidence suggesting a statistically significant but practically modest relationship between firm performance and CEO pay (for meta-anlayses, see Tosi et al., 2000; van Essen, Otten, & Carberry, 2015). Aguinis and colleagues offer a fresh perspective on this corporate governance conundrum, specifically by calling attention to the nature of the distributions underlying chief executive officer (CEO) pay and performance.

Indeed, their study underscores a curiously taken-for-granted aspect of the CEO labor market: the immense heterogeneity in the amounts CEOs are paid. Much of the focus from academics and practitioners alike tends to be on the ever-increasing average pay of CEOs (e.g., Connelly et al., 2016; Kim, Kogut, & Yang, 2015), who in 2016 were paid around 350 times what the average firm employee was paid[1] - an eye-popping ratio, to be sure, and one that warrants our attention (and perhaps criticism). Sometimes lost in this debate, however, is the fact that some CEOs are paid far more than others, even after accounting for contextual factors such firm size, industry affiliation, macroeconomic trends, and so on (Wowak, Hambrick, &

[1] See www.paywatch.org.

Henderson, 2011). Aguinis and colleagues shine a spotlight on this variance, arguing and finding evidence that CEO pay follows a power law distribution whereby a small minority of CEOs receives the lion's share of the rewards. That is, the actual variability in CEO pay is much higher than would be the case if it followed a standard normal distribution where extreme outliers (such as are routinely observed in CEO pay samples) would be effectively impossible.

In one sense, this is not all that surprising. Economists have long argued that pay distributions in fields such as the arts, sports, and business follow a power law (Gabaix, 2016). This theory, known as the "economics of superstars" (Rosen, 1981), posits that even small differences in talent can manifest in large differences in pay when individuals' potential marginal products – i.e., their ability to personally add value – increase exponentially toward the top of the talent distribution. Because a CEO's marginal product rises dramatically with firm size (Fama, 1980; Roberts, 1956), it makes sense that CEO pay would follow a power law distribution. To the extent that the most talented CEOs are actually being hired by the biggest firms, then, the rank orderings of CEO performance (more specifically, CEO marginal product) and CEO pay level should be more or less overlapping (Gabaix & Landier, 2008; Malmendier & Tate, 2009; Tervio, 2008).

It is regarding this latter point where the results of Aguinis and colleagues are most striking. They find little overlap between the two distributions, an implication of which is that some CEOs are paid far too much, and others far too little, relative to what they actually deserve. This is suggestive of an inefficient labor market where boards are making inaccurate *ex ante* assessments of CEO talent (i.e., the best CEOs aren't being sorted into the firms where they can make the biggest performance impact) and/or granting pay packages that are not closely reflective of the CEO's performance relative to peers (i.e., the best CEOs aren't receiving the pay

they deserve for the performance they have delivered). Both possibilities imply that there is a significant amount of noise in boards' CEO pay decisions, which, in turn, could be construed as being unfair or unjust to some (perhaps many) CEOs. However, although the authors' evidence of inconsistency between CEO pay and CEO performance distributions is both novel and intriguing, the more general claim that this inconsistency is reflective of fundamental injustice seems more open to conjecture. At the very least, we urge readers to consider three key questions that help to inform the results and interpretation of Aguinis and colleagues' study. First, and most broadly, what does "fair" even mean in the context of CEO pay? Second, to what extent can CEOs personally affect – for good or for ill – the fates and fortunes of their organizations? Finally, how can we as researchers accurately assess whether a given CEO is overpaid, underpaid, or appropriately paid? In the following pages, we offer some thoughts on these issues.

Fairness in the Context of CEO Pay

Front and center in Aguinis and colleagues' study is the notion of fairness, or (in)justice, which has long been a point of contention in the realm of executive pay. The issue is often raised in conjunction with broader societal discussions regarding income inequality, which in recent years has spawned marches, protests (e.g., the Occupy Wall Street movement), and a widespread sentiment of anger about the wealth/power gap between the top "1 percent" (a group to which most CEOs belong) and everyone else (Maharawal, 2013). In a way, the populist uproar over CEO pay is a modern manifestation of an age-old dynamic whereby the working class questions and/or distrusts the social hierarchy that gives rise to rich and powerful elites (Piketty, 2014). Income inequality is a pervasive, long-term phenomenon (Milanovic, Lindert, & Williamson, 2011) that has served as the impetus for public uprisings from ancient Rome to the French Revolution, and all the way through to modern times. In a world where the wealth of the Walton

family (descendants of Wal-Mart founder Sam Walton) is larger than the combined wealth of 42% of Americans (Fitz, 2015), questions of pay fairness provide near-daily fodder for the mainstream media.

The pay fairness question raised by Aguinis and colleagues pertains to whether CEOs receive the pay they deserve in light of the performance they have delivered, which is another way of asking whether the best (or worst) CEOs receive the highest (or lowest) pay. As such, their study emphasizes fairness as it applies to the pay CEOs receive *relative to the pay other CEOs receive*, which is, of course, an entirely appropriate conceptualization of fairness in a study of the CEO labor market. From a broader perspective, though, their study invokes a number of other questions regarding the overall fairness of CEO pay. For instance, what constitutes a reasonable average level of CEO pay? To what extent should CEO pay contracts focus on value creation for shareholders versus value creation for other stakeholders (e.g., employees, customers, etc.)? And is there a socially acceptable limit to what even the best CEOs should be paid?

While the first of these questions has not escaped the attention of researchers (e.g., Connelly et al., 2016; Kim et al., 2015), it is helpful to consider what the broader population considers to be fair pay for CEOs. In a recent survey of over 55 thousand people in 40 countries, Kiatpongsan and Norton (2014) found that people believed, on average, that an ideal CEO-to-average worker pay ratio would be around 5-to-1 – obviously a far cry from the aforementioned 350-to-1 pay gap between today's CEOs and lower-level workers. In short, there is a large disconnect between what many people consider to be fair and what companies actually pay their CEOs. This in and of itself does not mean that companies are wrong to pay CEOs what they do

(more on that below), but the sobering statistics above do give credence to the argument that inequality, or at least the widespread perception of it, is “worse than you think” (Fitz, 2015).

Beyond public perceptions of what constitutes fair pay for CEOs, the issue of pay fairness also touches on how CEO performance should be judged. Specifically, which organizational audiences should be included in CEO performance evaluations? In weighing CEO pay fairness from a broader stakeholder perspective, one should arguably consider not only the value a CEO creates for shareholders, which is naturally an important (probably the most important) basis for evaluating CEO performance, but also the degree to which a CEO creates value for company customers, employees, and society at large. For example, recent research suggests that abundant CEO stock option pay is associated with a greater incidence of potentially life-threatening product safety problems that warrant recalls (Wowak, Mannor, & Wowak, 2015). Taking these types of outcomes into account might require changing how we think about CEO marginal product (and the accompanying pay fairness), as shareholder value creation alone may not fully capture the CEO’s true societal impact. The same argument can be made regarding employee morale/commitment and corporate social responsibility (Berrone & Gomez-Mejia, 2009). In focusing solely on financial performance, Aguinis and colleagues (as well as other researchers, ourselves included) may be inadvertently overlooking some other important criteria that boards consider when setting CEO pay.

From a more philosophical standpoint, it is worthwhile to consider whether there are socially acceptable limits to what even the best CEOs should be paid. Here, too, some data points help provide context. According to a 2015 study of S&P 500 CEO-to-worker pay ratios conducted by the job search firm Glassdoor, Discovery Communications CEO David Zaslav was paid $156 million in 2014, which was 1,951 times more than the median worker pay in his

company. Is this simply too much for any CEO? Or is this level of pay warranted in certain circumstances? (Interestingly, the Glassdoor survey included data on employee ratings of satisfaction. Discovery Communications scored in the top 15%.) Should shareholders be upset when Apple's board pays CEO Tim Cook more than $370 million over his first five years in the position (Gandel, 2016)? Maybe, maybe not. The economics of superstars theory argues that in cases where the individual's performance impact is significant, such pay levels may be worth it. Outsized pay packages may also signal to the broader labor market that the company is willing to pay top dollar for star performers, which can have a powerful signaling effect (Connelly et al., 2011). As we discuss below, however, the justification for these pay decisions centrally depends on the extent to which CEOs are personally responsible for firm performance.

The Influence of CEOs on Firm Performance

While Aguinis and colleagues ask whether CEOs receive the pay they deserve, a relevant follow-up question is whether CEOs receive the proper credit (or blame) they deserve for firm performance. That is, any consideration of CEO pay deservingness must account for the CEO's marginal product, as it is this latter quantity that forms the basis of economic theories of compensation. Even if we eschew discussion of moral or ethical justifications for a given level of compensation – after all, the claim that an individual *deserves* anything is an unarguably ideological one – assertions based on economic precepts alone also can nevertheless still be quite precarious. The key premise, and one that the management and organization literature continues to struggle to support, is that we have access to robust, valid, econometric measures of a CEO's marginal product. Certainly, we can measure firm-level performance during the period that the CEO was in office. But firm performance (and even residuals of performance regressed on

certain firm-level outcomes, as the authors have done) remains a very rough proxy for individual CEO performance, let alone ability or underlying merit.

Admittedly, it is hard to fault Aguinis and colleagues' broader idea that leaders are instrumental to, and responsible for, the direction, behavior, and success of their organizations. Upper echelons theory (Hambrick & Mason, 1984) is predicated on the idea that the firm is a reflection of its top managers, and especially its most empowered senior manager. Executives' distinct dispositions, ideologies, experiences, and cognitions are held to impact their fields of vision, perceptions, and interpretations. This heterogeneity leads different executives to favor different courses of actions, even when faced with objectively similar external stimuli. And, in general, substantial evidence does bear out this claim (Finkelstein, Hambrick, & Cannella, 2009). Presumably, then, organizational performance should be directly and measurably attributable to individual leaders. This idea lies at the heart of much of strategic management, yet it is surprising how little work directly supports such a claim.

One stream of research closely touching on this issue deals with the concept of managerial discretion, or the idiosyncratic influence that executives can have beyond inertial and/or uncontrollable outside forces – in short, the question of whether and when CEOs matter (e.g., Hambrick & Finkelstein, 1987; Mackey, 2008; Wangrow, Schepker, & Barker, 2015). Managerial discretion – and therefore the ostensible impact of executives on organizational outcomes – varies as a function of individual-level (Carpenter & Golden, 1997), organizational-level (Li & Tang, 2010), industry-level (Finkelstein & Hambrick, 1990), and even country-level (Crossland & Hambrick, 2011) factors. Managerial discretion also acts as a general moderator of upper echelons logic – the firm reflects its leaders more when those leaders themselves matter more (Hambrick, 2007). Evidence also suggests that stakeholders within a given context are able

to recognize and respond to differences in discretion. For example, the negative relationship between firm performance and subsequent CEO dismissal is several times stronger in high-discretion societies than in low-discretion societies (Crossland & Chen, 2013).

That said, measuring, and thus getting to the heart of, *individual* CEO influence has remained elusive. A series of variance decomposition studies suggests that, yes, in general, CEOs do matter and often quite substantially. The "CEO effect" – the statistical impact that CEOs have on firm performance variance after accounting for categorical forces such as year, industry, and firm effects – has been estimated at anywhere from 5-6% up to 20-30% and above (for reviews, see Hambrick & Quigley, 2014; Mackey, 2008). Yet several key caveats exist. First, almost all CEO effect studies report substantial amounts of unexplained variance, sometimes 50% or more of total firm performance variance. Second, this body of work has been subject to significant criticism. For example, Blettner, Chaddad, and Bettis (2012) counseled caution in evaluating the impact of CEOs on firm performance for a range of reasons, including the characteristics of firm performance time series; possible confounding of CEO, firm, and time; and the many interactions influencing the CEO-performance effect (also see Brush & Bromiley, 1997). Other recent work argues that a non-trivial proportion of performance variance is mistakenly attributed to CEOs and is in fact simple randomness (Fitza, 2014, 2017; also see Quigley & Graffin, 2017). Third, and most importantly, even allowing for these concerns, most of this work considers CEOs as a collective and provides little insight into the marginal product or influence of individual CEOs.

Several authors offer alternative methodological approaches that may get closer to identifying individual CEO effects, such as using samples of executives that have operated in multiple firms (Bertrand & Schoar, 2003), measuring the CEO effect "in context" (Hambrick &

Quigley, 2014), or assessing shareholder responses to unexpected events such as employee deaths (Johnson et al., 1985; Quigley, Crossland, & Campbell, 2017). Naturally, each of these alternatives also have their own limitations, but they bring us somewhat closer to answering the question of how much specific CEOs matter, a question of vital importance to the underlying issue of pay-performance fairness.

The Conceptualization and Measurement of CEO Over- and Underpayment

Aguinis and colleagues also invoke the concept of CEO over- and underpayment, which captures the extent to which a CEO's pay exceeds or falls short of what would be predicted based on labor market norms (Fong, Misangyi, & Tosi, 2010; Seo et al., 2015; Wade, O'Reilly, & Pollock, 2006; Wowak et al., 2011). The basic idea is that for any CEO job, there exists a market rate (or reservation wage) for what the CEO *should* be paid given the particulars of the position at that specific point in time: the size and complexity of the company, the financial health of the company, the industry or industries in which the company operates, and so on. CEO jobs vary in the demands they place on the people occupying them (Hambrick, Finkelstein, & Mooney, 2005), and estimating a baseline market rate is a necessary first step in evaluating whether a given CEO is being paid too much or too little relative to that baseline. The typical scholarly approach for doing so involves regressing CEO pay on a set of observable, objective characteristics such as those noted above (company size, recent performance, etc.). The residuals from these wage models are then used as measures of CEO over- and underpayment, with larger deviations from zero representing more extreme instances of overpayment (for positive residuals) and underpayment (for negative residuals).

This approach certainly has merits, the most notable of which is that it substantively reflects the benchmarking process that boards engage in when determining CEO pay (Holmstrom

& Kaplan, 2003). Although boards have substantial discretion when choosing peer referents to justify their CEOs' pay (Faulkender & Yang, 2010; Porac, Wade, & Pollock, 1999), they also tend to focus on objectively similar peers (e.g., comparably sized firms in the same industry) when designing CEO pay packages. Scholars have argued that competitive benchmarking "represents an efficient way to determine the reservation wage of the CEO and is a necessary input to the compensation process" (Bizjak, Lemmon, & Naveen, 2008: 166). As such, residuals from a reasonably specified wage model should capture, at least in part, boards' conscious decisions to deviate from market rates when setting their CEOs' pay.

Yet this technique also comes with drawbacks that are sometimes overlooked in studies of executive over- and underpayment. First, the R-squared values in researchers' wage models rarely exceed 0.50, which means that half (and often more) of the variance in CEO pay levels is unaccounted for. No measures are perfect, of course, but the use of residuals from such weakly predictive wage models introduces a considerable amount of measurement error that should be kept in mind when drawing conclusions. Second, researchers often estimate wage models using convenience samples of all applicable CEO-firm combinations in the Execucomp database, which roughly covers the S&P 1500 population. (Indeed, we ourselves have used this approach.) The relevant labor market for a given CEO is likely much smaller, however, as it strains credulity to argue that the CEO of the 1,000th largest firm is a salient reference point for the CEO of the 10th largest firm; moreover, the applicability of cross-industry pay comparisons is surely open to question. As such, it may be advisable to use smaller samples of similarly sized industry peers in wage models (Cadman, Klasa, & Matsunaga, 2010).

We likewise believe that scholars would benefit from following Aguinis and colleagues' approach of assessing over- and underpayment as it applies to individual components of pay, as

opposed to, or in addition to, total pay. Abundant research has shown that pay instruments such as fixed salary, stock options, and restricted stock differ widely in their motivational properties (for a review, see Wowak, Gomez-Mejia, & Steinbach, 2017), which suggests that the effects of over- and underpayment may hinge upon the specific makeup of pay instruments that comprise CEO compensation arrangements. Aguinis and colleagues' use of this approach allowed them to conclude that their findings were not being driven by one form of pay or another, as they found consistent results across different operationalizations of over- and underpayment (total pay, salary, bonus, and option pay). But one can readily envision scenarios where this would not be the case, and it behooves researchers to incorporate different forms of over- and underpayment in their theories and empirical analyses.

Conclusion

In summary, we greatly admire the aims of Aguinis and colleagues, and we applaud the thoroughness and methodological sophistication in their study. Their argument about the applicability of power law distributions in CEO compensation research is a point well-taken, and the evidence they offer regarding the weak overlap between CEO pay and firm performance is intriguing. At the same time, we counsel some caution when evaluating their broader claim that the U.S. CEO labor market is characterized by pervasive injustice or unfairness. As scholars build on Aguinis and colleagues' work in their own research, we encourage them to also consider the issues we noted regarding the meaning of fairness in the context of CEO pay, the challenges that accompany assessing CEO marginal product, and the conceptualization and measurement of value-laden constructs such as overpayment and underpayment.

One might even approach this issue from the opposite perspective by asking why boards and firms seem to be getting this wrong so consistently (i.e., why the CEO performance and

CEO compensation power laws so rarely match up). This may, in fact, be further evidence that engaged firm stakeholders do indeed have an implicit understanding of the discretion and influence of their senior executives. Perhaps it is not that the boards are getting the allocation of compensation fundamentally wrong, but that it is us, as researchers, who should be more circumspect in our evaluations of which CEOs deserve or do not deserve particular levels of compensation. We offer no sweeping solutions here; only the request that researchers who will undoubtedly build on the work of Aguinis and colleagues pay careful heed to the fundamental challenges that accompany efforts to reconcile the twin concepts of CEO compensation and CEO performance. Questions about income inequality and fairness rarely lend themselves to easy answers, but they are nevertheless important for scholars to continue to explore – challenges and all.

REFERENCES

Aguinis, H., Martin, G. P., Gomez-Mejia, L. R., O'Boyle, E. H., & Joo, H. In press. The two sides of CEO pay injustice: A power law conceptualization of CEO over and underpayment. ***Management Research.***

Berrone, P., & Gomez-Mejia, L. R. 2009. Environmental performance and executive compensation: An integrated agency-institutional perspective. ***Academy of Management Journal***, 52: 103-126.

Bertrand, M., & Schoar, A. 2003. Managing with style: The effect of managers on firm policies. ***Quarterly Journal of Economics***, 118: 1169-1208.

Bizjak, J. M., Lemmon, M. L., & Naveen, L. 2008. Does the use of peer groups contribute to higher pay and less efficient compensation? ***Journal of Financial Economics***, 90: 152-168.

Blettner, D. P., Chaddad, F. R., & Bettis, R. A. 2012. The CEO performance effect: Statistical issues and a complex fit perspective. ***Strategic Management Journal***, 33: 986-999.

Brush, T. H., & Bromiley, P. 1997. What does a small corporate effect mean? A variance components simulation of corporate and business effects. ***Strategic Management Journal***, 18: 825-835.

Cadman, B., Klasa, S., & Matsunaga, S. 2010. Determinants of CEO pay: A comparison of Execucomp and non-Execucomp firms. ***Accounting Review***, 85: 1511-1543.

Carpenter, M. A., & Golden, B. R. 1997. Perceived managerial discretion: A study of cause and effect. ***Strategic Management Journal***, 18: 187-206.

Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. 2011. Signaling theory: A review and assessment. ***Journal of Management***, 37: 39-67.

Connelly, B. L., Haynes, K. T., Tihanyi, L., Gamache, D. L., & Devers, C. E. 2016. Minding the gap: Antecedents and consequences of top management-to-worker pay dispersion. ***Journal of Management***, 42: 862-885.

Crossland, C., & Chen, G. 2013. Executive accountability around the world: Sources of cross-national variation in firm performance-CEO dismissal sensitivity. ***Strategic Organization***, 11: 78-109.

Crossland, C., & Hambrick, D. C. 2011. Differences in managerial discretion across countries: How nation-level institutions affect the degree to which CEOs matter. ***Strategic Management Journal***, 32: 797-819.

Fama, E. F. 1980. Agency problems and the theory of the firm. ***Journal of Political Economy***, 88: 288-307.

Faulkender, M., & Yang, J. 2010. Inside the black box: The role and composition of compensation peer groups. ***Journal of Financial Economics***, 96: 257-270.

Finkelstein, S., & Hambrick, D. C. 1990. Top-management-team tenure and organizational outcomes: The moderating role of managerial discretion. ***Administrative Science Quarterly***, 35: 484-503.

Finkelstein, S., Hambrick, D. C., & Cannella, A. A. 2009. ***Strategic leadership: Theory and research on executives, top management teams, and boards***. New York: Oxford University Press.

Fitz, N. 2015. Economic inequality: It's far worse than you think, ***Scientific American***. https://www.scientificamerican.com/article/economic-inequality-it-s-far-worse-than-you-think/.

Fitza, M. A. 2014. The use of variance decomposition in the investigation of CEO effects: How large must the CEO effect be to rule out chance? ***Strategic Management Journal***, 35: 1839-1852.

Fitza, M. A. 2017. How much do CEOs really matter? Reaffirming that the CEO effect is mostly due to chance. ***Strategic Management Journal***, 38: 802-811.

Fong, E. A., Misangyi, V. F., & Tosi, H. L. 2010. The effect of CEO pay deviations on CEO withdrawal, firm size, and firm performance. ***Strategic Management Journal***, 31: 629-651.

Gabaix, X. 2016. Power laws in economics: An introduction. ***Journal of Economic Perspectives***, 30: 185-206.

Gabaix, X., & Landier, A. 2008. Why has CEO pay increased so much? ***Quarterly Journal of Economics***, 123: 49-100.

Gandel, S. 2016. How Apple's nifty compensation tweak saved Tim Cook's $373 million payday, ***Fortune***. http://fortune.com/2016/08/26/tim-cooks-apple-anniversary-compensation/.

Gomez-Mejia, L. R., Tosi, H., & Hinkin, T. 1987. Managerial control, performance, and executive compensation. ***Academy of Management Journal***, 30: 51-70.

Hambrick, D. C. 2007. Upper echelons theory: An update. ***Academy of Management Review***, 32: 334-343.

Hambrick, D. C., & Finkelstein, S. 1987. Managerial discretion: A bridge between polar views of organizational outcomes. In L. L. Cummings & B. M. Staw (Eds.), ***Research in organizational behavior***, Vol. 9: 369-406. Greenwich, CT: JAI Press.

Hambrick, D. C., Finkelstein, S., & Mooney, A. C. 2005. Executive job demands: New insights for explaining strategic decisions and leader behaviors. ***Academy of Management Review***, 30: 472-491.

Hambrick, D. C., & Mason, P. A. 1984. Upper echelons: The organization as a reflection of its top managers. ***Academy of Management Review***, 9: 193-206.

Hambrick, D. C., & Quigley, T. J. 2014. Toward more accurate contextualization of the CEO effect on firm performance. ***Strategic Management Journal***, 35: 473-491.

Holmstrom, B., & Kaplan, S. N. 2003. The state of U.S. corporate governance: What's right and what's wrong? ***Journal of Applied Corporate Finance***, 15: 8-20.

Johnson, W. B., Magee, R. P., Nagarajan, N. J., & Newman, H. A. 1985. An analysis of the stock price reaction to sudden executive deaths: Implications for the managerial labor market. ***Journal of Accounting and Economics***, 7: 151-174.

Kiatpongsan, S., & Norton, M. I. 2014. How much (more) should CEOs make? A universal desire for more equal pay. ***Perspectives on Psychological Science***, 9: 587-593.

Kim, J. W., Kogut, B., & Yang, J.-S. 2015. Executive compensation, fat cats, and best athletes. ***American Sociological Review***, 80: 299-328.

Li, J., & Tang, Y. 2010. CEO hubris and firm risk taking in China: The moderating role of managerial discretion. ***Academy of Management Journal***, 53: 45-68.

Mackey, A. 2008. The effect of CEOs on firm performance. ***Strategic Management Journal***, 29: 1357-1367.

Maharawal, M. M. 2013. Occupy Wall Street and a radical politics of inclusion. ***Sociological Quarterly***, 54: 177-181.

Malmendier, U., & Tate, G. 2009. Superstar CEOs. ***Quarterly Journal of Economics***, 124: 1593-1638.

Milanovic, B., Lindert, P. H., & Williamson, J. G. 2011. Pre-industrial inequality. ***Economic Journal***, 121: 255-272.

Piketty, T. 2014. ***Capital in the twenty-first century***. Cambridge, MA: Harvard University Press.

Porac, J. F., Wade, J. B., & Pollock, T. G. 1999. Industry categories and the politics of the comparable firm in CEO compensation. ***Administrative Science Quarterly***, 44: 112-144.

Quigley, T. J., Crossland, C., & Campbell, R. J. 2017. Shareholder perceptions of the changing impact of CEOs: Market reactions to unexpected CEO deaths, 1950–2009. ***Strategic Management Journal***, 38: 939-949.

Quigley, T. J., & Graffin, S. D. 2017. Reaffirming the CEO effect is significant and much larger than chance: A comment on Fitza (2014). ***Strategic Management Journal***, 38: 793-801.

Roberts, D. R. 1956. A general theory of executive compensation based on statistically tested propositions. ***Quarterly Journal of Economics***, 70: 270-294.

Rosen, S. 1981. The economics of superstars. ***American Economic Review***, 71: 845-858.

Seo, J., Gamache, D. L., Devers, C. E., & Carpenter, M. A. 2015. The role of CEO relative standing in acquisition behavior and CEO pay. ***Strategic Management Journal***, 36: 1877-1894.

Tervio, M. 2008. The difference that CEOs make: An assignment model approach. ***American Economic Review***, 98: 642-668.

Tosi, H. L., Werner, S., Katz, J. P., & Gomez-Mejia, L. R. 2000. How much does performance matter? A meta-analysis of CEO pay studies. ***Journal of Management***, 26: 301-339.

van Essen, M., Otten, J., & Carberry, E. J. 2015. Assessing managerial power theory: A meta-analytic approach to understanding the determinants of CEO compensation. ***Journal of Management***, 41: 164-202.

Wade, J. B., O'Reilly, C. A., & Pollock, T. G. 2006. Overpaid CEOs and underpaid managers: Fairness and executive compensation. ***Organization Science***, 17: 527-544.

Wangrow, D. B., Schepker, D. J., & Barker, V. L. 2015. Managerial discretion: An empirical review and focus on future research directions. ***Journal of Management***, 41: 99-135.

Wowak, A. J., Gomez-Mejia, L. R., & Steinbach, A. L. 2017. Inducements and motives at the top: A holistic perspective on the drivers of executive behavior. ***Academy of Management Annals***, 11: 669-702.

Wowak, A. J., Hambrick, D. C., & Henderson, A. D. 2011. Do CEOs encounter within-tenure settling up? A multiperiod perspective on executive pay and dismissal. ***Academy of Management Journal***, 54: 719-739.

Wowak, A. J., Mannor, M. J., & Wowak, K. D. 2015. Throwing caution to the wind: The effect of CEO stock option pay on the incidence of product safety problems. ***Strategic Management Journal***, 36: 1082-1092.