STELLAR OBSERVATIONS: STAR EMPLOYEE PRODUCTIVITY, COMPENSATION, AND REPUTATION

by

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Abstract

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This three-essay dissertation focuses on star employees – most commonly defined as those individuals who are both disproportionately productive and externally visible relative to their colleagues (Kehoe, Lepak, & Bentley, 2016) – and their influence on organizations in terms of performance contributions, the compensation they command, and their ability to enhance firm reputation. The star employee is not a new phenomenon as one of the first and still influential studies within the literature was published over three decades ago (i.e., Rosen, 1981). The influence of star employees is evident across a diverse range of fields including business, academics, the arts, and sports. Perhaps the star employee phenomena is currently no more apparent than in the high-technology sector where talented engineers, programmers, and other individuals are offered extraordinarily high salaries in an effort to maximize their respective organization's performance.

The allure of the star employee is not difficult to understand as organizations strive for competitive advantage. Stars possess superior levels of human capital – the knowledge, skills, abilities, and other characteristics enabling individuals to perform at high levels (Becker, 1962, 1964; Wright, McMahan, & McWilliams, 1994) – which can be viewed as an organizational

resource that produces useful outputs over time (Wright & McMahan, 2011). The uneven dissemination of human capital among firms, particularly at the levels possessed by star employees, makes this resource particularly valuable and in short supply (Castanias & Helfat, 1991; Crook, Todd, Combs, Woehr, & Ketchen, Jr., 2011), leading to the potential for competitive advantage (Barney, 1991). This competition for human capital among rival firms has been described as 'The War for Talent' (Michaels, Handfield-Jones, & Axelrod, 2001), and has been the subject of academic research (e.g., Call, Nyberg, & Thatcher, 2015) as well as popular press articles (e.g., Streitfeld, 2015), signaling the significance of this phenomenon among scholars and practitioners.

The first essay uses meta-analytic techniques to assess the extant literature that empirically measures the relationship between the presence of a star employee and organizational performance. Framed by the resource-based view (Barney, 1991) and grounded in human capital theory (Becker, 1964), evidence is presented that supports a direct relationship between the presence of a star employee and organizational performance. This relationship, however, is not identical across all studies and is significantly influenced by how the independent variable is defined as well as when the measure of organizational performance is captured. Studies identifying stars based on performance report stronger relationships between the presence of a star and organizational performance versus studies that require that both performance and external status criteria are met when identifying stars. Furthermore, analysis indicates that the relationship between the presence of a star employee and organizational performance significantly differs in magnitude depending on whether an operational or global measure of organizational performance is used as the dependent variable, suggesting that stars

are able to appropriate some of the economic rent which would otherwise show up as organizational profit.

The second essay investigates how competition among rival organizations for human capital impacts compensation offers to stars in employee acquisitions. The positive association between star employees and their organization's performance suggests an intense battle for these resources is taking place among rival firms in the external labor market. Sometimes referred to as a talent war, organizations beg, borrow, or steal to attract defectors from competitors in an attempt to gain competitive advantage. But are these tactics paying off? Using signaling theory, I argue that organizations may be offering compensation premiums to star employees as a result of misinterpreting signals within the external labor market. Relying on data from the Major League Baseball free agency market, I provide evidence that organizations are likely to pay a compensation premium to an individual based on their prior performance, visibility, experience, and desirability.

The third essay extends the notion that star employees are overvalued in the external labor market and addresses how a star's value to the firm may be supplemented. Organizations – particularly those in human capital-intensive industries – that have engaged in the talent war for star employees, may have received less than they bargained for (Groysberg, Lee, & Nanda, 2008; Terry & McGee, 2016). Consequently, firms may be looking for other ways in which a star employee can contribute to organizational productivity and effectiveness. I argue that organizations can leverage their star talent within the recruitment process; one of the most urgent problems faced by many contemporary organizations (Ployhart, 2006). This study examines if and how stars may enhance organizational recruitment efforts. In a 2 × 2 factorial design experiment (n = 184), evidence suggests that the presence of a star employee signaled

organizational reputation to potential applicants in the external labor market, in turn, increasing attraction to the firm and the likelihood that they will pursue the application process further. Results provide evidence that star employees can trigger signaling-based mechanisms early on in the recruitment process, leading to desirable organizational-level recruitment outcomes.

This dissertation not only advances the star literature, but the combined results also contribute to resource-based theory, signaling theory, and human capital theory. In the following pages, researchers will find new evidence and areas uncovered for future lines of inquiry. This collection of essays should also be of interest to practitioners across a broad range of industries including, but not limited to, software development, biotechnology, banking, and sports. The reported results provide a greater understanding of the impact that stars have on organizations, which may be considered when managers are faced with the option of utilizing star talent as a means of achieving competitive advantage. The intent of this dissertation is to provide insight to scholars who are interested in star research and practitioners who manage organizations in the middle of a talent war that is far from over.

REFERENCES

Barney, J. 1991. Firm resources and sustained competitive advantage. ***Journal of Management***, 17(1): 99-120.

Becker, G. S. 1962. Investment in human capital: A theoretical analysis. ***The Journal of Political Economy***: 9-49.

Becker, G. S. 1964. ***Human capital***. New York: Columbia University Press.

Call, M. L., Nyberg, A. J., & Thatcher, S. 2015. Stargazing: An integrative conceptual review, theoretical reconciliation, and extension for star employee research. ***Journal of Applied Psychology***, 100(3): 623-640.

Castanias, R. P., & Helfat, C. E. 1991. Managerial resources and rents. ***Journal of Management***, 17(1): 155-171.

Crook, T. R., Todd, S. Y., Combs, J. G., Woehr, D. J., & Ketchen Jr, D. J. 2011. Does human capital matter? A meta-analysis of the relationship between human capital and firm performance. ***Journal of Applied Psychology***, 96(3): 443-456.

Groysberg, B., & Abrahams, R. 2006. Lift outs: How to acquire a high-functioning team. ***Harvard Business Review***, 84(12): 133-140.

Groysberg, B., Lee, L., & Nanda, A. 2008. Can they take it with them? The portability of star knowledge workers' performance. ***Management Science***, 54(7): 1213-1230.

Kehoe, R. R., Lepak, D. P., & Bentley, F. S. 2016. Let's call a star a star: Task performance, external status, and exceptional contributors in organizations. ***Journal of Management***: 1-25.

Michaels, E., Handfield-Jones, H., & Axelrod, B. 2001. ***The war for talent.*** Boston: Harvard Business Press.

Ployhart, R. E. 2006. Staffing in the 21st century: New challenges and strategic opportunities. ***Journal of Management***, 32(6): 868-897.

Rosen, S. 1981. The economics of superstars. ***The American Economic Review***, 71(5): 845-858.

Rosen, S. 1983. The economics of superstars. ***The American Scholar***, 52(4): 449-460.

Streitfeld, D. 2015, March 21. Bigger settlement said to be reached in Silicon Valley antitrust case. ***The New York Times.*** http://www.nytimes.com/2015/01/15/technology/silicon-valley-antitrust-case-settlement-poaching-engineers.html?_r=0 (accessed March 1, 2017).

Terry, R. P., & McGee, J. E. 2016. ***Starstruck: An examination of signals that contribute to star employee compensation premiums***. Paper presented at Proceedings of the Seventy-sixth Annual Meeting of the Academy of Management, Anaheim, CA.

Wright, P. M., & McMahan, G. C. 2011. Exploring human capital: Putting 'human' back into strategic human resource management. ***Human Resource Management Journal***, 21(2): 93-104.

Wright, P. M., McMahan, G. C., & McWilliams, A. 1994. Human resources and sustained competitive advantage: A resource-based perspective. ***International Journal of Human Resource Management***, 5(2): 301-326.

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Star Power: A Meta-Analytic Review of the Star Employee-Organizational Performance Relationship

ABSTRACT

This paper uses meta-analytic techniques to assess the extant literature that empirically examines the relationship between the presence of a star employee at a firm and that firm's performance. Framed by the resource-based view, an examination of 30 samples from previous studies in the star literature suggests an overall positive relationship that is moderated by how stars are defined as well as the type of organizational performance metric used in the study. Studies identifying stars based solely on performance criteria report stronger relationships between the presence of a star and organizational performance. Furthermore, analysis indicates that the relationship between the presence of a star employee and organizational performance significantly differs in magnitude depending on whether an operational or global measure of organizational performance is used as the dependent variable, suggesting that stars are able to appropriate some of the economic rent which would otherwise show up as organizational profit. These findings suggest study design is systematically impacting results and should be taken into careful consideration when executing future star research.

INTRODUCTION

Firms deploy tangible and intangible resources to develop and execute organizational strategy in pursuit of competitive advantage (Hitt, Bierman, Shimizu, & Hochhar, 2001). Tangible resources include physical assets, technology, and financial capital, while corporate reputation, culture, and human capital represent intangible resources (Bateman, Snell, & Konopaske, 2017). Firms seek to gain competitive advantage through the procurement and use of resources that are valuable and rare (Barney, 1991; Hitt et al., 2001). Due to their complexity, intangible resources—such as human capital—may be the most likely to contribute to organizational competitive advantage (Hitt et al., 2001). Acquisition

Since the release of the results of McKinsey's *War for Talent* studies, firms have taken notice of the significance of talent management (Michaels, Handfield-Jones, & Axelrod, 2001). Attracting, developing, and retaining talent is becoming increasingly important as organizations recognize that human capital is a potential source of competitive advantage (Wright & McMahan, 2011). One method through which firms have chosen to compete in the war for talent is by employing individuals with exceptional levels of human capital. Such individuals are referred to as *star* employees because they are regarded as extraordinarily productive and valuable, and are viewed as critical contributors to their firm's success (Call, Nyberg, & Thatcher, 2015; Groysberg, Lee, & Nanda, 2008).

The potential impact of stars on organizational productivity is becoming increasingly important and has attracted the interest of researchers from a variety of academic disciplines—most notably management (e.g., Grigoriou & Rothaermel, 2014; Groysberg et al., 2008), sociology (e.g., Zucker & Darby, 1996; 2006) and economics (e.g., Azoulay, Zivin, & Wang, 2010). While practitioners strongly believe that stars positively contribute to their firms' bottom

line, researchers have found the actual impact that stars have on organizational performance to be empirically equivocal. A number of studies report that stars have a positive impact on organizational performance (e.g. Grigoriou & Rothaermel, 2014; Rothaermel & Hess, 2007), while the results of other studies suggest a negative relationship (Groysberg & Abrahams, 2006; Groysberg & Lee, 2008; Groysberg & Lee, 2010). To further confound matters, some scholars report mixed results within the same study (Higgins, Stephan, & Thursby, 2011).

Perhaps one of the underlying reasons for variation in empirical findings is the absence of construct clarity within the stars literature. Specifically, this stream of research suffers from a lack of consensus on a universally accepted star definition. Studies have characterized stars in terms of their performance (e.g., Kehoe & Tzabbar, 2015; Zucker & Darby, 1996), their external visibility and social connections (e.g., Crocitto, 1989; Oldroyd & Morris, 2012), or some combination of these factors (e.g., Groysberg, et al., 2008; Hess & Rothaermel, 2011; Rothaermel & Hess, 2007). Different conceptualizations of a star likely obscure the true impact that such employees have on organizational outcomes (Call et al., 2015; Kehoe, Lepak, & Bentley, 2016). That is, various ways by which scholars have identified and defined stars may be a contributing factor to the conflicting results comprising this body of literature

A second area of ambiguity within the stars literature involves the organizational outcomes that stars are hypothesized to influence. Organizational performance is measured in terms of either operational performance—such as firm patents (e.g., Grigoriou & Rothaermel, 2014)—or global performance—such as return on equity, return on sales, or some of other measure of overall company returns (e.g., Wade, Porac, Pollock, & Graffin, 2006). Stars may demand some of the organizational profits that result from their superior human capital in the form of compensation, which would likely underestimate the star's contribution in terms of

global performance measures (Coff, 1999; Crook, Todd, Combs, Woehr, & Ketchen Jr., 2011). Furthermore, if stars are unable to acquire the economic rents to which they feel entitled, they may respond in the form of decreased motivation and/or performance (Wright & McMahan, 2011). The value that a star provides to an organization may not translate universally across different organizational performance metrics.

Call et al.'s (2015) recent qualitative review of this stream of research highlights the attention stars receive from a variety of academic disciplines and develops an integrated framework for future stars research. Their review exposes gaps in empirical findings throughout the literature, but fails to adequately quantify the relationship between a star and their firm's performance. This study intends to help fill this void. Framing this paper within the resource-based view of the firm, I assess the overall direction and magnitude of the star employee-organizational performance relationship and investigate two potential moderators that may explain some of the empirical disparities in the literature. Meta-analyzing previous studies in the stars literature, I find an overall positive relationship between the presence of a star employee and company performance. This relationship is moderated by how the star is defined in the study and by the organizational performance metric used. These findings are consistent with resource-based theory and provide some justification for expending the necessary resources to recruit and retain star employees. These results also clearly highlight the need to embrace a common set of definitions and constructs.

THEORY AND HYPOTHESES

The resource-based theory of competitive advantage suggests that performance differences among firms can be explained by the uneven distribution of valuable resources (Barney, 1991). Firms possessing resources that rivals cannot easily duplicate or substitute for—

such as human capital—will outperform firms without such valuable resources (Barney, 1991; Peteraf, 1993). It has been suggested that the knowledge, skills, abilities, and other characteristics (KSAOs) comprising a firm's human capital may be the most valuable and inimitable resource an organization can possess to achieve competitive advantage (Coff, 1997; Crook et al., 2011; Grant, 1991; Kogut & Zander, 1992).

Human capital theory posits that an organization's workforce represents a key source of competitive advantage since top talent can explicitly contribute to organizational performance (Wright, Smart, & McMahan, 1995). Human capital tends to become a more strategically important resource for individuals as they perform and progress within a career (Groysberg, et al., 2008; Harris, Pattie, & McMahan, 2015). Individuals with higher levels of human capital are highly desirable to organizations (e.g. Combs and Skill, 2003; Harris and Helfat, 1997; Sturman, Walsh, & Cheramie, 2008) and are typically difficult to locate, recruit, and retain (e.g. Gomez-Mejia and Wiseman, 1997; Devers, Canella, Reilly, & Yoder, 2007). Individually, a higher level of human capital is generally associated with greater performance, career advancement, career success, and compensation (e.g. Greenhaus, Parasuraman, & Wormley, 1990; Judge, Cable, Boudreau, & Bretz Jr., 1994; Judge, Klinger, & Simon, 2010; Wayne, Liden, Kraimer, & Graf, 1999; Ng, Eby, Sorensen, & Feldman, 2005; Ng and Feldman, 2009, 2010; McMahan and Harris, 2012).

Similar to physical or financial capital, human capital is an asset that produces useful outputs over extended periods of time. What makes human capital unique is that individuals cannot be separated from their knowledge, skills, and abilities the way they can be separated from their physical or financial assets (Wright & McMahan, 2011). Macro scholars treat human capital as a unit-level resource which is an aggregation of the KSAOs of those within the unit

(Coff, 1999; Wright, McMahan, & McWilliams, 1994; Wright & McMahan, 2011). From a macro view, the microfoundation of human capital takes place at the individual level where there is heterogeneity in the amount of human capital that is possessed by each employee. Aggregating this to the unit-level suggests a main effect of human capital on organizational performance, implying more is better (Wright & McMahan, 2011).

Human capital can be categorized as either generic or specific. Generic human capital refers to general KSAOs that can be used by a number of firms while specific human capital refers to firm-specific KSAOs that are only useful to the focal organization (Wright & McMahan, 2011). The resource-based view calls for organizations to possess valuable and unique resources to gain competitive advantage, and prior research suggests the best way to achieve this is through the development of firm-specific human capital (Barney & Wright, 1998; Crook et al., 2011). However, general human capital can also be considered a source of competitive advantage. While the KSAOs are general and can be useful to a number of firms, the level of general human capital that one possesses makes the resource unique. Furthermore, an individual possessing an elevated level of general human capital may not be as mobile as one would assume when taking into consideration the switching costs and ambiguities associated with changing firms (Wright, et al., 1994; Wright & McMahan, 2011). Star employees can be evaluated along similar dimensions. A star's disproportionate productivity can be attributed to their exceptional level of general human capital (Groysberg et al., 2008) which suggests that they are indeed unique, valuable, and thus a possible source of competitive advantage.

An individual's KSAOs are the origins of human capital resources—accessible capacities at the individual- or unit-level that can be used for relevant unit-level purposes (Ployhart, Nyberg, Reilly, & Maltarich, 2014). Prior research has suggested a simple, level-based differentiation

between these constructs where anything at the individual-level is human capital and anything at the unit-level is a human capital resource (Nyberg et al., 2014; Ployhart et al., 2014). However, others contend that human capital resources can also come from individual-level capacities (Ployhart, et al., 2014). Ployhart et al. distinguish human capital from human capital resources by stipulating that human capital resources are accessible capacities that contribute to relevant unit-level outcomes. Thus, the unit must be able to use the human capital resources, which in turn must contribute to the unit's purpose (Ployhart et al., 2014).

Investments in human capital have been shown to positively influence firm performance (Becker & Huselid, 2006; Crook et al., 2011; Huselid, 1995; Subramony, Krause, Norton, & Burns, 2008). Indeed, a meta-analysis of 66 studies yielded results indicating a strong, positive effect for this relationship (Crook et al, 2011). Human capital is a resource that is unevenly distributed among firms and, in the case of top performers who possess superior levels of human capital, in high demand and often in short supply (Castanias & Helfat, 1991; Crook et al., 2011). Furthermore, firms cannot easily or feasibly duplicate or acquire their rivals' human capital (Coff, 2002; Crook et al., 2011). Recall, resource-based theory requires organizations to possess rare and valuable resources as a means of achieving competitive advantage. Stars are individuals with superior levels of human capital (Groysberg, et al., 2008) who disproportionately contribute to the outcomes of their respective unit (e.g., Groysberg & Lee, 2009; Hess & Rothaermel, 2011; Ployhart et al., 2014). This suggests that star employees are individual-level human capital resources who are unique and create value for their unit's stakeholders. The presence of a star employee provides an organization with a strategic human capital resource, contributing to organizational competitive advantage (Ployhart et al., 2014). Therefore, I predict that there will be a positive relationship between the presence of a star and organizational performance.

Hypothesis 1: The presence of a star is positively related to organizational performance.

Star Definition

Stars have been defined in a variety of ways in the extant literature. Many studies take into consideration productivity, as well as social aspects of individuals in identifying stars (e.g. Groysberg, Polzer, & Elfenbein, 2011; Rothaermel & Hess, 2007), while other studies tend to recognize stars as individuals who possess just one of these characteristics (e.g. Crocitto, 1989; Seleim, Ashour, & Bontis, 2007). This lack of consensus for a universally accepted definition of a star is a legitimate critique of the literature which has not gone unnoticed. Call et al. (2015) examined previous studies on stars across three disciplines—economics, sociology, and management—to build an integrative definition of stars "…as those employees who exhibit disproportionately high and prolonged (a) performance, (b) visibility, and (c) relevant social capital" (p. 623). More recently, Kehoe et al. (2016) relied on differences in performance and/or external status to develop a typology that separate stars into three broad categories: universal stars, performance stars, and status stars.

The most widely accepted definition of a star in contemporary literature is that of *universal stars.* These individuals are associated with exceptional task performance and external status, and are able to create value both directly and indirectly. Universal stars are able to contribute directly to their firm via their exceptional task performance, stemming from the knowledge, skills, and abilities they possess (Kehoe et al., 2016). Furthermore, these individuals can directly contribute to their colleagues' performance by way of a human capital spillover effect (e.g. Groysberg & Lee, 2010). Broad external status provides universal stars the opportunity to make indirect contributions to the organization through reputational spillover that translates into enhanced customer (Lucifora & Simmons, 2003; Ravid, 1999), investor (Higgins,

Stephan, & Thursby, 2011), and human capital (Coff & Kryscynski, 2011; Groysberg & Lee, 2009) attraction (Kehoe et al., 2016).

The remaining two categories of stars—performance stars and status stars—are actually subsets of the universal star category. While universal stars are individuals who possess exceptional task performance *and* external status, these more narrow categories are comprised of individuals who only satisfy one of these criteria. Performance stars are exceptionally productive individuals who do not possess status outside of their firm. There are three potential reasons why an individual would be labeled a performance star: (1) the task performance of their job or industry is inherently less visible; (2) the individual may be a "rising star" who exhibits exceptional task performance but has not yet established an external network; or (3) the individual may be a "falling star" who has lost their external status standing but maintains their exceptional task productivity (Kehoe et al., 2016). By contrast, status stars are individuals who are not exceptionally productive but have broad external status with strategically relevant stakeholders (D'Aveni, 1996; Kehoe et al., 2016). Status stars create organizational value by connecting their firm to external networks (Burt, 1992), and by providing access to external resources such as customers (Lucifora & Simmons, 2003; Ravid, 1999), investors (Higgins, et al., 2011), and human capital (Coff & Kryscynski, 2011; Groysberg & Lee, 2009). The status star's prestige may also signal organizational reputation (Spence, 1973), enhancing credibility and attraction from the aforementioned stakeholders (Kehoe et al., 2016).

An individual's external status is made up of a complex set of interpersonal relationships, and introduces ambiguity and complexity in calibrating the precise organizational contributions of these types of stars. On the other hand, exceptional task performance is much easier to determine and quantify, simplifying assessments of how an individual contributes to firm

performance (Kehoe et al., 2016). Therefore, the category of star might be expected to affect the observed impact on organizational performance. Studies identifying stars using only performance criteria will be more likely to find a larger effect on organizational performance because the individual's impact on the firm's performance is much more easily identifiable. Incorporating external status to star identification will be more likely to lead to an attenuated effect due to the ambiguity and complexity in how an individual's external status contributes to organizational performance. Furthermore, the choice of how individual task performance and external status are defined as well as the researcher's anticipation of how stars will impact organizational performance, may contribute to expected differences in effect sizes. Based on the foregoing discussion:

Hypothesis 2: The definition of a star moderates the positive relationship between the presence of a star and organizational performance such that studies featuring universal or status stars will report weaker effects than studies featuring performance stars.

Global Versus Operational Performance Metrics

Not all of the economic rents generated by strategic resources are captured by owners (Amit & Schoemaker, 1993; Collis & Montgomery, 1995; Crook, Ketchen, Combs, & Todd, 2008; Dierickx & Cool, 1989; Peteraf, 1993). Within the resource-based view (RBV), it is often assumed that there is a tight link between strategic resources and organizational performance (Amit & Schoemaker, 1993; Hall, 1993; Peteraf, 1993); however this assumption can be misleading (Coff, 1999). The RBV suggests that most of the economic rent is generated by individuals or networks of individuals who, consequently, have an interest in claiming some of what they generated. Collis & Montgomery (1995) refer to this as the appropriability condition, suggesting that a variety of stakeholders all compete for a share of the firm's profits which may

result in an underestimation of the positive impact of certain valuable resources (Coff, 1999; Crook et al., 2011).

Knowledge-based, causally ambiguous resources—such as star employees—are highly desired because they are difficult to imitate and may be perceived as a source of competitive advantage (Barney, 1991). Their tacit knowledge of rent-generating activities may be viewed as irreplaceable and inimitable (Groysberg, McLean, & Nohria, 2006) and thus critical to organizational success (Coff, 1999). However, stars—which constitute valuable and unique resources—may have greater bargaining power than non-star employees and be in a better position to command some of the economic rents generated through the application of their human capital (Coff, 1999).

Stars may command higher salaries based on their ability to generate profits for their company (Coff, 1999). Thus, the link between the presence of a star and global firm performance may be attenuated as some of the profits that would otherwise show up in financial performance measures are instead appropriated to the individual(s) responsible for the enhanced financial performance (Barney & Clark, 2007). Furthermore, human capital correlates more strongly with operational performance measures such as patent counts (e.g., Grigoriou & Rothaermel, 2014) or new products introduced to market (e.g., Hess & Rothaermel, 2011) than with global performance measures, such as return on assets. Consequently, the value created by stars may be understated in studies using the latter metrics (Crook et al., 2011).

Organizational performance metrics such as accounting returns and stock prices are measured after stakeholders have had an opportunity to appropriate some of the rents they helped generate (Coff, 1999; Coff & Lee, 2003) while other metrics (e.g., operational performance or market share) are measured before such appropriation could take place (Crook et al, 2008).

Crook et al. (2008) found evidence of a weaker relationship between strategic resources and firm performance when performance was measured after potential appropriation versus before. This suggests that the link between the presence of a star employee and organizational performance will be stronger when performance in measured before potential appropriation, and weaker when performance is measured after potential appropriation. Additionally, studies that only consider global performance may be underestimating the true impact that stars have on firm performance and may be overlooking potential sources of competitive advantage (Crook et al., 2011; Ray, Barney, & Muhanna, 2004).

Hypothesis 3: Firm performance measure moderates the positive relationship between the presence of a star and organizational performance, such that effects are stronger among studies using operational performance measures than for studies using global organizational performance measures.

METHOD

Sample

In order to identify studies examining the relationship between star employee presence and organizational performance, a keyword search was conducted for published and unpublished articles through 2016 in several databases including Business Source Complete, PsycINFO, SPORTDiscuss, Google Scholar, and Proquest Dissertations. Keywords used in the search included *star(s), star employee(s), star performer(s), star worker(s), allstar(s), all star(s), star talent, firm performance, organizational performance, team performance, and group performance.* All combinations of independent variable and dependent variable keywords were used. Additionally, several authors publishing in the star literature were also contacted to request working papers or unpublished manuscripts that might possibly be included in the meta-analysis.

To be included in the meta-analysis, a study had to contain a measure of star employee presence at the organization, a measure of organizational performance, and a reported bivariate relationship between these two variables (i.e., correlation). Ultimately, 30 samples in 23 studies met these criteria.

Coding

In order to test Hypotheses 1, I documented the correlation between star employees and organizational performance. To test Hypotheses 2 and 3, I coded for study characteristics that reflected the theoretical concepts of interest. Specifically, to examine the impact that star definition might have on the relationship between the presence of a star and organizational performance, I coded whether a study focused on universal stars performance stars (Kehoe et al., 2016). To do this, I examined the definition used for star employee in each study. A study was coded as using a *universal star* definition if both performance *and* social (i.e., external visibility or social/network connections) criteria were used to identify an individual as a star employee. A study was coded as using a *performance star* definition if an individual was labeled a star employee based only on their performance. To examine the impact the chosen performance measure exerts on the relationship between the presence of a star employee and organizational performance, I coded whether used an operational or global organizational performance measure (Crook et al., 2011). Studies were coded as using *operational* measures if the organizational performance metric was taken before there was a chance for star employees to appropriate some of the rent they helped create (e.g., patent counts, Grigoriou & Rothaermel, 2014) (Crook et al, 2011). Studies were coded as using *global* metrics if the organizational performance measure was taken after there was an opportunity for rent appropriation (e.g., net income, Rothaermel &

Hess, 2007) (Coff, 1999; Coff & Lee, 2003). Both the studies used in the meta-analysis and the coding of these studies appear in Table 1.

Insert Table 1 about here

Meta-Analytic Procedures

In this study, I calculated effect size estimates using the mean of the sample size weighted correlations (r_w) from the population of studies. This method of obtaining effect sizes is beneficial, as the positive and negative sampling errors arising from individual studies can be accounted for, providing a more accurate estimate (Hunter & Schmidt, 2004). For better interpretation of the effect size of the presence of a star employee and organizational performance, 95% bootstrapped confidence intervals (CI_{BS}) were also calculated. Use of bootstrapping, based on non-parametric distribution, is appropriate as collective data often violates the distribution assumption of parametric tests (Rosenberg, Adams, & Gurevitch, 2000). Finally, to address the "file-drawer" problem, the fail-safe sample size (N_{FS}) was calculated. The fail-safe sample size estimates the number of unpublished studies yielding null results that would be needed to indicate a significant probability of Type I error for the observed effects (Rosenthal, 1979). While a concrete number for N_{FS} does not validate or invalidate results, the larger the N_{FS}, the more confident one can be in the robustness of results (Freling, Vincent, & Henard, 2014; Rosenthal, 1979).

To examine the proposed moderators, a weighted least squares regression was conducted which regressed the sample size-weighted correlations on the moderator variables (also referred to as a meta-regression). This analysis is designed to examine if the proposed moderators help

explain some of the variation in effect sizes between studies. To determine if the regression model significantly explained between-study variance, the respective coefficient and *z*-score were examined to determine the direction and significance of each moderator (Post & Byron, 2015).

RESULTS

The first hypothesis is the main effect prediction that the presence of a star employee is positively related to organizational performance. As shown in Table 2, the sample size weighted mean correlation between the presence of a star employee and organizational performance is r_w = .317, a medium effect size. The associated 95% bootstrapped confidence interval [.217, .428] does not include zero, suggesting this results is significant and providing support for Hypothesis 1. Furthermore, the fail-safe sample size (N_{FS} = 273) suggests the file drawer problem is not likely an issue.

Hypotheses 2 and 3 predicted that the definition of a star employee and the measure of organizational performance, respectively, would moderate the relationship between the presence of a star employee and organizational performance. To test these hypotheses, a weighted least squares regression was used where the sample size-weighted correlation was simultaneously regressed on each moderator variable. Results (see Table 3) indicate that star employee definition and measure of organizational performance both significantly moderate the main effect. Studies that use a *universal star* definition report a significantly weaker relationship between the presence of a star employee and organizational performance (b = -.250, SE_b = .074, p < .001) than those focusing on performance stars, thus supporting Hypothesis 2. Studies using a global performance measure report a weaker relationship between the presence of a star

employee and organizational performance (b = -.321, SE_b = .071, p < .001) than those using an operational organizational performance measure, providing support for Hypothesis 3.

Follow-up univariate analyses were also conducted to further examine the proposed moderators. The significance of the moderators was tested by calculating the sample size-weighted correlation (r_w) for each level of the moderator variable and testing between the groups (i.e., universal star definition vs. performance star definition and global organizational performance measure vs. operational organizational performance measure) (Hunter & Schmidt, 2004). The presence of a moderating effect is indicated when the 95% bootstrapped confidence intervals between the two groups (e.g., global vs. operational) do not overlap. Results for this analysis are presented in Table 4. Studies that use a universal star definition had a sample size-weighted correlation of r_w = .185 (CI_{BS} = .098, .280) whereas studies that used a performance star definition had a sample size-weighted correlation of r_w = .534 (CI_{BS} = .331, .708). Studies using a global performance measure (r_w = .113, CI_{BS} = .039, .206) yielded weaker star employee-organizational performance relationships than studies using an operational organizational performance measure (r_w = .502, CI_{BS} = .364, .636). These results provide further support for Hypotheses 2 and 3, as none of the 95% bootstrapped confidence intervals contain zero or overlap between groups (Hunter & Schmidt, 2004).

Insert Table 2 about here

Insert Table 3 about here

Insert Table 4 about here

DISCUSSION

Human capital is viewed as a valuable and rare resource and may be a particularly influential role in helping firms achieve and sustain a competitive advantage (Barney, 1991; Hitt et al., 2001). This is evident by the increasing importance that organizations now place on attracting, developing, and retaining human capital (Wright & McMahan, 2011). Star employees represent exceptional levels of human capital and are viewed as critical contributors to organizational success (Call et al., 2015; Groysberg et al., 2008), which suggests they are a source of competitive advantage. However, prior studies in the star literature have not achieved consensus about the star employee-organizational performance relationship and, in fact, yield positive (e.g. Grigoriou & Rothaermel, 2014), negative (e.g., Groysberg & Lee, 2010), and even mixed (e.g., Higgins et al., 2011) results. Meta-analysis allows us to quantitatively synthesize the extant star literature by statistically aggregating prior research findings while significantly reducing the effects of individual study artifacts such as sampling error (Hunter & Schmidt, 2004). Examining 30 samples from previous studies in the star literature, I provide evidence that the presence of a star employee is significantly and positively related to organizational performance. Results further suggest that this relationship is moderated by how a study defines a star employee and the type of organizational performance metric used in the study.

The RBV has become one of the most commonly applied theories in strategic management research (Powell, 2001; Priem & Butler, 2001); however, a systematic review of the empirical support for RBV shows only modest results (Newbert, 2007). Newbert examined

several independent-dependent variable pairs to determine the level of support for the theory. The results most applicable to the current investigation come from Newbert's (2007) examination of studies using a "*resource heterogeneity approach"* (p. 127) which considers the relationship between specific resources, capabilities, or core competencies and a measure of competitive advantage or firm performance. While finding relatively strong support when capabilities (71% of studies supporting the relationship) and core competencies (67%) were the independent variables, much weaker support (37%) was found when a specific resource (such as human capital) was the independent variable. The first hypothesis in the current meta-analysis predicted a baseline, overall positive relationship between the presence of a star employee and corresponding organizational performance. Based on data from 30 samples, I find support for this prediction, suggesting that the presence of a star employee is significantly and positively related to organizational performance. These findings represent an interesting departure from Newbert (2007) as I report that 90% of the specific resource-performance tests in our sample are in line with RBV, comparable to the 98% support found by Barney and Arikan (2001). While this sample of studies is relatively small and focused, the findings are consistent with other meta-analyses which examine specific resource-organizational performance relationships using a resource-based approach (Crook et al., 2008; 2011).

The second hypothesis predicted the relationship between the presence of a star employee and organizational performance would be moderated by the definition used to identify stars within the study as proposed by Kehoe et al. (2016). Results indicate a significant difference in the variation of effect sizes between studies that used a *universal star* definition and those that did not. This suggests that using a universal star definition yields a weaker relationship with performance, supporting this hypothesis. The star literature has been criticized about how these

individuals are identified and/or defined in studies, leaving some to label them as individuals with the "it" factor (Call et al., 2015). My findings provide support for this criticism, clearly demonstrating that the star-organizational performance relationship varies in strength depending on the criteria used to identify an individual as a star.

A universal star's external status is made up of a complex set of relationships and network positions, making their total contribution to organizational performance less identifiable (Kehoe et al., 2016). This may make it more difficult for researchers to isolate where universal star contributions are taking place within the organization. Furthermore, a universal star's external status enhances their external employment options and increases the possibility of their exodus to another organization. This places them in a position to capture more of the value they create, relative to performance stars, which would otherwise contribute to organizational performance (Kehoe et al., 2016).

The last hypothesis predicted the relationship between the presence of a star employee and organizational performance would be moderated by the type of performance metric used in the study; more specifically, if the performance measure was taken before or after the opportunity for the star to appropriate some of the economic rent. My results show that studies using an operational performance measure (i.e., taken before appropriation) reported a stronger relationship with the presence of a star employee than studies using global performance measures. This is consistent with my prediction that studies using an operational performance measure would observe a stronger star employee-organizational performance relationship, and supports Hypothesis 3.

These findings are consistent with other empirical studies that have examined the appropriability condition (Coff & Lee, 2003; Moliterno & Wiersema, 2007)—including two

meta-analyses (Crook et al., 2008; 2011)—and highlight the importance of dependent variable selection in resourced-based research. Overall performance measures are highly aggregated metrics that may not reflect the competitive advantages created by stars at lower levels of the organization (Ray et al., 2004). Competitive advantages in one area of the organization may be offset by competitive disadvantages in another area, while rent generation from resources may be appropriated by firm stakeholders and, therefore, not reflected in an overall performance measure (Ray et al., 2004). These consequences are most likely to occur when global measures of performance are used, which are not only highly aggregated, but also provide ample opportunity for rent appropriation by organizational stakeholders before they can be reflected in the overall measure. Therefore, by only examining global measures of performance, organizational sources of competitive (dis)advantage may go undetected (Crook et al., 2011; Ray et al., 2004). To address this shortcoming, multiple measures of organizational performance should be used in order to detect any systematic differences caused by the appropriability condition (Crook et al., 2008). Furthermore, examining relationships by first using an operational metric to determine if the effect carries through to a global measure would allow the accurate detection of the overall value of the resource investment (Crook et al., 2011). This is a crucial consideration for firms seeking to acquire stars from the external labor market as a means of determining if the expected value created by a star will justify the value the organization will be able to capture (Kehoe et al., 2016).

Practical Implications

While these results indicate that firms with stars outperformed those without stars, this does not necessarily mean that organizations will automatically realize gains in performance by increasing the number of star employee within their organization. In fact, ample evidence

suggests that an increase in stars through employee acquisition may actually have quite the opposite effect. Research suggests that hiring firms often overvalue stars because their performance is not as portable between organizations as anticipated (Groysberg, et al., 2004; 2008). For example, Groysberg et al. (2008) found that stars who switched firms exhibited an immediate decline in performance that continued for a minimum of five years. The hiring firms experienced negative stock-market reactions when they hired stars from competitors, suggesting star acquisitions are more likely to undermine firm value than contribute to competitive advantage (Groysberg, Nanda, & Nohria, 2004; Groysberg, et al., 2008). A possible explanation for this is that hiring firms do not take into account the idiosyncratic fit between the star and his/her incumbent firm that allow them to excel (Call et al., 2015). Hiring firms may overlook and/or underestimate how company-specific factors such as resources and capabilities, systems and processes, leadership, internal networks, training, and teams can contribute to, or detract from, star success (Groysberg et al., 2004).

Instead of hiring stars from the external labor market, organizations may be able to realize performance enhancements by cultivating stars internally. Identifying high performing individuals who do not possess the visibility of stars, but who still perform at high levels, is a key way to achieve this. By focusing on the development of such individuals, firms can increase high performers' human capital that is specific to the organization, developing them into an idiosyncratic resource. An increase in an employee's firm-specific human capital increases that individual's value to the focal firm without enhancing their mobility, making them more embedded in the organization (Call et al., 2015). These activities have the potential to increase the number of stars within the organization while simultaneously limiting those individuals' external employment options—ultimately enhancing their value to the firm (Coff, 1999).

Limitations

Meta-analysis is an extremely useful tool to quantitatively review a literature base, but it is limited to variables and relationships that can be meaningfully and consistently coded, and constrained by the scope of the original studies (Freling et al., 2014). The current analysis was also limited to those studies that reported useful effect sizes of our relationships of interest (e.g., a correlation). Several studies examining the star employee-organizational performance relationship did not report the type of effect size that was needed and therefore were excluded from our analysis. In these cases, unsuccessful attempts were made to contact the author(s) of the study for useable effects; the most common response being that the dataset was no longer accessible. I was also limited to those studies where the theoretical moderators of interest could be accurately coded. Therefore, studies with too little—or no explanation at all—of how the independent and/or dependent variable were measured were also excluded from the analysis. For the aforementioned reasons, the sample size of thirty studies is relatively small but is consistent with other published meta-analyses within the management literature (e.g., Kong, Dirks, and Ferrin, 2014, $k = 38$; Shirom, Gilboa, Fried, & Cooper, 2008, $k = 30$).

Another limitation, and a critique of the resource-based view (Crook et al., 2008), is that I was unable to examine any mediating factors that may help explain the star employee-organizational performance relationship. Newbert (2007) found much stronger evidence for a firm's specific capability or core competence relating to performance than a specific resource. This suggests that capabilities and core competencies are developed through a bundle of specific resources. While I find evidence of a specific resource relating to organizational performance, perhaps it is due to the combination of star employee and other resource contributions to a specific capability or core competence. What other resources are critical to integrate with star

employees in achieving competitive advantage? Furthermore, by examining how stars fit in with specific capabilities or core competencies, we may be able to identify the types of firms, industries, or competitive strategies where stars are most valuable.

Main effect findings suggest that organizations may be engaged in a talent war for star employees; one in which firms are willing to win at all costs. Indeed, firms will likely be required to spend significant amounts of money to attract individuals so highly regarded (Bidwell, 2011; Bidwell & Keller, 2014; Call et al., 2015). Another fruitful avenue for future research, then, would be to examine compensation offers in star employee acquisitions. Considering the evidence that a star's performance declines when switching organizations (Groysberg et al., 2008), are stars commanding higher salaries than they are worth? If so, are there any systematic factors that contribute to the premium they are able to command?

CONCLUSION

The star phenomenon is nothing new. One of the seminal studies in the literature was published over 30 years ago (i.e., Rosen, 1981) but the topic has recently experienced increased interest. A growing number of researchers have explored star employees and their relationship to company performance and the number of published studies has significantly increased over the past decade. In response to this growth, I set out to quantitatively synthesize the extant empirical literature. I find that the presence of a star employee is positively associated with organizational performance, but that this relationship is moderated by how the star is identified in the study and the type of organizational performance metric used. These findings uncover patterns in study design within the current literature which seem to systematically impact results. These results and suggestions provide direction for researchers interested in the star phenomenon, and take us one step closer in identifying their "it" factor.

REFERENCES

Amit, R., & Schoemaker, P. J. 1993. Strategic assets and organizational rent. ***Strategic Management Journal***, 14(1): 33-46.

Azoulay, P., Zivin, J. S. G., & Wang, J. 2010. Superstar extinction. ***Quarterly Journal of Economics***, 125(2): 549-589.

Backhaus, K., & Heiner, K. 2014. The effects of group-level and individual contributions on business simulation team performance. ***Organization Management Journal***, 11(3): 172-179.

Barney, J. 1991. Firm resources and sustained competitive advantage. ***Journal of Management***, 17(1): 99-120.

Barney, J. B., & Arikan, A. M. 2001. The resource-based view: Origins and implications. In M.A. Hitt, R.E. Freeman, & J.S. Harrison (Eds.), ***Handbook of strategic management:*** 124-188. Oxford: Blackwell.

Barney, J. B., & Clark, D. N. 2007. Resource-based theory: Creating and sustaining competitive advantage. Oxford: Oxford University Press.

Barney, J. B., & Wright, P. M. 1998. On becoming a strategic partner: The role of human resources in gaining competitive advantage. ***Human Resource Management***, 37(1): 31-46.

Basuroy, S., Chatterjee, S., & Ravid, S. A. 2003. How critical are critical reviews? The box office effects of film critics, star power, and budgets. ***Journal of Marketing***, 67(4): 103-117.

Bateman, T. S., Snell, S. A., & Konopaske, R. 2017. ***Management: Leading and collaborating in a competitive world*** (12th ed.). New York, NY: McGraw-Hill.

Becker, B. E., & Huselid, M. A. 2006. Strategic human resources management: Where do we go from here? ***Journal of Management***, 32(6): 898-925.

Bidwell, M. 2011. Paying more to get less: The effects of external hiring versus internal mobility. ***Administrative Science Quarterly***, 56(3): 369-407.

Bidwell, M., & Keller, J. 2014. Within or without? How firms combine internal and external labor markets to fill jobs. ***Academy of Management Journal***, 57(4): 1035-1055.

Burt, R. S. 1992. ***Structural holes: The social structure of competition***. Cambridge, MA: Harvard University Press.

Call, M. L., Nyberg, A. J., & Thatcher, S. 2015. Stargazing: An integrative conceptual review, theoretical reconciliation, and extension for star employee research. ***Journal of Applied Psychology***, 100(3): 623-640.

Castanias, R. P., & Helfat, C. E. 1991. Managerial resources and rents. ***Journal of Management***, 17(1): 155-171.

Cattani, G., Ferriani, S., Mariani, M. M., & Mengoli, S. 2013. Tackling the "Galácticos" effect: Team familiarity and the performance of star-studded projects. ***Industrial and Corporate Change***, 22(6): 1629-1662.

Coff, R., & Kryscynski, D. 2011. Drilling for micro-foundations of human capital-based competitive advantages. cognitive perspective on the joint effects of relationship quality and differentiation on creativity. ***Academy of Management Journal***, 53: 1090-1109.

Coff, R. W. 1997. Human assets and management dilemmas: Coping with hazards on the road to resource-based theory. ***Academy of Management Review***, 22(2): 374-402.

Coff, R. W. 1999. When competitive advantage doesn't lead to performance: The resource-based view and stakeholder bargaining power. ***Organization Science***, 10(2): 119-133.

Coff, R. W. 2002. Human capital, shared expertise, and the likelihood of impasse in corporate acquisitions. ***Journal of Management***, 28(1): 107-128.

Coff, R. W., & Lee, P. M. 2003. Insider trading as a vehicle to appropriate rent from R&D. ***Strategic Management Journal***, 24(2): 183-190.

Collis, D. J., & Montgomery, C. A. 1995. Competing on resources: Strategy in the 1990s. ***Harvard Business Review,*** 73: 118-128.

Combs, J. G., & Skill, M. S. 2003. Managerialist and human capital explanations for key executive pay premiums: A contingency perspective. ***Academy of Management Journal***, 46(1): 63-73.

Crocitto, M. 1989. Executive leader networks and organizational performance: an alternative exploration of "the leader effect". Unpublished doctoral dissertation, City University of New York.

Crook, T. R., Ketchen, D. J., Combs, J. G., & Todd, S. Y. 2008. Strategic resources and performance: A meta-analysis. ***Strategic Management Journal***, 29(11): 1141-1154.

Crook, T. R., Todd, S. Y., Combs, J. G., Woehr, D. J., & Ketchen Jr, D. J. 2011. Does human capital matter? A meta-analysis of the relationship between human capital and firm performance. ***Journal of Applied Psychology***, 96(3): 443-456.

D'Aveni, R. A. 1996. A multiple-constituency, status-based approach to interorganizational mobility of faculty and input-output competition among top business schools. ***Organization Science***, 7(2): 166-189.

Devers, C. E., Cannella, A. A., Reilly, G. P., & Yoder, M. E. 2007. Executive compensation: A multidisciplinary review of recent developments. ***Journal of Management***, 33(6): 1016-1072.

Dierickx, I., & Cool, K. 1989. Asset stock accumulation and sustainability of competitive advantage. ***Management Science***, 35(12): 1504-1511.

Ethiraj, S. K., & Garg, P. 2012. The division of gains from complementarities in human-capital-intensive activity. ***Organization Science***, 23(3): 725-742.

Freling, T. H., Vincent, L. H., & Henard, D. H. 2014. When not to accentuate the positive: Re-examining valence effects in attribute framing. ***Organizational Behavior and Human Decision Processes***, 124(2): 95-109.

Fuller, A. W., & Rothaermel, F. T. 2012. When stars shine: The effects of faculty founders on new technology ventures. ***Strategic Entrepreneurship Journal***, 6(3): 220-235.

Gilboa, S., Shirom, A., Fried, Y., & Cooper, C. 2008. A meta-analysis of work demand stressors and job performance: Examining main and moderating effects. ***Personnel Psychology***, 61(2): 227-271.

Gomez-Mejia, L., & Wiseman, R. M. 1997. Reframing executive compensation: An assessment and outlook. ***Journal of Management***, 23(3): 291-374.

Graffin, S. D., Wade, J. B., Porac, J. F., & McNamee, R. C. 2008. The impact of CEO status diffusion on the economic outcomes of other senior managers. ***Organization Science***, 19(3): 457-474.

Grant, R. M. 1991. The resource-based theory of competitive advantage: Implications for strategy formulation. ***California Management Review***, 33(3): 114-135.

Greenhaus, J. H., Parasuraman, S., & Wormley, W. M. 1990. Effects of race on organizational experiences, job performance evaluations, and career outcomes. ***Academy of Management Journal***, 33(1): 64-86.

Grigoriou, K. 2012. Essays on the micro-foundations of the knowledge-based view: human capital, knowledge networks and innovation strategy. Unpublished doctoral dissertation, Georgia Institute of Technology.

Grigoriou, K., & Rothaermel, F. T. 2014. Structural microfoundations of innovation: The role of relational stars. ***Journal of Management***, 40(2): 586-615.

Groysberg, B. 2002. ***The portability of star knowledge workers: Evidence from the analyst market***. Unpublished doctoral dissertation, Harvard University.

Groysberg, B., & Abrahams, R. 2006. Lift outs: How to acquire a high-functioning team. ***Harvard Business Review***, 84(12): 133-140.

Groysberg, B., & Lee, L. 2009. Hiring stars and their colleagues: Exploration and exploitation in professional service firms. ***Organization Science***, 20(4): 740-758.

Groysberg, B., & Lee, L. 2010. Star power: Colleague quality and turnover. ***Industrial and Corporate Change***, 19(3): 741-765.

Groysberg, B., & Lee, L. 2008. The effect of colleague quality on top performance: The case of security analysts. ***Journal of Organizational Behavior***, 29(8): 1123-1144.

Groysberg, B., Lee, L., & Nanda, A. 2008. Can they take it with them? The portability of star knowledge workers' performance. ***Management Science***, 54(7): 1213-1230.

Groysberg, B., McLean, A. N., & Nohria, N. 2006. Are leaders portable? ***Harvard Business Review***, 84(5): 92.

Groysberg, B., Nanda, A., & Nohria, N. 2004. The risky business of hiring stars. ***Harvard Business Review***, 82(5): 92-101.

Groysberg, B., Polzer, J. T., & Elfenbein, H. A. 2011. Too many cooks spoil the broth: How high-status individuals decrease group effectiveness. ***Organization Science***, 22(3): 722-737.

Hall, R. 1993. A framework linking intangible resources and capabilities to sustainable competitive advantage. ***Strategic Management Journal***, 14(8): 607-618.

Harris, C. M., Pattie, M. W., & McMahan, G. C. 2015. Advancement along a career path: The influence of human capital and performance. ***Human Resource Management Journal***, 25(1): 102-115.

Harris, D., & Helfat, C. 1997. Specificity of CEO human capital and compensation. ***Strategic Management Journal***, 18(11): 895-920.

Hertel, G., Volmer, J., & Sonnentag, S. 2011. The role of star performers in software design teams. ***Journal of Managerial Psychology***, 26(3): 219-234.

Hess, A. 2008. Essays on dynamic capabilities: The role of intellectual human capital in firm innovation. Unpublished doctoral dissertation, Georgia Institute of Technology.

Hess, A. M., & Rothaermel, F. T. 2011. When are assets complementary? Star scientists, strategic alliances, and innovation in the pharmaceutical industry. ***Strategic Management Journal***, 32(8): 895-909.

Higgins, M. J., Stephan, P. E., & Thursby, J. G. 2011. Conveying quality and value in emerging industries: Star scientists and the role of signals in biotechnology. ***Research Policy***, 40(4): 605-617.

Hitt, M. A., Biermant, L., Shimizu, K., & Kochhar, R. 2001. Direct and moderating effects of human capital on strategy and performance in professional service firms: A resource-based perspective. ***Academy of Management Journal***, 44(1): 13-28.

Hunter, J. E., & Schmidt, F. L. 2004. Methods of meta-analysis: Correcting error and bias in research findings. Thousand Oaks, CA: Sage.

Huselid, M. A. 1995. The impact of human resource management practices on turnover, productivity, and corporate financial performance. ***Academy of Management Journal***, 38(3): 635-672.

Kehoe, R. R., Lepak, D. P., & Bentley, F. S. 2016. Let's call a star a star: Task performance, external status, and exceptional contributors in organizations. ***Journal of Management***: 1-25.

Kehoe, R. R., & Tzabbar, D. 2015. Lighting the way or stealing the shine? An examination of the duality in star scientists' effects on firm innovative performance. ***Strategic Management Journal***, 36(5): 709-727.

Kim, Y. 2015. Turbulence makes stars twinkle: The effects of star performers on collective turnover, unit human capital resources, and unit performance under a firm acquisition. Unpublished doctoral dissertation, University of South Carolina.

Kogut, B., & Zander, U. 1992. Knowledge of the firm, combinative capabilities, and the replication of technology. ***Organization Science***, 3(3): 383-397.

Kong, D. T., Dirks, K. T., & Ferrin, D. L. 2014. Interpersonal trust within negotiations: Meta-analytic evidence, critical contingencies, and directions for future research. ***Academy of Management Journal***, 57(5): 1235-1255.

Lucifora, C., & Simmons, R. 2003. Superstar effects in sport evidence from Italian soccer. ***Journal of Sports Economics***, 4(1): 35-55.

McMahan, G., & Harris, C. 2012. Measuring human capital: A strategic human resource management perspective. In J. Paauwe, D. Guest, & P. Wright (Eds.), ***HRM & performance: Achievements & challenges:*** 111-128. New York: Wiley.

Michaels, E., Handfield-Jones, H., & Axelrod, B. 2001. ***The war for talent.*** Boston: Harvard Business School Press.

Moliterno, T. P., & Wiersema, M. F. 2007. Firm performance, rent appropriation, and the strategic resource divestment capability. ***Strategic Management Journal***, 28(11): 1065-1087.

Newbert, S. L. 2007. Empirical research on the resource-based view of the firm: An assessment and suggestions for future research. ***Strategic Management Journal***, 28(2): 121-146.

Ng, T. W., Eby, L. T., Sorensen, K. L., & Feldman, D. C. 2005. Predictors of objective and subjective career success: A meta-analysis. ***Personnel Psychology***, 58(2): 367-408.

Ng, T. W., & Feldman, D. C. 2009. How broadly does education contribute to job performance? ***Personnel Psychology***, 62(1): 89-134.

Ng, T. W., & Feldman, D. C. 2010. Human capital and objective indicators of career success: The mediating effects of cognitive ability and conscientiousness. ***Journal of Occupational and Organizational Psychology***, 83(1): 207-235.

Nyberg, A. J., Moliterno, T. P., Hale, D., & Lepak, D. P. 2014. Resource-based perspectives on unit-level human capital a review and integration. ***Journal of Management***, 40(1): 316-346.

Oldroyd, J. B., & Morris, S. S. 2012. Catching falling stars: A human resource response to social capital's detrimental effect of information overload on star employees. ***Academy of Management Review***, 37(3): 396-418.

Park, H.S. & Shin, S. 2015. The role of the star player in a cohesive group. ***Small Group Research,*** 46(4): 415-430.

Peteraf, M. A. 1993. The cornerstones of competitive advantage: A resource-based view. ***Strategic Management Journal***, 14(3): 179-191.

Ployhart, R. E., Nyberg, A. J., Reilly, G., & Maltarich, M. A. 2014. Human capital is dead; long live human capital resources! ***Journal of Management***, 40(2): 371-398.

Post, C., & Byron, K. 2015. Women on boards and firm financial performance: A meta-analysis. ***Academy of Management Journal***, 58(5): 1546-1571.

Powell, T. C. 2001. Competitive advantage: Logical and philosophical considerations. ***Strategic Management Journal***, 22(9): 875-888.

Priem, R. L., & Butler, J. E. 2001. Is the resource-based "view" a useful perspective for strategic management research? ***Academy of Management Review***, 26(1): 22-40.

Ravid, S. A. 1999. Information, blockbusters, and stars: A study of the film industry. ***The Journal of Business***, 72(4): 463-492.

Ray, G., Barney, J. B., & Muhanna, W. A. 2004. Capabilities, business processes, and competitive advantage: Choosing the dependent variable in empirical tests of the resource-based view. ***Strategic Management Journal***, 25(1): 23-37.

Rosen, S. 1981. The economics of superstars. ***The American Economic Review***, 71(5): 845-858.

Rosenberg, M. S., Adams, D. C., & Gurevitch, J. 2000. ***MetaWin: Statistical software for meta-analysis***. Sunderland, MA: Sinauer.

Rosenthal, R. 1979. The file drawer problem and tolerance for null results. ***Psychological Bulletin***, 86(3): 638.

Rothaermel, F. T., & Hess, A. M. 2007. Building dynamic capabilities: Innovation driven by individual-, firm-, and network-level effects. ***Organization Science***, 18(6): 898-921.

Seleim, A., Ashour, A., & Bontis, N. 2007. Human capital and organizational performance: A study of Egyptian software companies. ***Management Decision***, 45(4): 789-801.

Spence, M. 1973. Job market signaling. ***The Quarterly Journal of Economics***: 355-374.

Subramony, M., Krause, N., Norton, J., & Burns, G. N. 2008. The relationship between human resource investments and organizational performance: A firm-level examination of equilibrium theory. ***Journal of Applied Psychology***, 93(4): 778.

Wade, J. B., Porac, J. F., Pollock, T. G., & Graffin, S. D. 2006. The burden of celebrity: The impact of CEO certification contests on CEO pay and performance. ***Academy of Management Journal***, 49(4): 643-660.

Wang, L. 2009. Money and fame: Vividness effects in the national basketball association. ***Journal of Behavioral Decision Making***, 22(1): 20-44.

Wright, P. M., & McMahan, G. C. 2011. Exploring human capital: Putting 'human' back into strategic human resource management. ***Human Resource Management Journal***, 21(2): 93-104.

Wright, P. M., McMahan, G. C., & McWilliams, A. 1994. Human resources and sustained competitive advantage: A resource-based perspective. ***International Journal of Human Resource Management***, 5(2): 301-326.

Wright, P. M., Smart, D. L., & McMahan, G. C. 1995. Matches between human resources and strategy among NCAA basketball teams. ***Academy of Management Journal***, 38(4): 1052-1074.

Zucker, L. G., & Darby, M. R. 2006. ***Movement of star scientists and engineers and high-tech firm entry***. NBER Working paper 12172, National Bureau of Economic Research, Cambridge, MA.

Zucker, L. G., & Darby, M. R. 1996. Star scientists and institutional transformation: Patterns of invention and innovation in the formation of the biotechnology industry. ***Proceedings of the National Academy of Sciences of the United States of America***, 93: 12709-12716.

TABLE 1

Studies Used in the Meta-Analysis

Study	Sample	Star Definition	Performance Construct Labels	Overall effect
Backhaus & Heiner (2014)	35	Performance Star	Performance score	0.56
Basuroy, Chatterjee, & Ravid (2003)	175	Universal Star	Number of positive reviews for a film (O)	0.379
Cattani, Ferriani, Mariani, & Mengoli (2013)	2297	Universal Star	Domestic box office receipts (O)	0.44
Cattani, Ferriani, Mariani, & Mengoli (2013)	2297	Universal Star	Profitability (return on invested capital) (G)	0.09
Crocitto (1989)	946	Performance Star	Profitability (net income/dollar value of assets) (G)	0
Crocitto (1989)	946	Performance Star	Stock price (G)	0.11
Ethiraj & Garg (2012)	6867	Universal Star	Number of playoff appearances (O)	0.119
Fuller & Rothaermel (2012)	177	Universal Star	Venture achieving IPO (1=yes) (G)	0.49
Graffin, Wade, Porac, & McNamee (2008)	1271	Universal Star	Industry return (Total assets*Total return)/Total assets) (G)	0.05
Grigoriou & Rothaermel (2014)	2442	Performance Star	Patent counts (O)	0.72
Grigoriou (2012)	1751	Performance Star	Biotech patents (O)	0.59
Grigoriou (2012)	2371	Performance Star	Annual count of patents granted (O)	0.71
Grigoriou (2012)	2138	Performance Star	Number of firm total patents (O)	0.74
Groysberg & Lee (2010)	9037	Universal Star	Profit (G)	-0.05
Groysberg (2002)	9531	Universal Star	Firm stock performance (G)	-0.03
Hess & Rothaermel (2011)	465	Universal Star	Number of new drugs annually (O)	0.127
Hess (2008)	1863	Universal Star	Patents granted (O)	0.356
Hess (2008)	3240	Universal Star	Biotech patent count (O)	0.524
Hess (2008)	1863	Universal Star	Net income (G)	-0.019
Hess (2008)	3240	Universal Star	Net income (G)	0.13

TABLE 1
(Continued)

Study	Sample	Star Definition	Performance Construct Labels	Overall effect
Higgins, Stephan, & Thursby (2011)	89	Universal Star	IPO proceeds (G)	0.08
Kehoe & Tzabbar (2015)	456	Performance Star	Innovative productivity (O)	0.47
Kim (2015)	82	Performance Star	Unit post acquisition performance (G)	0.36
Park & Shin (2015)	47	Performance Star	Upper management rated performance (O)	0.08
Rothaermel & Hess (2007)	1782	Universal Star	Non biotech patents (O)	0.123
Rothaermel & Hess (2007)	1782	Universal Star	Net income (G)	0.234
Seleim, Ashour, & Bontis (2007)	38	Performance Star	Export intensity (O)	0.489
Volmer & Sonnentag (2009)	20	Performance Star	Executive-rated performance (O)	0.58
Wade, Porac, Pollock, & Graffin (2006)	1271	Universal Star	Company return (G)	0.08
Wang (2009)	304	Universal Star	Team performance (G)	0.053

Note: IPO = initial public offering. Codes in parentheses depict organizational performance as global (G) or operational (O).

TABLE 2

Main Effect Results for Star Employee Presence and Organizational Performance

	Number of samples (k)	Number of observations (N)	Mean correlation (r)	Weighted correlation (r_w)	Mean study variance (var_t)	95% Confidence Interval (CI_{BS})	Unaccounted variance (χ^2)	Fail-safe sample size (N_{fsR})
Organizational Performance	30	58,823	0.2862	0.3167	0.0065	0.2169 - .4275	24.2312	273

TABLE 3

Weighted Least Squares Regression Model for Proposed Moderators of the Star Employee Presence - Organizational Performance Relationship

	Organizational Performance		
Variable	**b**	**SE_b**	**z**
Constant	0.628	0.059	10.516*
Star Definition	-0.250	0.074	-3.378*
Performance Measure	-0.321	0.071	-4.531*

Note: The number of independent effect sizes (k) is 30. *b* is the unstandardized regression coefficient, SE_b is the standard error, and *z* is the associated significance test.

* $p < .001$

TABLE 4
Univariate Results for Theoretical Moderators

	Number of samples (k)	Number of observations (N)	Mean correlation (r)	Weighted correlation (r_w)	95% Confidence Interval (CI_{BS})
Star Definition					
Universal Star	18	47,551	.176	0.185	.098 - .280
Non-universal Star	12	11,272	.451	0.533	.331 - .708
Performance Measure					
Global Measure	14	32,836	.113	.113	.039 - .206
Operational Measure	16	25,987	.438	.502	.364 - .636

Starstruck: An Examination of Signals That Contribute to Star Employee Compensation Premiums

ABSTRACT

For some industries, the greatest competition among rivals is not for market share, but rather for human capital (Terdiman, 2014). Sometimes referred to as a talent war, organizations compete aggressively to attract defectors from competitors in an attempt to gain competitive advantage. But are these tactics paying off? Using signaling theory, I argue that organizations may be offering compensation premiums to star employees as a result of misinterpreting signals within the external labor market. With data from Major League Baseball, I find that organizations are likely to pay a compensation premium to an individual based on their past performance, visibility, experience, and desirability. I discuss the implications of these findings for organizations waging war for talent and suggest directions for future research on a matter that is far from over.

Keywords: star employees, signaling theory, compensation premium, talent war

INTRODUCTION

When asked why Facebook acquired FriendFeed in 2009 for $47 million, the rough equivalent of $4 million per employee, Mark Zuckerberg famously responded by stating that "someone who is exceptional in their role is not just a little better than someone who is pretty good. They are 100 times better" (Helft, 2011). Zuckerberg's talent calculus is not unique. Marc Andreesen, cofounder of Netscape and a highly acclaimed Silicon Valley venture capitalist expressed similar sentiments when he noted that "The gap between what a highly productive person can do and what an average person can do is getting bigger and bigger. Five great programmers can completely outperform 1,000 mediocre programmers" (Helft, 2011).

While these two examples may represent the extreme extent to which firms are scrambling to recruit top talent, they reveal the intense battle for key employees many organizations are facing. Indeed, perhaps the greatest competition among rivals in many industries is not for market share, but rather for human capital (Terdiman, 2014). PricewaterhouseCoopers (2012) recently reported that the dearth of skilled employees has become so acute that roughly twenty-five percent of surveyed CEOs were unable to pursue a market opportunity or had to cancel or delay a strategic initiative because of talent challenges. Not surprisingly, the competition to hire the best and brightest skilled workers is becoming increasingly intense. So intense, in fact, companies such as Apple, Google, and Adobe were recently found to be engaged in a wage-fixing scheme (Streitfeld, 2015).

The shortage of skilled workers and other top talent is challenging because organizations recognize that human capital is a potential source of competitive advantage (Wright & McMahan, 2011). Human capital refers to the set of skills, knowledge, and abilities and other characteristics that enable an individual to perform at a high level (Wright, McMahan, & McWilliams, 1994).

The competition for the very best talent—referred to as *stars*—is particularly acute because such individuals are regarded as extraordinarily productive and valuable, and organizations view them as critical contributors to a firm's success (Ernst & Vitt, 2000; Groysberg, Lee, & Nanda, 2008). Attracting stars, however, can be quite expensive and the intended benefits of such endeavors often fail to materialize (Groysberg, Nanda, & Nohria, 2004). Accordingly, organizations need to better understand how to attract qualified employees while avoiding overpaying for the talent. This is particularly relevant in high technology and other talent-centered industries where skilled engineers, for example, can often command multiple $100,000-plus job offers brimming with lavish perks and equity packages. The scramble for stars has also increased the frequency of employee poaching and "acqhiring" which only amplifies the ongoing talent war (Selby & Mayer, 2013).

This study attempts to help organizations avoid becoming *starstruck*—being overly impressed by an individual's celebrity—by shedding additional light on certain pitfalls of recruiting star employees. Arguments are rooted in the resourced-based view of the firm and signaling theory while the Major League Baseball free agency market is used to empirically assess my predictions. I readily acknowledge that the contributions of key individuals can mean the difference between success and failure, but, I also argue that top talent is often overvalued and such individuals frequently fail to deliver the desired outcomes.

THEORY AND HYPOTHESES

Human Capital Theory

The resource-based view (RBV) argues that the source of an organization's competitive advantage is rooted primarily in the way it employs the bundle of tangible or intangible resources it possesses (Barney, 1991; Penrose, 1959; Wernerfelt, 1984). The RBV prescribes that firms

should develop core competences by bundling these resources in such a way that they are valuable, rare, inimitable, and nonsubstitutable. Human capital theory posits that an organization's workforce represents a key source of competitive advantage since top talent can explicitly contribute to organizational performance (Wright, Smart, & McMahan, 1995). Human capital refers to the skills set, knowledge, abilities and other characteristics possessed by an employee or potential employee that can produce positive outcomes (Wright & McMahan, 2011). For example, while Steve Jobs is credited for much of Apple's success, the company's engineering talent is generally credited for creating the user-friendly interface platforms that allowed Apple products to become so popular. Similarly, Wal-Mart's IT staff is typically credited for allowing the retailing giant to perfect its supply chain.

Human capital tends to become a more strategically important resource for individuals as they perform and progress within a career (Groysberg et al., 2008; Harris, Pattie, & McMahan, 2015). In addition, human capital theory indicates that individuals with higher levels of human capital are relatively more difficult to locate, recruit, and retain (e.g. Gomez-Mejia and Wiseman, 1997; Devers et al., 2007), and are thus highly desired by organizations (e.g. Combs and Skill, 2003; Harris and Helfat, 1997; Sturman et al., 2008). Finally, human capital is associated with greater performance, career advancement, career success and compensation (e.g. Greenhaus et al., 1990; Judge et al., 1994, 2010; Wayne et al., 1999; Ng et al., 2005; Ng and Feldman, 2009, 2010a,b; McMahan and Harris, 2012).

While there is little doubt that human capital can contribute to a firm's competitive advantage, there is debate about whether this resource should be developed internally or acquired. The RBV tends to suggest that the skills most central to a firm's competitiveness should be developed and maintained internally. All other skills, on the other hand, can be outsourced

(Wright et al., 1995). Lepak and Snell (1999) argue that the decision to seek talent from inside or from outside the organization is predicated on the uniqueness and value of the human capital needed. If, for example, an organization requires unique and valuable human capital, it should focus on internal development activities to help ensure a sustainable competitive advantage. Time and other resources should be devoted to nurturing the skill sets of existing employees because such individuals possess critical institutional knowledge, are familiar with organizational routines, contribute to an effective organizational culture, and other intangible factors to support the firm's competitive advantage. Conversely, acquiring talent from outside the organization is more appropriate if the talent needed is valuable but less unique and available in the external labor market. In other words, it is best to "buy" talent by paying the prevailing market price and immediately reaping the rewards of increased productivity.

The acquisition mode of employment or a reliance on the external labor market is the focus of the current study. Due to the escalating talent war, an increasing number of firms simply lack the luxury of time and money to develop talent internally. Whether it is a new venture attempting to gain a foothold in an emerging market or a large, established firm such as Amazon attempting to remain at the forefront of e-commerce, organizations need talent to meet their strategic objectives. Too often, however, talent is overvalued and the acquiring company pays too high a price in acquiring the talent.

Signaling Theory

Signaling theory helps explain why some firms overcompensate star employees. Within the job market, signaling theory assumes an information asymmetry exists between the employer and potential employee who has unobservable attributes which will influence future behaviors. While the employer may have extensive background information on a candidate, the true

potential and full capability of the individual are not completely known. Only time will reveal this information, making hiring an investment decision; one based on uncertainty. Perceptions of the potential employees drive initial salary offerings. Since the employer cannot determine the marginal product the employee will contribute prior to hiring, salary and hiring decisions are based on a variety of observable, personal data and characteristics (Spence, 1973).

Information is the basis upon which individuals make decisions (Connelly, Certo, Ireland, & Reutzel, 2011). When "different people know different things," an information asymmetry exists (Stiglitz, 2002). While two types of information asymmetry were defined by Stiglitz (2000), information about quality and information about intent, this study is concerned with information about quality. More specifically, about the quality of a potential employee as the organization is not completely aware of his or her characteristics. Signals have the potential to reduce this information asymmetry (Connelly et al., 2011).

In their review of signaling theory, Connelly et al. (2011) discussed the parties and actions present in an information asymmetry-reduction transaction. The parties include the *signaler* who has greater information about quality and the *receiver* who desires but lacks information about quality known by the signaler. The actions within the transaction include the *signal* which is sent by the signaler to the receiver as a means of reducing information asymmetry and *feedback* which is sent back to the signaler as a means of improving signaling efficiency. The parties and actions taken by them take place within the *signaling environment* which impacts the accuracy, efficiency, and quality of asymmetry reduction. Signalers are insiders who take actions to communicate positive qualities that can be picked up by the receiver. Certainly a requirement for the receiver to take notice is that the signal can be observed. Actions that cannot be observed by outsiders will unlikely be picked up. The receivers are those

outsiders who lack but desire information put out by the signaler about the party in question. Signaling should result in mutual benefit between the two parties; the signaler should benefit from an action taken by the receiver that, without the signal, the receiver would not have taken and the receiver should gain from the decision made based on the information given by the signal.

The ability to resolve information asymmetries through signaling is dependent on the accuracy with which the signal is interpreted, which may not be consistent with the intent of the sender (Belogolovsky & Bamberger, 2014). Connelly et al. (2011) note that receivers may place greater emphasis on signals they subjectively feel are more relevant. While well-intentioned, misplaced emphasis will not aid in making the best decision. In fact, inaccurate signal interpretation is likely to have significantly negative impacts on decision making. For example, when acquiring stars as a means of gaining competitive advantage, organizations that place too much emphasis on star past performance, visibility, desirability, and experience may be stuck with little more than a saturated payroll.

Prior Performance

Uncertainty permeates most hiring decisions because such decisions are typically based on observable factors such as performance, which are evident to all potential employers, rather than unobservable factors, such as attitude and adaptability (Spence, 1973). Since unobservable factors do not aid external candidates gain employment, employers are not pressured to compensate for them. Consequently, organizations base their compensation decisions on observable factors (Bidwell, 2011). Prior performance is one such observable factor that signals an individual's ability for future performance (Banker, Darrough, Huang, & Plehn-Dujowich, 2012) and may be related to the value that an individual may command later in their career (Harris et al., 2015). Individuals with high performance records signal to external organizations

that they possess the necessary human capital to execute desired performance (Fombrun & Shanley, 1990), thus reducing uncertainty about their future abilities (Harris et al., 2015). In a competitive labor market, organizations pick up on cues from potential employees to reduce informational asymmetries that exist between the two parties. These cues come from a variety of signals that organizations use to base reputational judgments of individuals including their potential as a future employee (Fombrun & Shanley, 1990). As such, a record of high past performance will likely lead to increased value being placed on the individual by external organizations (Harris et al., 2015).

The executive compensation literature clearly indicates that a relationship exists between the compensation of newly hired CEOs and prior positive performance (Combs & Skill, 2003). For instance, Fisher and Govindarajan (1992) report that executives who possess more experience a better compensated than their less experienced peers. More recently, Banker et al (2012) discovered that newly hired CEOs with experience in the same industry receive a higher salary based on prior performance; the expectation being that the candidate is able to transfer their industry-specific knowledge and ability to the new firm.

Organizations are willing to pay a higher price to acquire the human resource(s) which they believe are most closely tied to addressing current problems faced (Ertug & Castellucci, 2013). Organizational responses to the *war for talent*, such as star acquisition, have been driven by a scarcity mindset (Beechler & Woodward, 2009). Harris et al. (2015) found evidence that a record of high past performance sent signals to the labor market, indicating possession of the necessary human capital for future success, which led to an increased value placed on the individual by external organizations. Substantial evidence supports that star performers are not just slightly, but much better performers than their non-star colleagues but performance varies

over time. Thus, depending on when the measurement is taken, a non-star performer may look like a star performer and vice versa (Pfeffer & Sutton, 2006). Nevertheless, as organizations scan the labor market for cues to address current deficiencies, signals of high past performance may be interpreted as a solution to a current organizational problem and carry greater weight than other selection criteria. Furthermore, if an organization deems the individual's human capital as scarce within the labor market, they are more likely to be willing to pay a premium for such skills (Harris & Helfat, 1997).

Hypothesis 1: A star's prior performance is positively related to future compensation premium.

Visibility

Visibility refers to the ability to observe an individual's performance and reputation, and occurs within the organization (internal visibility) and outside the organization within the external labor market (external visibility) (Merton, 1968). Internal visibility can lead to greater attention and scrutiny by an individual's supervisors and colleagues relative to others in the organization. External visibility provides an individual with more leverage to secure resources within the current organization in the face of their enhanced external employment options (Call, Nyberg, & Thatcher, 2015). Both types of visibility can contribute to star compensation premiums.

Visibility can send signals both within the organization and to the external environment. Internally, visibility can draw additional, and perhaps even unfair, scrutiny as compared to other organizational members, but it can also signal validity and acceptance. Examining mentoring relationships, Ramaswami, Dreher, Bretz, and Weithoff (2010) found that the visibility of a female's mentoring relationship with a senior male member of a male-dominated organization

signaled her legitimacy as well as the backing and support from a powerful, senior member of the organization. Visibility can also signal quality and prospective performance by developing relationships or alliances with prominent parties (Reuer, Tong, & Wu, 2012; Reuer & Ragozzino, 2012) in addition to reducing information asymmetries between insiders and external stakeholders (Clark, Cornwell, & Pruitt, 2002).

Externally, visibility enhances an individual's power in the external labor market, provides them with additional leverage in relationships, and increases their ability to acquire necessary resources. According to signaling theory, CEO visibility signals competence (Hayward, Rindova, & Pollock, 2004) and future firm success through their ability to acquire better employees, leverage relationships, and have better access to necessary capital (Fombrun, 1996). Enhanced CEO visibility has also pressured firms to offer more attractive remuneration packages to compensate for increased external opportunities (Rajgopal, Shevlin, & Zamora, 2006), even when the CEO's performance was not linked to firm profitability (Wade, Porac, Pollock, & Graffin, 2006).

Visibility has been linked to acquisition premiums (Reuer et al., 2012), increased share prices (Clark et al., 2002), career advancement (Harris et al., 2015; Ramaswami, Dreher, Bretz, & Wiethoff, 2010), and greater compensation (Hayward et al., 2004; Rajgopal et al., 2006; Ramaswami et al., 2010; Wade et al., 2006). Additionally, visibility reduces information asymmetry (Fombrun, 1996) and signals competence (Hayward et al., 2004), legitimacy (Certo, 2003), prominence (Boyd, Bergh, & Ketchen, 2010; Rindova, Williamson, Petkova, & Sever, 2005), and the ability to execute desired performance in the future (Harris et al., 2015).

The literature clearly indicates that stars enjoy greater visibility than their colleagues and are thus, intentionally or unintentionally, signaling their current and potential contributions (Call

et al., 2015). External organizations scan the environment for cues of an individual's future performance ability and past research suggests a greater weight is placed on individuals' visibility when assessing human resource acquisitions (Rajgopal et al., 2006; Wade et al., 2006). This is perhaps better known as the "Matthew effect," which suggests that a more visible individual will receive more credit than a less visible individual, even if their work or accomplishment is similar (Merton, 1968). In essence, an individual is rewarded because they are seen and not necessarily because they perform their job. Additionally, the visibility of stars may enhance an organization's reputation and could be used as a recruiting tool for attracting other stars or individuals who have star potential (Agrawal, McHale, & Oettl, 2014). Furthermore, stars may signal the prestige of the organization, influencing the way stakeholders view the firm and perhaps altering the organization's entire identity, similar to what happened with Apple after the reentry of Steve Jobs (Call et al., 2015). I expect that organizations will respond to greater star visibility in the form of increased compensation.

Hypothesis 2: A star's visibility is positively related to future compensation premium.

Experience

Similar to past performance and visibility, experience reduces information asymmetry and provides a cue that an organization may consider in the process of acquiring human capital. Prior experience brings increased familiarity, credibility, and expertise to a role (Gomulya & Boeker, 2014). Greater experience in a job signals an individual has had the opportunity to hone their skills and become more proficient in their work (Lance, Hedge, & Alley, 1989) through the development of the necessary knowledge and skills that are essential to effective performance (Morrison & Brantner, 1992).

Signaling theory has been influential in explaining the role of experience consideration in CEO successions and how experience influences the perceptions of external stakeholders. Hiring a CEO successor with prior chief executive experience signals to external stakeholders the organization's commitment to competent leadership (Gomulya & Boeker, 2014). Shareholders may consider an appointed CEO lacking chief executive experience to be ill-prepared to lead an organization whereas an appointed CEO with prior experience signals to shareholders his or her ability and preparedness to lead at the outset of their appointment (Graffin, Carpenter, & Boivie, 2011). Experience may be a proxy for ability and influence in addition to a predictor of future performance (Miller & Shamsie, 2001). Indeed, prior CEO experience is the most relevant background characteristic when considering an individual for that role (Finkelstein, Hambrick, & Cannella, 2009).

Examining firms' response to financial restatement, Gomulya and Boeker (2014) found organizations that were facing a more severe crisis in the form of damaged reputation were more likely to hire a CEO successor who has prior chief executive experience, signaling their commitment to recovery and turnaround to their stakeholders. Graffin et al. (2011) demonstrated that selection of a CEO with prior chief executive experience was inversely associated with risk and uncertainty as perceived by shareholders.

Experience has been central to models of job performance and has been linked to compensation. Experience influences individuals' knowledge, skills, abilities, and motivation that, in turn, shape personal work outcomes that are of key interest to organizations such as job performance. Organizations consider a candidate's experience in selection and compensation decisions because it signals their knowledge and skills, motivation, and attitude and values that influence job performance and other key outcomes (Tesluk & Jacobs, 1998).

As stars gain more experience, they are less likely to be as concerned about their individual performance as they were earlier in their career. Stars may then shift their focus from individual contribution to establishing a legacy within their field. Further, they may provide more unique contributions to the organization such as mentoring and participating in strategic decisions (Call et al., 2015). These contributions will not likely come from stars with less experience that are focused on building performance and visibility in the earlier part of their career. Indeed, stars have the ability to influence others around them. Human capital spillovers from stars, as suggested above, have been found to contribute to the performance of their non-star colleagues (Azoulay, Zivin, & Wang, 2010; Oettl, 2012). Thus, I expect that organizations will provide a compensation premium to a star not only for their expertise but also their mentoring and leadership skills that come with greater experience which may translate in to human capital spillovers which benefit other non-star employees within the organization.

Hypothesis 3: A star's experience is positively related to future compensation premium.

Desirability

The marketplace for talent influences compensation levels. The Society for Human Resource Management notes that employers struggle to fill openings due to a lack of qualified individuals as employees move to other organizations in the pursuit of higher compensation. This is particularly true for highly trained workers (Miller, 2015).

There is intense competition in many markets for specific talents or skill sets and the executive compensation literature sheds light on the importance of this phenomena. Harris and Helfat (1997) argue that a firm looking to hire an outside CEO will only enter salary negotiations with its first choice as successor. This gives additional market power to the candidate, knowing that he or she is the firm's desired choice for the position. Making an offer to a potential

successor also signals to the candidate's current employer or other firms in search of an executive of the demand for that individual. In response, the current firm or other interested firms may extend counteroffers for the services of the desired candidate, resulting in a further reduction of market power of the original hiring organization. Relative to economic conditions and the demand for talent, a candidate's compensation may be bid up by several interested organizations in an auction-like fashion (Finkelstein & Hambrick, 1988).

In a competitive bidding situation, where the value of the focal object is uncertain, the party that unknowingly overestimates its value is more likely to bid higher than their competitors and thus more likely to win the competition. That is, organizations that correctly estimate the value of items on average will lose bidding wars in which they underestimate the item and win those in which they overestimate the item (Cassing & Douglas, 1980). As such, it can be expected that the item won in the process is worth less than the value estimated at the time of bidding (Oren & Williams, 1975). This result is magnified upwards as the number of bidders increase and the competition becomes more intense due to the increased variance in bids and thus the greater likelihood of the estimate being further from the true value (Capen, Clapp, & Campbell, 1971; Cassing & Douglas, 1980). Organizations fail to take the number of bidders into account and thus do not adjust their bids, resulting in a greater chance of overpayment relative to the true value of the item (Bazerman & Samuelson, 1983; Varaiya, 1988).

Reports of talent wars and employee poaching among organizations suggest a highly competitive market for human capital in certain industries. Certainly some individuals are more desirable than others, suggesting that multiple firms may be interested in the same potential employee. Stars who are desired by multiple organizations signal to the external labor market the expected value they will add to an organization. Within the same industry, stars who are

desired by multiple firms signal competitors' expectations of value and possible competitive advantage. Simultaneously, stars interpret interest from several organizations as a signal of their demand within the labor market, resulting in increased market power for the individual. In addition, intensive bidding wars for star performers signal that stars are free agents, not dissimilar to athletes entering the free agency market (Groysberg et al., 2008; Lazear, 1986). Knowing this, the courted individual is likely to allow a bidding process to play out among the interested firms and join the organization that offers the most attractive compensation package. As such, the individual is likely to be the beneficiary of an inflated compensation package when he or she is able to generate interest from multiple organizations.

Hypothesis 4: A star's desirability is positively related to future compensation premium.

METHOD

The free agent market of Major League Baseball provides an appropriate context with which to study organizations' acquisitions of employees for several reasons. First, baseball team owners and managers face the same task of maximizing performance as management in most organizations. All other things equal, increased individual performance should lead to increased team performance, making the choice of compensation for acquired players a strategic decision (Bloom, 1999). Second, research in the area of reserve wages and compensation premiums has been quite limited because detailed personnel data needed for statistical analysis are generally tightly held corporate secrets. This problem does not exist when using sports data because player salaries, as well as performance measures, are publically available from several sources (Jane, 2013). Finally, player performance measures are objective. The data used are reliable and without bias, allowing us to place more confidence in our results (Chang, 2011).

This study follows a three-stage procedure to test our hypotheses. First, I establish a value commensurate with the player's performance for the season prior to free agency which represents the worth of a player in a dollar amount. Second, I assess the compensation premium (or lack thereof) a player receives based on his free agency contract, relative to his worth. Finally, I examine how a player's compensation premium is influenced by the proposed factors through a regression analysis. The details of this process are discussed in the following paragraphs.

In order to determine a player's worth to his baseball team, a monetary value that represents his performance contribution to team revenue must be established. This is done by calculating the player's marginal revenue product (MRP). Scully (1974) developed the first model for baseball player MRP and it has since been modified and advanced by several authors (Bruggink & Rose, 1990; Hill, 1985; Hill & Spellman, 1983; MacDonald & Reynolds, 1994; Medoff, 1976; Scully, 1989; and Zimbalist, 1992). I calculate MRP by modifying the model provided by MacDonald and Reynolds (1994). They based a player's MRP on his contribution to key performance variables, the effect of those variables on a team's winning percentage, and the effect of winning percentage on team revenue (see MacDonald & Reynolds, 1994 for a detailed description).

The first step in determining how much an individual player's performance contributes to his team's revenue is to establish a team revenue equation. This linear equation is a slight modification from MacDonald and Reynolds' (1994) where we have included the one-year lag of team revenue:

$$REV = \beta_0 + \beta_1 WP + \beta_2 REVt\text{-}1 + \beta_3 POP + \beta_4 Y + \beta_5 LOSER + \beta_6 TT + \varepsilon_2$$

where, REV = estimated total team operating revenue,

WP = winning percentage,

REVt-1 = one-year lag of REV

POP = metropolitan statistical area population in millions,

Y = personal income in the metropolitan area in millions,

LOSER = 1 if team's WP falls below .500 averaged over the previous three seasons, 0 if otherwise,

TT = 1 if there is another MLB team in the metropolitan area, 0 if otherwise,

and ε_2 = error term

Estimating this model using OLS will produce biased and inconsistent results due to the endogenous variable WP. Accordingly, instrumental variables should be used to help explain the variance of WP. At the same time, the chosen instrumental variables should be uncorrelated with the unobserved factors in the error term that are correlated with the dependent variable, REV.

Following MacDonald and Reynolds (1994), I use the total team runs for the season (RUNS), a team's earned run average per 9-inning game (ERA), if a team is in contention to win their division (CONT), and if a team is out of the pennant race (OUT) as instrumental variables for WP. RUNS are an appropriate measure of offense because it takes into account various methods of contribution by players including walks, stolen bases, bunts, sacrifice flies, intellectual base running, scoring on defensive errors, etc. in addition to batting average, slugging percentage, and home runs. Similarly, on the defensive side, ERA is an appropriate measure of overall defense as it assesses a pitcher's and team's ability to prevent the offense from scoring runs. Two dichotomous variables from the original Scully (1974) model are also included to capture team motivation: CONT which is assigned a 1 if a team is in contention to

win their division (within five games of first place) and OUT which is assigned a 1 if a team is out of the pennant race (finishing the season 20 or more games out of first place of their division). Players are assumed to put forth more effort to win close games when they have a chance to win their division whereas teams that are out of contention will not be similarly motivated. Furthermore, teams out of contention may not even be made up of the same on-field players as losing clubs tend to make "September call-ups," allowing players in their farm system to gain some experience in "Big League" games.

In order to obtain consistent and unbiased parameter estimates for our REV equation, I need to perform a two-stage least squares (2SLS) procedure. The first stage of this procedure is to run an OLS regression of our endogenous variable, WP, on the chosen instruments RUNS, ERA, CONT, OUT and the other exogenous variables from the REV equation, REVt-1, POP, Y, LOSER, and TT. Next, I obtain the predicted values of WP ($\widehat{WP}$) to be used in place of WP in the REV equation. As reported in Table 1, both the F statistic (F(4, 230) = 295.61) and Hansen J statistic (p = 0.2731) indicate that the chosen instruments are valid and exogenous for this analysis.

1^{st} stage: $WP = \beta_0 + \beta_1 RUNS + \beta_2 ERA + \beta_3 CONT + \beta_4 OUT + \beta_5 REVt\text{-}1 + \beta_6 POP + \beta_7 Y + \beta_8 LOSER + \beta_9 TT + \varepsilon_1$

2^{nd} stage: $REV = \beta_0 + \beta_1 \widehat{WP} + \beta_2 REVt\text{-}1 + \beta_3 POP + \beta_4 Y + \beta_5 LOSER + \beta_6 TT + \varepsilon_2$

This procedure produced the following results:

Insert Table 1 about here

Previous research (Scully, 1974; MacDonald & Reynolds, 1994) has acknowledged that while baseball is a team sport, it is important for the analysis of player MRP to assume that team performance is a linear summation of individual performance and players should be assessed based on their primary contribution; as a hitter or pitcher.

The coefficients from the 2SLS procedure can now be used to calculate a player's MRP for the 2013 season. For the aforementioned reasons, I assess the contribution of hitters by the number of runs they score. From the first stage, each additional run scored increases a team's winning percentage by .367. From the second stage, a one-point increase in winning percentage increases revenue by $81,206. Thus, each run scored by a player contributes (.367*$81,206) $29,803 to a team's total revenue.

$$MRP_{hitter\ i} = (.367 * \$81{,}206) * runs\ scored_i$$

The contribution of pitchers is assessed based on their ERA. This is a weighted average of each pitcher's share of innings pitched during the season (IP%), thus each function of pitcher productivity is multiplied by the percentage of innings that player pitched. The lowest possible ERA is 0 which would be equivalent to the intercept in the first stage, 552.5, implying that the team's winning percentage would be 552.5 plus offensive production. As in the hitter equation, each one-point increase in winning percentage increases revenue by $81,206. From the 2SLS procedure, each one-point decline (increase) in ERA raises (lowers) team winning percentage by 79.62 points.

$$MRP_{pitcher\ i} = \$81{,}206 * (552.5 - 79.62ERA) * IP\%$$

$$= (\$44{,}866{,}315 * IP\%) + (\$6{,}465{,}622 * IP\%)\ ERA_i$$

While arguments have been made that slugging average (Scully, 1974) and strike-to-walk ratio (Bruggink & Rose, 1990; Scully, 1974) are the best measures for hitter and pitcher effectiveness

respectively, I follow the formulas using RUNS and ERA offered by MacDonald and Reynolds (1994).

Data

Team panel data was collected for a nine-year period from 2005 to 2013. Previous research has generally used only two years of team data to examine team winning percentage and revenue functions. I chose an extended time period to allow for the inclusion of a lag revenue variable in an attempt to improve the accuracy of the models. The starting point of 2005 was chosen because this was the first year after the Washington Nationals relocated to Washington, D.C. from Montreal and thus reflects the current landscape of Major League Baseball; 2013 was the most recently available data for all of the team variables at the time of analysis.

I collected free agent data for the 2012 and 2013 free agent classes. Free agent transaction data was obtained from *ESPN's MLB Free Agent Tracker* (ESPN, 2014). Complete records of the free agents' position, age, free agency status (signed a new contract, retired, or remained unsigned), previous team before free agency, team they signed with in free agency, and the new contract terms (salary and number of years) is available from 2006 through 2013. All other player and team performance data was obtained through *Baseball-Reference.com* (Sports Reference, 2014).

Measures

Compensation premium. The dependent variable, compensation premium, is calculated as the average annual salary a free agent receives minus his MRP for the season prior to free agency. For example, a free agent with a 2013 MRP of $8 million who signs a three-year, $30 million contract would receive a compensation premium of $2 million for the 2014 season (($30 million/3 years) - $8 million = $2 million).

Prior performance. Past performance is measured by a player's *wins above replacement* (WAR) statistic. WAR is a performance statistic that was developed to capture how much better any one player is compared to a player available to replace him. WAR takes into account the difference between pitchers and non-pitchers and thus we are able to compare players of all positions with one statistic.

Visibility. Visibility was measured by a search of each player within the Factiva database. The variable is a count of times the player's name appears in a news article within the database during the contract year.

Experience. Experience was measured by the number of years a free agent has played Major League Baseball. This was captured by subtracting the year of the free agent's MLB debut from the year in which they became a free agent.

Desirability. Desirability is measured by the number of teams reported to be interested in acquiring the free agent. This was captured through media reports obtained through MLB Trade Rumors, a website devoted to publishing the latest updates of MLB player trades and free agent signings and is often cited by major media outlets (Dierkes, 2008).

Control measures. To reduce the possibility of spurious results, several factors were controlled for including whether they are a pitcher, length of contract, number of times the player has been through free agency, if the acquiring team was in contention the year before (see CONT above for a description), acquiring team revenue, if the previous team the free agent played for was in a large market, the previous team's winning percentage, if the acquiring team was a member of the National League, and free agent class. Pitcher is a dichotomous variable (1 if pitcher, 0 otherwise), large market is a dichotomous variable (1 if the previous team is located in a high-population baseball market based on SMSA – Chicago, Philadelphia, Los Angeles,

Dallas/Ft. Worth, New York, Toronto – 0 otherwise), and the length of contract was measured in years. I controlled for National League teams to account for any systematic acquisition strategies between the two leagues. Finally, since two years of free agent data are being used, I controlled for the year of the transaction.

Analysis

Due to some players being free agents in both observation periods, I treat the free agent data set as an unbalanced panel. Descriptive statistics and correlations are provided in Table 2. Prior to testing our formal hypotheses, I ran an initial regression of the player's MRP on his new salary to determine if a difference between these two figures indeed exists. The null hypothesis of this equation is that no frictions exist and there is equality between MRP and the player's new salary where $\beta_0=0$ and $\beta_1=1$. Results of this initial analysis are reported in Table 3 and reject the null hypothesis. As suspected, there is a significant difference between a player's MRP and his new salary, indicating that a player is paid above his prior performance in free agency. Having verified that a premium exists, we use a random effects GLS model to examine reasons for such a bonus. Results of the regression analysis to test our hypotheses can be found in Table 4.

Insert Table 2 about here

Insert Table 3 about here

Insert Table 4 about here

RESULTS

The first hypothesis predicted a star's prior performance is positively related to a future compensation premium. As depicted in Table 4, the prior performance coefficient is significantly and positively related to a player's compensation premium ($p < .01$), thus supporting Hypothesis 1. Hypothesis 2 predicted that a star's visibility is positively related to a future compensation premium. The visibility coefficient is significantly and positively related to the compensation premium variable ($p < .01$), supporting the second hypothesis. The third hypothesis predicted that prior experience is positively related to a star's future compensation premium. This hypothesis is supported as the experience coefficient is significant and positive ($p < .01$). The final hypothesis predicted that increased desirability is positively related to a star's future compensation premium. Desirability is positively and significantly related to a player's compensation premium ($p < .01$), thus, supporting Hypothesis 4.

DISCUSSION

As alluded to in the introduction, it is not uncommon for organizations to spend lavish amounts of money to recruit star employees. Silicon Valley firms are well known to offer extremely lucrative compensation packages to lure talented programmers, developers, and engineers. Indeed, Zuckerberg acquired FriendFeed not for a particular product or new technology. Rather he spent nearly $50 million to acquire FriendFeeds' key developers. While Facebook's approach to recruiting star performers may be somewhat unique to the hyper-competitive social media industry, many other executives share his opinion that a few truly

exceptional employees are more valuable than many average employees. As such, they are prepared to pay a premium to hire star employees.

My examination of the MLB free agency market clearly indicates that many baseball organizations paid a premium to acquire the talents of star players. This situation is arguably not limited to MLB since organizations across a variety of other industries likely face a similar dilemma when attempting to attract top talent. While time will eventually reveal whether such actions were appropriate, these results indicate that executives may be misinterpreting the signals conveyed within the external labor market by star employees. Prior performance, visibility, experience, and desirability may be inadequate, or even inappropriate, metrics for identifying what value individual employees actually contribute to an organization. Paying a premium for stars based solely on these four commonly used signals is potentially problematic. While they do help reduce uncertainly inherent in the selection process, they are insufficient in predicting a star's future contribution to an organization.

Past performance is not the best predictor of future performance and management should take caution in how much weight it carries in compensation and/or selection decisions. Groysberg et al. (2008) provided evidence that stars who changed employers experienced a significant decline in performance which persisted for years before they were able to perform at a level previous to their departure, even while remaining in the same industry. This suggests that firms basing compensation and selection decisions on prior performance may not get what they feel they bargained for. Within a sports context, past player performance is a highly ambiguous predictor of future performance, suggesting high-variance players are the most overpaid with respect to their actual performance (Bazerman & Samuelson, 1983). Indeed, performance varies

over time, thus, depending on when the measurement is taken or observed, a star performer in any industry may look like a non-star performer and vice versa (Pfeffer & Sutton, 2006).

While a highly-visible star can assist in attracting other stars to the organization (Agrawal, et al., 2014), enhance the firm's reputation (Call et al., 2015), and access needed resources (Fombrun, 1996), they may not necessarily help to increase the productivity of the firm (Wade et al, 2006). Management should closely examine if the expected benefits that visibility signals are a good fit for their current needs, e.g. a highly-visible star may not help an organization facing performance deficiencies. More importantly, management should do what it can to examine the star's credentials independent of their visibility so as not to be swayed by the Matthew Effect (Merton, 1968).

The results indicate a positive relationship between a star's experience and their compensation premium; however, increased experience is also associated with decreased productivity (Medoff & Abraham, 1981). Still, a star's experience can be beneficial to firms in other ways such as colleague mentoring/coaching, participating in strategic decisions (Call et al., 2015), and other spillover effects such as helping to increase the performance of their non-star colleagues (Azoulay et al., 2010; Oettl, 2012). When weighing experience in compensation decisions for stars, management should determine if the star can offer similar benefits or if they have specific, situational experience which can address a particular problem area for the firm (Gomulya & Boeker, 2014). Absence of these benefits suggests an organization is paying an unnecessary premium to a star based on their experience.

Finally, I found that increased competition for a star resulted in a compensation premium. This is consistent with previous findings in the star literature, suggesting star acquisitions are value destroying moves due to the possibility that the firm will fall victim to the winner's curse

(Groysberg et al., 2008). When in a competitive bid situation for a star, management should adjust their compensation offer downward when they have less information about the individual than other firms, when there is greater uncertainty about the star's future value to the firm, and as the competition for the star increases (i.e. the number of firms interested in the star increases) (Capen et al, 1971). Commonly, individuals fail to take the number of bidders into account and thus do not adjust their offers. Failure to adjust compensation offers appropriately in response to an increased bidding population will result in a greater chance of falling victim to the winner's curse (Bazerman & Samuelson, 1983).

As Groysberg et al. (2004) argue, engaging in star wars is risky. When star employees are hired, their performance tends to drop, their presence often upsets existing patterns of organization behavior, and the firm's market value falls. Stars also do not tend to stick around even though they were often enticed with very generous compensation packages. For these reasons, Groysberg and colleagues contend that organizations should develop their own talent internally rather than chasing stars in the external job market. Companies attempting to recruit a star performer are unable to adequately place a value on their true contribution based solely on the strength of that individual's signals.

Limitations and Directions for Future Research

As with any study, this one has its limitations. Perhaps the most obvious is the generalizability of sports data. Major League Baseball players are some of the highest paid individuals in the world and may not represent the workforce in general. However, employee poaching is not abundant among the entire workforce but rather concentrated among the more elite employees with competitive skill sets. In this context, MLB free agents seem to be an appropriate proxy. Furthermore, gathering data on employee poaching activities among

companies in Silicon Valley or elsewhere is difficult, if not impossible, because of the proprietary nature of organizational recruiting tactics. Transparent and objective transaction, salary, and performance data is readily available for Major League Baseball players and provides the opportunity for greater insight into the explored relationships. Moreover, by examining a single industry, I am able to better control for extraneous factors. The fact that I am able to still arrive at significant results boosts the confidence of these findings.

Another limitation to this study is that I did not look at post-acquisition performance. While I suggest that overpayment for talent is occurring in relation to past performance, I fail to consider future performance. Perhaps organizations are anticipating an uptick in performance to justify the compensation premiums. In order to properly assess this, however, performance over the entirety of the acquisition contract should be considered. This would provide the opportunity to control for aberrations in performance over a multiyear contract. Prior research in sports has suggested that players try to boost performance in their contract year as a means of commanding a lucrative, multiyear contract in free agency, only to shirk performance the following season (e.g., Krautmann & Solow, 2009). This analysis was not possible for the sample as some of the players' contracts that were included in the dataset are still active.

Future research should consider performance by an individual after he/she has received a compensation premium while not ignoring the incumbent employees who are not paid a premium. In organizations where there is greater pay dispersion, the level of pay predicts performance such that higher paid individuals exhibit better performance and lower paid individuals underperform (Bloom, 1999). Signals sent by organizations through compensation premiums, the effects of which can occur in less visible areas of performance such as commitment to the organization and prosocial behaviors, should also be considered.

Future research might also consider the role that the competitive environment of the organization plays in compensation premiums to stars. For instance, is an organization in an industry characterized by a high intensity of rivals more likely to be willing to offer premiums to stars who may be seen as an elusive source of competitive advantage in such an environment? Furthermore, could the organization's position in the competitive environment influence this likelihood? Competitive organizations in contention of becoming the industry leader may be more likely to offer a compensation premium to a star employee who may be viewed as the firm's key to becoming the industry leader (Terry, McGee, & Kass, 2017).

Finally, future research should consider the other ways in which stars might contribute to their organizations. I suggest that stars are offered compensation premiums based on signals present in the external labor market. This, coupled with previous evidence that stars' performance drops when changing employers, suggests that acquiring firms may be at risk of overpaying for someone who will underperform. Should this happen, firms will want to find other ways to deploy their newly acquired resource. One of the most urgent problems that organizations face is talent recruitment, which is seen not only as being necessary for competitive advantage, but for organizational viability (Ployhart, 2006). It has been suggested that, due to their external visibility, stars may enhance an organization's reputation. This, in turn, may signal organizational prestige, thus positively enhancing organizational recruitment efforts (Call et al., 2015; Ployhart, 2006).

CONCLUSION

Acquiring top talent is becoming increasingly critical for organizations to achieve sustainable competitive advantage. So critical, in fact, the war for talent in some industries is more intense than the war for market share (Terdiman, 2014). While the contributions of key

individuals can mean the difference between success and failure for organizations, such individuals are often overvalued and frequently fail to deliver as expected. Grounded in the resource-based view of the firm and signaling theory, this study offers insight into why organizations often offer a compensation premium when recruiting top talent or star employees. I contend that human capital, a key strategic resource, gives rise to the allure of star performers and signaling theory helps explain why star performers are able to command such a premium. Firms should take caution when interpreting signals present in the external labor market to mitigate the possibility of becoming *starstruck*.

REFERENCES

Agrawal, A. K., McHale, J., & Oettl, A. 2014. Why stars matter. ***NBER Working Paper Series***: 1-54.

Azoulay, P., Zivin, J. S. G., & Wang, J. 2010. Superstar extinction. ***Quarterly Journal of Economics***, 125(2): 549-589.

Banker, R. D., Darrough, M. N., Huang, R., & Plehn-Dujowich, J. M. 2012. The relation between CEO compensation and past performance. ***The Accounting Review***, 88(1): 1-30.

Barney, J. 1991. Firm resources and sustained competitive advantage. ***Journal of Management***, 17(1): 99-120.

Bazerman, M. H., & Samuelson, W. F. 1983. I won the auction but don't want the prize. ***Journal of Conflict Resolution***, 27(4): 618-634.

Beechler, S., & Woodward, I. C. 2009. The global "war for talent". ***Journal of International Management***, 15(3): 273-285.

Belogolovsky, E., & Bamberger, P. A. 2014. Signaling in secret: Pay for performance and the incentive and sorting effects of pay secrecy. ***Academy of Management Journal***, 57(6): 1706-1733.

Bidwell, M. 2011. Paying more to get less: The effects of external hiring versus internal mobility. ***Administrative Science Quarterly***, 56(3): 369-407.

Bloom, M. 1999. The performance effects of pay dispersion on individuals and organizations. ***Academy of Management Journal***, 42(1): 25-40.

Boyd, B. K., Bergh, D. D., & Ketchen, D. J. 2010. Reconsidering the reputation—performance relationship: A resource-based view. ***Journal of Management***, 36(3): 588-609.

Bruggink, T. H., & Rose, D. R.,Jr. 1990. Financial restraint in the free agent labor market for Major League Baseball: Players look at strike three. ***Southern Economic Journal***, 56(4): 1029-1043.

Call, M. L., Nyberg, A. J., & Thatcher, S. 2015. Stargazing: An integrative conceptual review, theoretical reconciliation, and extension for star employee research. ***Journal of Applied Psychology***, 100(3): 623-640.

Capen, E. C., Clapp, R. V., & Campbell, W. M. 1971. Competitive bidding in high-risk situations. ***Journal of Petroleum Technology***, 23(06): 641-653.

Cassing, J., & Douglas, R. W. 1980. Implications of the auction mechanism in baseball's free agent draft. ***Southern Economic Journal***, 47(1): 110-121.

Certo, S. T. 2003. Influencing initial public offering investors with prestige: Signaling with board structures. ***Academy of Management Review***, 28(3): 432-446.

Chang, K. S. 2011. Membership stability and performance: A study of baseball clubs and laboratory groups. ***The International Journal of Human Resource Management***, 22(02): 457-480.

Clark, J. M., Cornwell, T. B., & Pruitt, S. W. 2002. Corporate stadium sponsorships, signaling theory, agency conflicts, and shareholder wealth. ***Journal of Advertising Research***: 16-32.

Combs, J. G., & Skill, M. S. 2003. Managerialist and human capital explanations for key executive pay premiums: A contingency perspective. ***Academy of Management Journal***, 46(1): 63-73.

Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. 2011. Signaling theory: A review and assessment. ***Journal of Management***, 37(1): 39-67.

Devers, C. E., Cannella, A. A., Reilly, G. P., & Yoder, M. E. 2007. Executive compensation: A multidisciplinary review of recent developments. ***Journal of Management***, 33(6): 1016-1072.

Dierkes, T. 2008. **About MLB trade rumors.** http://www.mlbtraderumors.com/2008/01/about-mlbtrad-1.html. Accessed April, 2015.

Ernst, H., & Vitt, J. 2000. The influence of corporate acquisitions on the behaviour of key inventors. ***R&D Management***, 30(2): 105-120.

Ertug, G., & Castellucci, F. 2013. Getting what you need: How reputation and status affect team performance, hiring, and salaries in the NBA. ***Academy of Management Journal***, 56(2): 407-431.

ESPN. 2014. **MLB free agent tracker.** http://espn.go.com/mlb/freeagents. Accessed December, 2014.

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

Finkelstein, S., & Hambrick, D. C. 1988. Chief executive compensation: A synthesis and reconciliation. ***Strategic Management Journal***, 9(6): 543-558.

Fisher, J., & Govindarajan, V. 1992. Profit center manager compensation: An examination of market, political and human capital factors. ***Strategic Management Journal***, 13(3): 205-217.

Fombrun, C. J. 1996. ***Reputation: Realizing value from the corporate image***. Boston, Mass: Harvard Business School Press.

Fombrun, C., & Shanley, M. 1990. What's in a name? reputation building and corporate strategy. ***The Academy of Management Journal***, 33(2): 233-258.

Gomez-Mejia, L., & Wiseman, R. M. 1997. Reframing executive compensation: An assessment and outlook. ***Journal of Management***, 23(3): 291-374.

Gomulya, D., & Boeker, W. 2014. How firms respond to financial restatement: CEO successors and external reactions. ***Academy of Management Journal***, 57(6): 1759-1785.

Graffin, S. D., Carpenter, M. A., & Boivie, S. 2011. What's all that (strategic) noise? Anticipatory impression management in CEO succession. ***Strategic Management Journal***, 32(7): 748-770.

Greenhaus, J. H., Parasuraman, S., & Wormley, W. M. 1990. Effects of race on organizational experiences, job performance evaluations, and career outcomes. ***Academy of Management Journal***, 33(1): 64-86.

Groysberg, B., Lee, L., & Nanda, A. 2008. Can they take it with them? The portability of star knowledge workers' performance. ***Management Science***, 54(7): 1213-1230.

Groysberg, B., Nanda, A., & Nohria, N. 2004. The risky business of hiring stars. ***Harvard Business Review***, 82(5): 92-101.

Harris, C. M., Pattie, M. W., & McMahan, G. C. 2015. Advancement along a career path: The influence of human capital and performance. ***Human Resource Management Journal***, 25(1): 102-115.

Harris, D., & Helfat, C. 1997. Specificity of CEO human capital and compensation. ***Strategic Management Journal***, 18(11): 895-920.

Hayward, M. L., Rindova, V. P., & Pollock, T. G. 2004. Believing one's own press: The causes and consequences of CEO celebrity. ***Strategic Management Journal***, 25(7): 637-653.

Helft, M. 2011. ***For buyers of web start-ups, quest to corral young talent.*** New York Times. http://www.nytimes.com/2011/05/18/technology/18talent.html?_r=0. Accessed April, 2015.

Hill, J. R. 1985. The threat of free agency and exploitation in professional baseball-1976-1979. ***Quarterly Review of Economics and Business***, 25(4): 68-82.

Hill, J. R., & Spellman, W. 1983. Professional baseball: The reserve clause and salary structure. ***Industrial Relations***, 22(1): 1-19.

Jane, W. 2013. Overpayment and reservation salary in the Nippon professional baseball league: A stochastic frontier analysis. ***Journal of Sports Economics***, 14(6): 563-583.

Judge, T. A., Cable, D. M., Boudreau, J. W., & Bretz Jr, R. D. 1994. An empirical investigation of the predictors of executive career success. ***Personnel Psychology***, 48(3): 485-519.

Judge, T. A., Klinger, R. L., & Simon, L. S. 2010. Time is on my side: Time, general mental ability, human capital, and extrinsic career success. ***Journal of Applied Psychology***, 95(1): 92-107.

Krautmann, A.C. & Solow, J.L. 2009. The dynamics of performance over the duration of Major League Baseball long-term contracts. ***Journal of Sports Economics,*** 10(1): 6-22.

Lance, C. E., Hedge, J. W., & Alley, W. E. 1989. Joint relationships of task proficiency with aptitude, experience, and task difficulty: A cross-level, interactional study. ***Human Performance***, 2(4): 249-272.

Lazear, E. P. 1986. Salaries and piece rates. ***Journal of Business***, 59(3): 405-431.

Lepak, D. P., & Snell, S. A. 1999. The human resource architecture: Toward a theory of human capital allocation and development. ***Academy of Management Review***, 24(1): 31-48.

MacDonald, D. N., & Reynolds, M. O. 1994. Are baseball players paid their marginal products? ***Managerial & Decision Economics***, 15(5): 443-457.

McMahan, G., & Harris, C. 2012. Measuring human capital: A strategic human resource management perspective. In ***Human resource management and performance: Achievements and challenges***. Oxford: Wiley-Blackwell.

Medoff, J. L., & Abraham, K. G. 1981. Are those paid more really more productive? The case of experience. ***Journal of Human Resources***, 16(2): 186-216.

Medoff, M. H. 1976. On monopsonistic exploitation in professional baseball. ***Quarterly Review of Economics and Business***, 16(2).

Merton, R. K. 1968. ***Social theory and social structure***. New York, NY: The Free Press.

Miller, D., & Shamsie, J. 2001. Learning across the life cycle: Experimentation and performance among the Hollywood studio heads. ***Strategic Management Journal***, 22: 725-745.

Miller, S. 2015. ***Evaluate pay issues as talent market heats up.*** Society for Human Resource Management. http://www.shrm.org/hrdisciplines/compensation/articles/pages/pay-issues-2015.aspx. Accessed December, 2015.

Morrison, R. F., & Brantner, T. M. 1992. What enhances or inhibits learning a new job? A basic career issue. ***Journal of Applied Psychology***, 77(6): 926-940.

Ng, T. W., Eby, L. T., Sorensen, K. L., & Feldman, D. C. 2005. Predictors of objective and subjective career success: A meta-analysis. ***Personnel Psychology***, 58(2): 367-408.

Ng, T. W., & Feldman, D. C. 2009. How broadly does education contribute to job performance? ***Personnel Psychology***, 62(1): 89-134.

Ng, T. W., & Feldman, D. C. 2010a. Human capital and objective indicators of career success: The mediating effects of cognitive ability and conscientiousness. ***Journal of Occupational and Organizational Psychology***, 83(1): 207-235.

Ng, T. W., & Feldman, D. C. 2010b. Organizational tenure and job performance. ***Journal of Management***, 36(5): 1220-1250.

Oettl, A. 2012. Reconceptualizing stars: Scientist helpfulness and peer performance. ***Management Science***, 58(6): 1122-1140.

Oren, M. E., & Williams, A. C. 1975. On competitive bidding. ***Operations research***, 23(6): 1072-1079.

Penrose, E. T. 1959. ***The theory of the growth of the firm***. Great Britain: Basil Blackwell and Mott Ltd.

Pfeffer, J., & Sutton, R. I. 2006. ***Hard facts, dangerous half-truths, and total nonsense: Profiting from evidence-based management.*** Harvard Business Press.

Ployhart, R.E. 2006. Staffing in the 21st century: New challenges and strategic opportunities. ***Journal of Management,*** 32(6): 868-897.

PricewaterhouseCoopers. 2012. ***15th annual global CEO survey 2012.*** https://www.pwc.com/gx/en/ceo-survey/pdf/15th-global-pwc-ceo-survey.pdf. Accessed April, 2015.

Rajgopal, S., Shevlin, T., & Zamora, V. 2006. CEOs' outside employment opportunities and the lack of relative performance evaluation in compensation contracts. ***The Journal of Finance***, 61(4): 1813-1844.

Ramaswami, A., Dreher, G. F., Bretz, R., & Wiethoff, C. 2010. Gender, mentoring, and career success: The importance of organizational context. ***Personnel Psychology***, 63(2): 385-405.

Reuer, J. J., & Ragozzino, R. 2012. The choice between joint ventures and acquisitions: Insights from signaling theory. ***Organization Science***, 23(4): 1175-1190.

Reuer, J. J., Tong, T. W., & Wu, C. 2012. A signaling theory of acquisition premiums: Evidence from IPO targets. ***Academy of Management Journal***, 55(3): 667-683.

Rindova, V. P., Williamson, I. O., Petkova, A. P., & Sever, J. M. 2005. Being good or being known: An empirical examination of the dimensions, antecedents, and consequences of organizational reputation. ***Academy of Management Journal***, 48(6): 1033-1049.

Scully, G. W. 1989. ***The business of major league baseball.*** Chicago: University of Chicago Press.

Scully, G. W. 1974. Pay and performance in Major League Baseball. ***The American Economic Review***, 64(6): 915-930.

Selby, J., & Mayer, K. J. 2013. ***Startup firm acquisitions as a human resource strategy for innovation: The acqhire phenomenon***. Paper presented at Academy of Management Proceedings.

Spence, M. 1973. Job market signaling. ***The Quarterly Journal of Economics***: 355-374.

Sports Reference. 2014. ***Baseball-reference.com.*** http://www.baseball-reference.com/ December, 2014.

Stiglitz, J. E. 2000. The contributions of the economics of information to twentieth century economics. ***Quarterly Journal of Economics***, 115(4): 1441-1478.

Stiglitz, J. E. 2002. Information and the change in the paradigm in economics. ***American Economic Review***, 92(3): 460-501.

Streitfeld, D. 2015. ***Bigger settlement said to be reached in Silicon Valley antitrust case.*** New York Times. http://www.nytimes.com/2015/01/15/technology/silicon-valley-antitrust-case-settlement-poaching-engineers.html?_r=0. Accessed March, 2015.

Sturman, M. C., Walsh, K., & Cheramie, R. A. 2008. The value of human capital specificity versus transferability. ***Journal of Management***, 32(2): 290-316.

Terdiman, D. 2014. ***Silicon Valley talent wars: Engineers, come get your $250K salary.*** CNET. http://www.cnet.com/news/silicon-valley-talent-wars-engineers-come-get-your-250k-salary/.

Terry, R.P., McGee, J.E., & Kass, M. 2017. ***The not-so-free agent: Non-performance factors that contribute to free agent compensation premiums.*** Working paper, The University of Texas at Arlington, Arlington, TX.

Tesluk, P. E., & Jacobs, R. R. 1998. Toward an integrated model of work experience. ***Personnel Psychology***, 51(2): 321.

Varaiya, N. P. 1988. The 'winner's curse' hypothesis and corporate takeovers. ***Managerial and Decision Economics***, 9(3): 209-219.

Wade, J. B., Porac, J. F., Pollock, T. G., & Graffin, S. D. 2006. The burden of celebrity: The impact of CEO certification contests on CEO pay and performance. ***Academy of Management Journal***, 49(4): 643-660.

Wayne, S. J., Liden, R. C., Kraimer, M. L., & Graf, I. K. 1999. The role of human capital, motivation and supervisor sponsorship in predicting career success. ***Journal of Organizational Behavior***, 20(5): 577-595.

Wernerfelt, B. 1984. A resource-based view of the firm. ***Strategic Management Journal***, 5(2): 171-180.

Wright, P. M., & McMahan, G. C. 2011. Exploring human capital: Putting 'human' back into strategic human resource management. ***Human Resource Management Journal***, 21(2): 93-104.

Wright, P. M., McMahan, G. C., & McWilliams, A. 1994. Human resources and sustained competitive advantage: A resource-based perspective. ***International Journal of Human Resource Management***, 5(2): 301-326.

Wright, P. M., Smart, D. L., & McMahan, G. C. 1995. Matches between human resources and strategy among NCAA basketball teams. ***Academy of Management Journal***, 38(4): 1052-1074.

Zimbalist, A. 1992. Salaries and performance: Beyond the Scully model. ***Diamonds are forever: The business of baseball***: 109-133.

TABLE 1

Two Stage Least Squares Regression Results

2SLS (1st stage) VARIABLES	WP
Constant	552.5**
	(28.88)
RUNS	0.367**
	(.041)
ERA	-79.62**
	(5.116)
CONT	26.16**
	(4.899)
OUT	-40.79**
	(5.927)
REVt1	8.14e-08
	(4.25e-08)
POP	-8.38E-07
	(1.94e-06)
Y	2.48E-08
	(3.62e-08)
LOSER	1.819
	(4.0897)
TT	-11.88*
	(5.899)
Observations	240
R-squared	0.832

Robust standard errors in parentheses
* p<0.05
** p<0.01

2SLS (2nd stage) VARIABLES	REV
Constant	-4,294,000
	(11,900,000)
WP	81,206**
	(22,193)
REVt1	0.845**
	(.07)
POP	-1.113
	(1.349)
Y	0.0494
	(.0295)
LOSER	-7,066,000*
	(2,954,089)
TT	-2,280,000
	(4,465,066)
Observations	240
R-squared	0.884
Hansen J statistic	.2731
F (4, 230)	295.61

Robust standard errors in parentheses
* p<0.05
** p<0.01

TABLE 2

Descriptive Statistics and Correlation Matrix

	Mean	S.D.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
(1) Premium (M)	2.97	4	1													
(2) Prior Perf.	1.14	1.45	.52**	1												
(3) Visibility	2.99	5.88	.38**	.23**	1											
(4) Experience	10.09	3.31	.08	.06	.13	1										
(5) Desirability	0.44	0.5	.39**	.34**	.09	-.03	1									
(6) Contract Year	1.74	1.02	.53**	.42**	.04	-.11	.22**	1								
(7) Pitch	0.51	0.5	-.32**	-.13	-.15	-.06	-.02	-.11	1							
(8) FAtimes	2.72	2.25	-.27**	-.02	-.04	.55**	-.22**	-.26**	.04	1						
(9) CONT	0.35	0.48	.21**	.09	.12	.05	-.17*	-.03	.01	.04	1					
(10) Revenue (M)	245	83.3	.28**	.13	.44**	.08	.11	-.12	-.08	.06	.14	1				
(11) BigMkt	0.41	0.49	.12	-.01	.04	.06	-.02	-.16*	-.07	.01	.06	.13	1			
(12) WPt-1	534.07	59.98	.32**	.29**	.21**	.07	.21**	.16*	-.05	-.07	.22**	.21**	-.21**	1		
(13) Class	0.46	0.5	0	.02	-.13	.1	.1	.08	.06	.01	-.17*	.00	-0.05	-0.04	1	
(14) NL	.46	.5	-.07	-.11	-.12	.05	.07	.01	.04	.06	-.12	-.1	-.08	.03	-.05	1

Note: M = millions

n = 168

* p < .05

** p < .01

TABLE 3

Initial Premium Analysis

VARIABLE	Contract Year MRP
New Salary	0.207***
	(0.0404)
Constant	1.486e+06***
	(285,692)
Observations	168
Number of ID	153
R^2	0.15

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

TABLE 4
Compensation Premium

VARIABLES	Controls	Full Model
Years	1,989,000***	1,547,000***
	(227,749)	(253,763)
Pitch	-1,734,000***	-1,474,000***
	(424,408)	(379,855)
FAtimes	-255,610***	-389,444***
	(68,438)	(89,067)
Cont	1,215,000**	1,467,000***
	(497,269)	(434,720)
Rev	0.0117***	0.00675**
	(0.00318)	(0.00274)
BigMkt	1,491,000***	1,184,000***
	(513,196)	(433,914)
Win	12,096***	4,711
	(3,097)	(3,015)
CLASS2013	80,648	-37,418
	(443,311)	(402,252)
NL	-66,682	13,137
	(421,485)	(389,037)
Prior Perf.		445,002***
		(170,986)
Visibility		103,429***
		(30,847)
Experience		207,153***
		(67,300)
Desirability		1,559,000***
		(475,001)
Constant	-9,273,000***	-6,647,000***
	(1,842,000)	(1,762,000)
Observations	168	168
Number of ID	153	153
R^2	0.56	0.68

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Magnetic Stars: Enhancing Organizational Recruitment Efforts through Star Signaling

ABSTRACT

Organizations—particularly those in human capital-intensive industries—that have fought the talent war with star employees, may have received less than they bargained for (Groysberg, Lee, & Nanda, 2008; Terry & McGee, 2016). Consequently, firms may seek other ways in which a star employee can contribute to organizational productivity and effectiveness. I suggest that organizations can leverage their star talent within the recruitment process—one of the most urgent problems faced by organizations today (Ployhart, 2006). The current study seeks to examine if and how stars may enhance organizational recruitment efforts. In a 2 (star present vs. absent) × 2 (average salary or above average salary) factorial research design (n = 184), I find that the presence of a star employee signals organizational reputation to potential applicants in the external labor market which in turn, increases applicants' attraction to the firm and the likelihood that they will pursue the application process further. These results provide evidence that star employees can trigger signaling-based mechanisms early on in the recruitment process, leading to desirable organizational-level recruitment outcomes.

INTRODUCTION

While organizational leaders are generally optimistic about future economic conditions and business performance, one particular firm activity has the potential to decrease such optimism and severely hinder business growth. According to the Employer Associations of America's 2017 National Business Trends Survey, nearly two-thirds of businesses surveyed reported that recruiting new employees is becoming increasingly challenging, with nearly one-third of businesses expressing dissatisfaction with their current approach. Among the greatest recruiting concerns is the inability to attract skilled workers. Forty-one percent of responding firms in this survey reported that they expect this to be a problem over the next year, and 50% anticipate difficulty over the next five years. To compound the matters, roughly half of the surveyed companies indicate a need to increase hiring over the next year (Stroiman, 2016).

With a low unemployment rate leading to more job opportunities, the war for talent is heating up and the current battle ground favors applicants. Practicing managers and academics concur that, in addition to the quantity of applicants, the quality of applicants is of critical importance when attempting to recruit employees (Rynes & Barber, 1990). Recruiting talent is one of the most urgent problems faced by organizational leaders, as a tight labor market gives leverage to applicants who are able to choose among several organizations—particularly in human capital-intensive industries. Managers are realizing that recruitment alone is not only necessary for achieving competitive advantage, but rather securing talent may also be necessary for organizational sustainability (Ployhart, 2006; Taylor & Collins, 2000).

Contributing to organizational recruitment challenges is the ongoing war for talent among firms vying for the best human capital resources. Such resources can give organizations competitive advantage through the accumulated knowledge, skills, abilities, and other

characteristics possessed by the employees within an organization (Ployhart & Kim, 2014). One way in which organizations compete for talent is by obtaining individuals with the highest levels of human capital through star employee acquisition. Firms see this as a means of organizing and deploying the brightest talent that rival firms cannot match (Groysberg, Nanda, & Nohria, 2004). The "more is better" approach has been evidenced through bidding wars taking place over star employees in a variety of industries including high tech, academics, and sports just to name a few (Groysberg, Polzer, & Elfenbein, 2011; Terry & McGee, 2016). Indeed, human capital theory suggests that when individuals possess general human capital, their services are quite mobile, providing a productivity advantage for any firm who is able to attract them (Becker, 1962, 1964). However, when some of an individual's skills are specific to a particular firm, the star may experience a decline in performance after being acquired by another organization. In fact, Groysberg, Lee, and Nanda (2008) found that—when star performers switched firms—their production declined, suggesting that their performance is not portable, even in the same industry.

Recent headlines like *The war for talent: Employers offer premium wages to draw skilled workers* (Yildiramaz, 2016) and *Robust benefits package essential in war for talent…* (SHRM, 2016), suggest strategy of star employee acquisition is not diminishing. A growing body of research also suggests that organizations competing for talent through star acquisition likely overpaid for talent (Terry & McGee, 2016) that often underperforms (Groysberg et al, 2008). In what other ways, then, might a star employee contribute to firm productivity? I suggest they may help with employee recruitment. The current labor market favors applicants in many industries, and individuals are frequently offered similar job openings, compensation packages, and location options. I propose that promoting the opportunity to be affiliated with an industry star may set one particular organization apart from the competition. Applicants may view the

presence of a star employee at an organization as an opportunity to further develop their own human and social capital, and to work at a more reputable organization. I anticipate these perceived opportunities will lead to desirable recruitment outcomes, such as the likelihood of pursuing the application process further and eliciting stronger perceptions of organizational attraction.

THEORY AND HYPOTHESES

Signaling theory proposes that, in the absence of complete information between two parties, signals are sent by one party and interpreted by the other party as a means of compensating for the ambiguity inherent in the transaction (Connelly, Certo, Ireland, & Reutzel, 2011; Spence, 1973). In his original work, Spence (1973) used the labor market as a model for explaining signaling theory. He illustrated that, as a means of reducing information asymmetries between an applicant and a potential employer, the applicant will use his or her education credentials as a signal of the quality of their candidacy to the organization. Firms may accept an individual's education as an accurate proxy of applicant quality, since a lower quality applicant would not likely be willing to invest the necessary time and money to attain—or be able to endure the rigors of—higher education (Connelly et al., 2011).

Since its inception in the economic literature, signaling theory has also been used prominently in management research including strategy (e.g. Deephouse, 2000; Zhang & Wiersema, 2009), and entrepreneurship (e.g. Certo, 2003; Gulati & Higgins, 2003). Within the human resource management literature, signaling theory has been used to investigate promotion decisions (Stern & James, 2016), employee quality (Chang, Travaglione, & O'Neill, 2015), psychological contracts (Suazo, Martinez, & Sandoval, 2011), and compensation (Terry & McGee, 2016).

Perhaps the original job market model used by Spence (1973) explains why the recruitment literature has relied so heavily on signaling theory. Potential job applicants are faced with incomplete information about organizations in their search for employment (Schwab, Rynes, & Aldag, 1987). In an attempt to reduce the information asymmetry between themselves and the organization, signaling theory suggests that applicants will use what information they do have about the organization as signals of its characteristics (Turban, 2001). Recruitment activities are designed to highlight the organization's positive aspects, thus increasing attraction to the firm. Indeed, prior research has shown recruitment activities to be related to perceptions of organizational characteristics, predicting organizational attraction (Turban, 2001; Turban, Forret, & Hendrickson, 1998).

Recruitment refers to the activities performed by organizations in an attempt to attract potential applicants to the organization (Ployhart, 2006). During recruitment, the signaling process is dependent on the signals sent through recruitment activities and the receiver's interpretation of the signal that is used to form impressions about the organization. Signals may be sent through organizational-level recruitment activities such as advertising and through individual-level activities via recruiter interviews and word-of-mouth endorsements. Signals from the individual-level and organizational-level activities may impact both individual- and organizational-level outcomes. At the individual-level, outcomes such as job pursuit intentions, job acceptance likelihood, and organizational attraction may be affected by both individual- and organizational-level signals. Organizational-level outcomes impacted by signals include the quantity and quality of the applicant pool (Celani & Singh, 2011).

Attraction to an organization may occur through signals obtained by the applicant during the recruitment process (Celani & Singh, 2011). Applicants who are exposed to organizational-

level signals that are consistent with their personal values during the recruitment process will likely be more attracted to that particular firm. A broad range of recruitment-related activities can serve as signals of organizational information (Rynes, Bretz, & Gerhart, 1991). Several studies have examined signals that may attract candidates, including known organizational characteristics or policies (Aiman-Smith, Bauer, & Cable, 2001; Cable & Judge, 1994; Lievens, Decaesteker, Coetsier, & Geirnaert, 2001; Wayne & Casper, 2012) and corporate social performance (Turban & Greening, 1996). Turban and Cable (2003) found a positive relationship between an organization's reputation and applicant pool, suggesting potential applicants were attracted to organizations with better reputations. Similarly, others have found a positive relationship between organizational image and the quantity and quality of applicants (Belt & Paolillo, 1982) and an applicant's intent to pursue a position at a particular organization (Collins & Stevens, 2002; Gatewood, Gowan, & Lautenschlager, 1993).

The recruitment process has been divided into three stages, including generating applicants, maintaining applicant interest, and influencing job choice (Barber, 1998). Applicants gain more information about a job and the organization when they decide to enter the applicant pool. Appropriately, organizations have historically focused most recruitment efforts on the first two stages of the recruitment process by providing job and organizational information as a way of attracting and engaging potential applicants (Uggerslev, Fassina, & Kraichy, 2012).

Applicants may use early-known information about a job or organization to make screening decisions about potential employers. Such information may be gathered from job advertisements or initial recruiter contact, activities that occur in the first stage (i.e., generating applicants) of the recruitment process (Barber, 1998). Therefore, early information about an organization may be a critical factor in determining whether an applicant chooses to remain in

the applicant pool. It may also possibly impact decisions later on in the recruitment process. Due to the subjective nature of the recruitment process, applicants will exert extra effort processing more objective information such as job and organizational characteristics. An applicant's perception of an organization's characteristics is likely to be a strong predictor of their perceived fit with the firm. In this way, organizational information may be a stronger attractant for applicants. Indeed, in a meta-analytic review, objective information—such as organizational characteristics—were found to be a significant predictor of applicant attraction, suggesting that organizations should direct recruitment efforts toward cultivating applicants' perceptions of fit (Uggerslev et al., 2012).

Stars as Signals

The mere presence of a star employee—an individual who is disproportionately productive and visible (Groysberg, et al., 2008)—will not necessarily draw in additional applicants from the external labor market. Rather, it is what a star employee represents (i.e., signals) that potential applicants will find attractive.

People tend to gravitate toward individuals who are viewed as assets that facilitate the achievement of their goals or objectives (Oldroyd & Morris, 2012). In fact, research on network formation demonstrates that networks are formed in an affiliatory pattern, where individuals establish relationships and make connections based on choice—which is influenced by the initiating actors' preferences and what they intend to gain from such affiliations (Oldroyd & Morris, 2012; Newman, 2002). The individuals with whom people want to most frequently make connections are those who are the highest-performing and most visible in the network. Within an organization, this suggests that individuals will gravitate toward stars to seek information and advice on how to achieve their own career objectives (Oldroyd & Morris, 2012).

Stars may serve as magnets in the recruitment process by attracting applicants to their organization. A star's visibility sends signals to the external labor market of their abilities. Within the context of star employee mobility or acquisition, these signals are often evaluated as negatively impacting organizations as it can lead to poaching and escalating the war for talent, leading firms to overvalue their potential contributions (Groysberg & Lee, 2008; Terry & McGee, 2016). However, a star's ability to provide positive signals in the external labor market may provide value creation in the recruitment process by attracting additional human capital to the organization in which the star is employed (Oldroyd & Morris, 2012).

Human capital. A star's expert performance signals their possession of exceptional levels of human capital, the set of knowledge, skills, abilities, and other characteristics that allow individuals to perform at high levels (Becker, 1962, 1964; Wright, McMahan, & McWilliams, 1994). While all individuals are born with a certain level of human capital, stars supplement their natural ability with intense effort to excel at a particular task. This is often referred to as *deliberate practice*, where exposure to important activities of a task, coupled with detailed feedback is repeatedly rehearsed (Call, Nyberg, & Thatcher, 2015). This commitment to improvement has been demonstrated as an antecedent to the expert performance achieved by stars (Ericsson, Krampe, & Tesch-Römer, 1993).

A prime example of deliberate practice—or the lack thereof—comes from professional golf. Tiger Woods—arguably the greatest golfer in recent time—is well-known for his extensive and meticulous practice sessions. Woods was once asked by fellow golfer John Daly to come have a beer with him on the eve of a golf tournament in 2004. Woods declined explaining he was headed to a workout session (Martin, 2016). Daly, who was known more for his ability to hit the ball far than winning tournaments, recently recollected on his earlier career saying, "I

think I wasted my talent in the 90s…I didn't work hard enough at it. I didn't do the right things to prepare myself to win golf tournaments" (Kay, 2016).

One way in which individuals may engage in deliberate practice in an attempt to enhance their own human capital is through observing other top performers. In addition to learning through direct experience, social learning theory (Bandura, 1977) suggests individuals can learn by observing others' behavior. This method of vicarious training is reinforced through rewards and/or punishments bestowed upon the observed individual. This process suggests that individuals who are interested in building human capital capable of yielding disproportionate productivity should study the behavior of expert performers to enhance their own performance. Furthermore, firms looking to enhance organizational human capital should publicize the performance of star employees as a means of encouraging expert performance from others (Call et al., 2015).

Organizations may use a similar tactic when supplementing their existing human capital pool from the external labor market. One possible way an organization can showcase star performance is during the recruiting process as a way of attracting quality applicants who are looking to enhance their own human capital. Even if an individual is motivated and has the ability and work ethic needed to enhance their human capital as previously described, they still need the opportunity to engage in the necessary activities that precede exceptional performance (Boxall & Purcell, 2011; Call et al., 2015; Ericsson et al., 1993). Individuals seeking to build human capital may interpret a star's presence at an organization as a signal of opportunity to observe and profit from a star employee's behavior (Bandura, 1977). Therefore, an applicant's attraction to the organization, and the likelihood that he or she will pursue the application process further, is indirectly influenced by the presence of a star at the recruiting organization via the

applicant's expected human capital development. Based on the foregoing discussion, I offer the following predictions.

Hypothesis 1a: The positive relationship between the presence of a star at a recruiting organization and an applicant's organizational attraction is an indirect effect of the applicant's expectation of human capital development.

Hypothesis 1b: The positive relationship between the presence of a star at a recruiting organization and an applicant's likelihood of pursuing the application process further is an indirect effect of the applicant's expectation of human capital development.

Social capital. The visibility of stars signals possession of an elevated level of social capital—the set of relationships and network connections used for information sharing (Burt, 1992; Coleman, 1988). Stars are able to develop exceptional levels of social capital because people are likely to seek relationships with the most visible actors in a network (Oldroyd & Morris, 2012). The goodwill generated from an enhanced network of relationships yields greater access to information and the ability to share it with organizational colleagues (Adler & Kwon, 2002; Dess & Shaw, 2001). The robust connections that stars have allow them to stay abreast of new developments within their field, which continuously adds to their already inflated human capital. As people are drawn to stars for their high level of human capital, their social capital is also elevated. As a star's social capital increases, their appeal becomes more significant, causing more and more individuals to gravitate toward them (Oldroyd & Morris, 2012).

Social networks have been shown to form via an affiliatory pattern. Individuals establish relationships based on choice, which is influenced by the initiating actor's preferences and what they intend to benefit from, such an affiliation (Oldroyd & Morris; Newman, 2002). This affiliatory pattern of network formation explains why individuals tend to gravitate toward a few

other individuals who are viewed as assets to helping them achieve their own goals and objectives. The individuals to whom others gravitate tend to be the highest-performing and most visible actors in network. Once stars are identified within an organization, they tend to attract colleagues seeking information and advice on how to achieve career objectives.

Stars may have a similar effect on individuals in the external labor market who are considering applying for a job within the organization. Potential applicants have goals of achieving career objectives and may view expanding their social network and enhancing their social capital as a means of accomplishing this. An individual with the ability and motivation to enhance their social capital must still have the opportunity to do so. A star's presence at an organization that is a potential employer signals the opportunity for the applicant to place themselves in the right place and time to enhance their social capital (Call et al., 2015). I expect an applicant's attraction to the organization and likelihood that they will pursue the application process further to be indirectly influenced by the presence of a star at the recruiting organization through the applicant's expected social capital development.

Hypothesis 2a: The positive relationship between the presence of a star at a recruiting organization and an applicant's attraction to an organization is an indirect effect of that applicant's expectation of social capital development.

Hypothesis 2b: The positive relationship between the presence of a star at a recruiting organization and an applicant's likelihood of pursuing the application process further is an indirect effect of that applicant's expectation of social capital development.

Reputation. Prior research has suggested that organizational reputation is a major determinant in attracting potential applicants (Rynes, 1991). Firm reputation signals characteristics of the organization including quality (Shapiro, 1982) and prestige (Rindova,

Williamson, Petkova, and Sever, 2005). Organizational reputation may be a particularly important signal early in the recruitment process, when applicants have little information about the firm and are trying to decide if they should expend the time and energy to apply (Collins & Stevens, 2002).

Job applicants use organizational reputation as a signal of job attributes and expected pride as an organizational member, and prior research has found firm reputation to positively affect recruiting outcomes (Cable & Turban, 2003; Collins & Han, 2004). Potential applicants use recruitment messages as a means of gathering information and reducing uncertainty about an organization as a potential employer (Highhouse & Hause, 1995; Leivens & Highhouse, 2003). Firm reputation can strongly influence an applicant's initial attitude by signaling the quality of the organization (Shapiro, 1982), as well as the expected working conditions at the firm (Williamson, King Jr., Lepak, & Sarma, 2010). Firm reputation also signals an organization's social status within its industry; thus, firms with a positive reputation receive more publicity and recognition, providing validation as a desirable employer (Rindova et al., 2005; Williamson, et al., 2010). All of this suggests a positive relationship between an organization's reputation and an applicant's evaluation of the firm as a desirable employer. Furthermore, in line with social-identity theory (Ashforth & Mael, 1989), applicants would be more likely to seek out firms with a positive reputation to enhance their self-esteem and personal prominence (Turban and Cable, 2003; Williamson et al., 2010).

Expectancy theory (Vroom, 1964) suggests that the likelihood of an individual applying for a job is a function of that person's attraction to an organization's characteristics and expectation of receiving a job offer. At the organizational level of recruitment outcomes, firm reputation should affect applicant pool quantity through applicant's attraction to organizational

characteristics and quality via their expectations of the likelihood of eventually receiving a job offer (Collins & Han, 2004; Turban & Cable, 2003). In addition to applicant pool quantity, Turban and Cable (2003) found firm reputation to be positively related to applicant pool quality, supporting the expectancy theory view that lower quality applicants may be discouraged from applying to organizations with more positive reputations because they feel less likely to receive a job offer (Rynes, 1991).

Recruiting activities such as job advertisements are the first step in influencing the amount of human capital an organization is able to attract (Ployhart & Kim, 2014). Indeed, the first contact a potential applicant has with an organization is quite possibly the firm's advertisement for employment. Initial application decisions are influenced by firm reputation, which contributes to an individual's general impression of the attractiveness of the organization (Rynes, 1991). Gatewood, et al. (1993) found applicants' perceptions of an organization's image to be a function of the information they were presented in the recruitment advertisement, suggesting that image perception can be influenced by manipulating the information in the recruitment advertisement. Furthermore, they concluded that an organization can influence its recruitment image independent of its corporate image; thus, organizations without high-profile images can still be competitive in attracting applicants from the external labor market through their recruitment messages.

The information included in a job advertisement can also signal unknown characteristics of the organization (Williams & Bauer, 1994). One way in which an organization might be able to signal its reputation is by including the presence of a star employee at the firm in its job advertisement. Kehoe, Lepak, and Bentley (2016) point out that organizations have been able to benefit from the reputational spillover effects of stars through increased customer attraction in a

variety of industries, including finance (Groysberg & Lee, 2010), sports (Lucifora & Simmons, 2003), and entertainment (Ravid, 1999). Similarly, organizations that are able to signal reputation with the presence of a star may positively increase the recruitment of human capital. Similar to the previous two hypotheses, I expect an applicant's attraction to the organization and likelihood that they will pursue the application process further to be indirectly influenced by the presence of a star at the recruiting organization via the applicant's perception of the organization's reputation.

Hypothesis 3a: The positive relationship between the presence of a star at a recruiting organization and an applicant's organizational attraction is an indirect effect of that applicant's perception of the recruiting organization's reputation.

Hypothesis 3b: The positive relationship between the presence of a star at a recruiting organization and an applicant's likelihood of pursuing the application process further is an indirect effect of that applicant's perception of the recruiting organization's reputation.

Compensation as a Signal

While an applicant's attractiveness of an organization and their likelihood of pursuing the application process with an organization are dependent on individual and market characteristics to an extent, there is ample evidence that compensation is one of the most important attributes that attracts applicants (Saks, Wiesner, & Summers, 1996). It is suggested that enhancing the attractiveness inducement positively influences the quantity and quality of those attracted to, and retained by, organizations (Rynes & Barber, 1990). Extrinsic inducements—especially pecuniary inducements—were found to be particularly important to Navy enlistment rates (Hanssens & Levien, 1983), and to the quality and quantity of Army recruits (Lakhani, 1988; Tannen, 1987). Compensation has also been shown to influence job pursuit intentions (Aiman-

Smith et al., 2001; Casper & Buffardi, 2004), and to be especially important early on in the job search process (Osborn, 1990). In a meta analysis by Chapman, Uggerslev, Carroll, Piasentin, and Jones (2005), compensation was found to be a significant factor in perceptions of job-organizational attraction, acceptance intentions, and actual job choice.

Theoretical (e.g. Rottenberg, 1956; Schwab et al., 1987) as well as empirical research (e.g. Rynes, Schwab, & Heneman, 1983) suggests that extrinsic inducements with calculable value are important factors in motivating job application and acceptance decisions. Organizations seeking higher quality applicants—especially those who signal the potential for higher productivity—will need to enhance inducements or accept a smaller or lower quality applicant pool (Rynes & Barber, 1990). This is in line with the expectancy theory view that lower quality applicants may be less likely to apply to an organization with a superior compensation policy relative to similar organizations offering less, as they feel they will be less likely to receive a job offer (Rynes, 1991).

An organization's compensation policy may also signal organizational characteristics that are unknown to an individual during the application process (Ehrhart & Ziegert, 2005). Firms with attractive compensation policies signal organizational prestige (Wayne & Casper, 2012), which in turn positively affects recruiting outcomes (Cable & Turban, 2003; Collins & Han, 2004). Compensation has also been related to anticipated work performance and organizational support and in turn, job pursuit intentions, suggesting that compensation policy signals concern for employee well-being and support (Wayne & Casper, 2012). Indeed, individuals anticipating higher work performance where more attractive compensation policies are offered suggest an anticipation of further developing career skills and connections at the organization. Furthermore,

compensation policy may signal opportunities available within the organization to develop as an employee through building human and social capital.

Hypothesis 4a: The positive relationship between the compensation policy at a recruiting organization and an applicant's organizational attraction is an indirect effect of that applicant's perception of the recruiting organization's reputation.

Hypothesis 4b: The positive relationship between the compensation policy at a recruiting organization and an applicant's likelihood of pursuing the application process further is an indirect effect of that applicant's perception of the recruiting organization's reputation.

Hypothesis 5a: The positive relationship between the compensation policy at a recruiting organization and an applicant's organizational attraction is an indirect effect of that applicant's perception of the recruiting organization's reputation.

Hypothesis 5b: The positive relationship between the compensation policy at a recruiting organization and an applicant's likelihood of pursuing the application process further is an indirect effect of that applicant's perception of the recruiting organization's reputation.

Hypothesis 6a: The positive relationship between the compensation policy at a recruiting organization and an applicant's organizational attraction is an indirect effect of that applicant's perception of the recruiting organization's reputation.

Hypothesis 6b: The positive relationship between the compensation policy at a recruiting organization and an applicant's likelihood of pursuing the application process further is an indirect effect of that applicant's perception of the recruiting organization's reputation.

METHOD

Participants

Participants were 184 business undergraduate students from a large, metropolitan university in the southern United States who were taking junior- and senior-level courses in management. The average age of the sample was 26.2 years and 43 percent were female. On average, participants had worked approximately six years. Seventy-seven percent were employed at the time of the study, working an average of 28 hours per week. Sixty-four percent of the participants reported that they were actively searching for a job.

Procedure

The experiment featured a 2 (star present vs. absent) x 2 (average or above average salary) research design to examine the effects of star employee presence on organizational recruitment. I told participants that I was asking for their feedback on job advertisements to help organizations connect with students as part of the new career center on campus. Participants were provided a link to complete the study online, which consisted of reading a job advertisement of a fictional company, followed by a survey to capture their perceptions of the organization as a potential employer. After consenting to the study, participants were randomly assigned to one of four conditions: (1) star present/average salary; (2) star present/above average salary; (3) star absent/average salary; and, (4) star absent/above average salary. All other content of the job advertisement was identical across conditions. Scenarios for all four conditions are presented in Appendix A.

Measures

All scale items are presented in Appendix B.

Dependent variables. Two were measured: Organizational attraction and likelihood of pursuing application process further. Organizational attraction was measured using a 7-point scale with three items (α = .95) from Turban and Keon (1993), while likelihood of pursuing the application process further was measured using a 7-point scale with five-items (α = .93) from Feldman, Bearden, and Hardesty (2006).

Indirect effect variables. I also assessed the potential influence of three signals as indirect effects in my model. *Expectation of human capital development* was measured using a 7-point scale with five items (α = .93) from Lee, Cornwell, and Babiak (2012). *Expectation of social capital development* was measured using a 7-point scale with three items (α = .87) from Onyx and Bullen (2000). *Organizational reputation* was measured using a 7-point scale with two items (α = .92) from Cable and Graham (2000).

RESULTS

Manipulation Checks

After reading the job advertisement, participants were asked to respond on a 7-point agreement scale to two items, "The Royal Group pays very well," and "An industry all-star performer works at The Royal Group." The measures were meant to assess the success of salary and star employee manipulations, respectively. Responses to the manipulation check item for salary were significantly higher in the above-average salary condition (M = 5.84, SD = 1.08) than the average salary condition (M = 4.57, SD = 1.22; $t(182) = -7.49$, $p < .001$). Responses to the manipulation check item for presence of a star employee in the organization were significantly higher in the star present condition (M = 5.77, SD = 1.45) than the star absent condition (M = 3.37, SD = 1.65; $t(182) = -10.48$, $p < .001$).

Prior to testing the hypotheses, I calculated descriptive statistics and reliabilities for the measures. Table 1 shows the means, standard deviations, correlations among the study variables, and internal consistency estimates. Reliabilities for all measures exceeded minimally acceptable standards (Hair, Black, Babin, & Anderson, 2006).

Insert Table 1 about here

I conducted confirmatory analysis to assess the construct validity of my measures. To demonstrate that I was measuring five distinct factors, I compared the hypothesized five-factor model to a four-factor model. Due to the high correlation between the dependant variables, I needed to ensure these were indeed separate constructs, so I set the correlation between organizational attraction and likelihood of pursuing the application process further equal to 1, to create the four-factor comparison model. The fit of my hypothesized five-factor model (χ^2 (143) = 292.988, root mean square error of approximation [RMSEA] = .076, comparative fix index [CFI] = .959, Tucker-Lewis index [TLI] = .951) was significantly better than the four-factor model (χ^2 (142) = 370.587, RMSEA = .093, CFI = .938, TLI = .926); χ^2 difference (1) = 77.599, $p < .001$), indicating that it is appropriate to use the hypothesized model.

I hypothesized that the presence of a star employee or an attractive compensation package may not necessarily lead to increased organizational attraction or a greater likelihood of pursuing the application process further; rather, it is the signals sent by these conditions that explain the relationship between the independent and dependent variables. As such, I examined the indirect effects in the models (Hayes, 2009). To test the hypotheses, I conducted mediation analysis to determine if indirect effects were significant in explaining the relationship between

the independent and dependent variables. Following Preacher and Hayes' (2008) bootstrapping method for testing mediator models, the analysis was executed using the regression-based PROCESS macro for SPSS. Consistent with Preacher and Hayes (2008), I used 5,000 bootstrapped samples with bias-corrected 95% confidence intervals. I interpret the effects of mediation through the tests of indirect effects, which can be found in Table 2. Coefficients for the paths in each of our models are presented in Figures 1 and 2.

Insert Table 2 about here

Insert Figure 1 about here

Insert Figure 2 about here

I hypothesized that the presence of a star employee and the compensation policy at the recruiting organization were indirectly related to both organizational attraction and likelihood of pursuing the job application process further via the following signals: (1) expected human capital development; (2) expected social capital development; and, (3) perceived organizational reputation. Table 2 shows that, in the star model, neither the indirect effects of anticipated human capital development nor anticipated social capital development were significant, leading me to reject Hypotheses 1a, 1b, 2a, and 2b. I found that perceived organizational reputation exerts a significant indirect effect on the relationship between the presence of a star employee

and organizational attraction (.27), as well as the star employee-likelihood of pursuing the application process further relationship (.22). These findings support Hypotheses 3a and 3b. The models including compensation were insignificant, and thus fail to provide evidence in support of all related hypotheses.

DISCUSSION

Organizations that choose to compete for talent by acquiring star performers may not be getting what they bargained for. Evidence suggesting that stars command compensation premiums (Terry & McGee, 2016) only to underperform at the acquiring organization (Groysberg et al., 2008) may lead firms to seek other ways of deploying their newly acquired star talent. I suggested one way in which organizations can leverage their star's power is through employee recruitment. The goal of this study was to determine whether star employees at recruiting organizations send signals in the recruitment process, and lead to greater organizational attraction and/or intent to pursue the application process among potential applicants.

Results of the present study are mixed. I hypothesized that the presence of a star at an organization and an organization's compensation policy would indirectly affect an individual's attraction to the recruiting organization and that person's likelihood of pursuing the application process through their anticipated ability to build human and social capital as an employee of the firm as well as their perceived reputation of the organization. I found no support that potential applicants see stars at a recruiting organization as vehicles for enhancing their skills and connections through human and social capital development. However, I did find evidence that individuals perceived organizations in which stars were present as more reputable, which in turn led to enhanced organizational attraction and greater likelihood of pursuing the application

process. The influence of compensation policy on the recruitment outcomes was not supported, either directly or indirectly.

While star employees at organizations may not directly influence an individual's attraction to that organization or the likelihood that they will apply to an organization, they do seem to trigger at least one mechanism that indirectly and positively impacts recruitment outcomes. The results suggest that stars signal a more positive organizational reputation which was found to be beneficial in attracting applicants. Prior research has shown that organizations may be able to benefit from increased customer attraction due to the reputational spillover effects of stars (Groysberg & Lee, 2010; Kehoe et al., 2016; Lucifora & Simmons, 2003; Ravid, 1999). Findings of the current study align with these results and contribute to the stars literature by providing evidence that organizations appear to benefit from star reputational spillover effects in other ways as well—namely , by attaining an enhanced organizational reputation and more positive recruitment outcomes.

The prediction that an individual would anticipate developing human and social capital at an organization in which a star is present was unsupported. The null results suggest that signals such as these may be dependent on other factors such as industry, education, career stage, or even socio-economic status. Importantly, the null results do not necessarily mean that these signals were not sent, but rather that the signals were not received or interpreted as such by the receivers (Connelly et al., 2011).

Given the extensive prior research on compensation, and the evidence that compensation policies positively impact recruitment outcomes (e.g. Chapman et al., 2005; Rynes & Barber, 1990), it was somewhat surprising that no such evidence was found in this study. Compensation policy did not directly impact organizational attraction or the likelihood of pursuing the

application process nor did it indirectly impact these recruitment outcomes via anticipated human capital development, anticipated social capital development, or perceived organizational reputation.

One explanation for these results may be found in expectancy theory (Vroom, 1964), which suggests that the decision to apply for a job is partly a function of the perceived likelihood of being offered a job (Barber & Roehling, 1993). Examining firm reputation and applicant pool characteristics, Turban and Cable (2003) found a positive relationship between organizational reputation and applicant quality, suggesting that only the more qualified (higher quality) applicants applied to more reputable organizations as they felt more likely to be offered a job at such a firm. Conversely, a firm with such a positive reputation may signal a very competitive employment application process and dissuade lower quality applicants from applying due to the perceived low chance of receiving a job offer (Rynes, 1991).

Compensation may have had a similar signaling effect in our study. Rather than signaling opportunity or a more positive organizational reputation, it may have signaled the competitiveness of the application process. If this was the case, respondents may have felt pessimistic about the possibility of receiving a job offer at the advertised organization, and decided they would not want to even engage in the application process with such an organization.

Study Limitations and Directions for Future Research

There are several limitations to this study that provide a context in which our results should be interpreted. First, the participants in our study were undergraduate students from a single university, making the sample homogenous. Thus, findings should be cautiously applied to other populations of job seekers—particularly those with established careers. The sample may also be a contributing factor to some of the non-significant results. College students may

prioritize landing their first job out of school and gaining practical work experience over examining signals coming from recruiting organizations. Future research should examine how the effects of star employees at recruiting organizations may influence job seekers with established careers who are seeking work.

A second limitation is that the scenarios featured a fictitious organization, which may have also influenced the results. Specifically, participants' lack of familiarity with the organization could have influenced their assessments of the firm in the scenario. I made attempts to mitigate this possibility by informing participants that the job advertisements were real and only the name of the organization had been changed. Additionally, a fictitious name served as a control for the possibility of participants making assessments based on prior knowledge of the organization. Nevertheless, it is possible that the firm name used in the scenario decreased realism, contributing to some of the results.

Finally, I did not include any other inducements in the scenarios beyond compensation. Indeed, extrinsic inducements have been found to be particularly important in recruitment, influencing both job application and acceptance decisions. Additionally, the importance of the type of inducement is proposed to depend on the characteristics of the applicant pool (Rynes & Barber, 1990). I chose compensation as an extrinsic inducement based on my sample of participants, because it is reasonable to assume that salary will be particularly important for college students who are concerned about how they will be able to pay off student loans, purchase a car or house, or start a family. The null findings support previous research that compensation was not a likely reason for job acceptance (e.g. Boswell, Roehling, LePine, & Moynihan, 2003), and suggest that perhaps salary is not as important as expected. Future research should examine other inducements, such as work schedule, organizational policies, or

opportunities for training and networking that may be complimentary to the presence of a star at a recruiting organization.

In this study, stars appear to signal organizational reputation to potential applicants in the external labor market, which in turn, enhance attraction to the firm and the likelihood that an individual will pursue the application process further. Practically, this suggests that recruiting managers may be able to add value to their efforts by spotlighting some of their most successful employees in job advertisements. This would be a very easy and cost effective means of signaling a powerful, yet intangible organizational characteristic early on in the recruitment process—a particularly critical time for applicants, as they decide whether or not to expend the time and energy to pursue employment with the organization (Collins & Stevens, 2002). The ability to shape potential applicants' initial attitudes of the firm (Shaprio, 1982) may provide a competitive advantage in the increasingly challenging and aggressive process of recruitment.

Additional future research should consider other potential signals that stars may be able to transmit on behalf of the organization to potential applicants with incomplete information as a means of enhancing recruitment efforts. Furthermore, the time in the recruitment process (i.e., generating applicants, maintaining applicant interest, and influencing job choice (Barber, 1998)), these and other signals are most critical and should also be investigated. This line of research has the potential to further our understanding and appreciation of the importance that signaling theory plays in the recruitment process, as well as the additional roles that star employees can play to enhance organizational effectiveness.

CONCLUSION

As the organizational recruitment environment becomes increasingly competitive, firms are looking for new ways to add value to their efforts. For firms with star employees, I suggest

one way in which to do this is to highlight the presence of top talent early on in the recruitment process. Results suggest that star employees at the recruiting organization send signals to applicants in the external labor market who have incomplete information about the firm. These findings indicate that job advertisements in which a star employee was highlighted enhanced applicants' perceptions of the organization's reputation, which in turn led to increased attraction to the firm and likelihood of pursuing the application process further. Future research in this area should examine additional ways in which star employees can signal that their organization is an advantageous employment option relative to other firms in a recruiting environment where applicants—not organizations—have leverage.

REFERENCES

Adler, P. S., & Kwon, S. 2002. Social capital: Prospects for a new concept. ***Academy of Management Review***, 27(1): 17-40.

Aiman-Smith, L., Bauer, T. N., & Cable, D. M. 2001. Are you attracted? Do you intend to pursue? A recruiting policy-capturing study. ***Journal of Business and Psychology***, 16(2): 219-237.

Ashforth, B. E., & Mael, F. 1989. Social identity theory and the organization. ***Academy of Management Review***, 14(1): 20-39.

Bandura, A. 1977. Self-efficacy: Toward a unifying theory of behavioral change. ***Psychological Review***, 84(2): 191.

Barber, A. E. 1998. ***Recruiting employees: Individual and organizational perspectives.*** Thousand Oaks, CA: Sage Publications.

Barber, A. E., & Roehling, M. V. 1993. Job postings and the decision to interview: A verbal protocol analysis. ***Journal of Applied Psychology***, 78(5): 845.

Becker, G. S. 1962. Investment in human capital: A theoretical analysis. ***The Journal of Political Economy***: 9-49.

Becker, G. S. 1964. ***Human capital.*** New York: Columbia University Press.

Belt, J. A., & Paolillo, J. G. 1982. The influence of corporate image and specificity of candidate qualifications on response to recruitment advertisement. ***Journal of Management***, 8(1): 105-112.

Boswell, W. R., Roehling, M. V., LePine, M. A., & Moynihan, L. M. 2003. Individual job-choice decisions and the impact of job attributes and recruitment practices: A longitudinal field study. ***Human Resource Management***, 42(1): 23-37.

Boxall, P., & Purcell, J. 2003. ***Strategy and human resource management.*** Basingstoke, UK: Palgrave.

Burt, R. S. 1992. ***Structural holes: The social structure of competition***. Cambridge, MA: Harvard University Press.

Cable, D. M., & Graham, M. E. 2000. The determinants of job seekers' reputation perceptions. ***Journal of Organizational Behavior***, 21(8): 929-947.

Cable, D. M., & Judge, T. A. 1994. Pay preferences and job search decisions: A person-organization fit perspective. ***Personnel Psychology***, 47(2): 317-348.

Cable, D. M., & Turban, D. B. 2003. The value of organizational reputation in the recruitment context: A brand-equity perspective. ***Journal of Applied Social Psychology***, 33(11): 2244-2266.

Call, M. L., Nyberg, A. J., & Thatcher, S. 2015. Stargazing: An integrative conceptual review, theoretical reconciliation, and extension for star employee research. ***Journal of Applied Psychology***, 100(3): 623-640.

Casper, W. J., & Buffardi, L. C. 2004. Work-life benefits and job pursuit intentions: The role of anticipated organizational support. ***Journal of Vocational Behavior***, 65(3): 391-410.

Celani, A., & Singh, P. 2011. Signaling theory and applicant attraction outcomes. ***Personnel Review***, 40(2): 222-238.

Certo, S. T. 2003. Influencing initial public offering investors with prestige: Signaling with board structures. ***Academy of Management Review***, 28(3): 432-446.

Chang, J., Travaglione, A., & O'Neill, G. 2015. How can gender signal employee qualities in retailing? ***Journal of Retailing and Consumer Services***, 27: 24-30.

Chapman, D. S., Uggerslev, K. L., Carroll, S. A., Piasentin, K. A., & Jones, D. A. 2005. Applicant attraction to organizations and job choice: A meta-analytic review of the correlates of recruiting outcomes. ***Journal of Applied Psychology***, 90(5): 928.

Coleman, J.S. 1988. Social capital in the creation of human capital. ***American Journal of Sociology***: S95-S120.

Collins, C. J., & Han, J. 2004. Exploring applicant pool quantity and quality: The effects of early recruitment practice strategies, corporate advertising, and firm reputation. ***Personnel Psychology***, 57(3): 685-717.

Collins, C. J., & Stevens, C. K. 2002. The relationship between early recruitment-related activities and the application decisions of new labor-market entrants: A brand equity approach to recruitment. ***Journal of Applied Psychology***, 87(6): 1121.

Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. 2011. Signaling theory: A review and assessment. ***Journal of Management***, 37(1): 39-67.

Deephouse, D. L. 2000. Media reputation as a strategic resource: An integration of mass communication and resource-based theories. ***Journal of Management***, 26(6): 1091-1112.

Dess, G. G., & Shaw, J. D. 2001. Voluntary turnover, social capital, and organizational performance. ***Academy of Management Review***, 26(3): 446-456.

Ehrhart, K. H., & Ziegert, J. C. 2005. Why are individuals attracted to organizations? ***Journal of Management***, 31(6): 901-919.

Ericsson, K. A., Krampe, R. T., & Tesch-Römer, C. 1993. The role of deliberate practice in the acquisition of expert performance. ***Psychological Review***, 100(3): 363.

Feldman, D. C., Bearden, W. O., & Hardesty, D. M. 2006. Varying the content of job advertisements: The effects of message specificity. ***Journal of Advertising***, 35(1): 123-141.

Gatewood, R. D., Gowan, M. A., & Lautenschlager, G. J. 1993. Corporate image, recruitment image and initial job choice decisions. ***Academy of Management Journal***, 36(2): 414-427.

Groysberg, B., & Lee, L. 2010. Star power: Colleague quality and turnover. ***Industrial and Corporate Change***: dtp049.

Groysberg, B., Lee, L., & Nanda, A. 2008. Can they take it with them? The portability of star knowledge workers' performance. ***Management Science***, 54(7): 1213-1230.

Groysberg, B., Nanda, A., & Nohria, N. 2004. The risky business of hiring stars. ***Harvard Business Review***, 82(5): 92-101.

Groysberg, B., Polzer, J. T., & Elfenbein, H. A. 2011. Too many cooks spoil the broth: How high-status individuals decrease group effectiveness. ***Organization Science***, 22(3): 722-737.

Gulati, R., & Higgins, M. C. 2003. Which ties matter when? The contingent effects of interorganizational partnerships on IPO success. ***Strategic Management Journal***, 24(2): 127-144.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. 2006. ***Multivariate data analysis*** (6^{th} ed). Upper Saddle River, NJ: Prentice Hall.

Hanssens, D. M., & Levien, H. A. 1983. An econometric study of recruitment marketing in the US Navy. ***Management Science***, 29(10): 1167-1184.

Hayes, A. F. 2009. Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. ***Communication Monographs***, 76(4): 408-420.

Highhouse, S., & Hause, E. L. 1995. Missing information in selection: An application of the Einhorn-Hogarth ambiguity model. ***Journal of Applied Psychology***, 80(1): 86.

Kay, E. 2016. ***John Daly admits he 'wasted his talent' in a career of missed opportunities.*** SB Nation. Retrieved on December 9, 2016 from http://www.sbnation.com/golf/2016/5/4/11585248/johndalychampionstourinsperityinvitational2016;

Kehoe, R. R., Lepak, D. P., & Bentley, F. S. 2016. Let's call a star a star task performance, external status, and exceptional contributors in organizations. ***Journal of Management***: 1-25.

Lakhani, H. 1988. The effect of pay and retention bonuses on quit rates in the US Army. ***Industrial & Labor Relations Review***, 41(3): 430-438.

Lee, S. P., Cornwell, T. B., & Babiak, K. 2013. Developing an instrument to measure the social impact of sport: Social capital, collective identities, health literacy, well-being and human capital. ***Journal of Sport Management***, 27(1): 24-42.

Lievens, F., Decaesteker, C., Coetsier, P., & Geirnaert, J. 2001. Organizational attractiveness for prospective applicants: A person–organisation fit perspective. ***Applied Psychology***, 50(1): 30-51.

Lievens, F., & Highhouse, S. 2003. The relation of instrumental and symbolic attributes to a company's attractiveness as an employer. ***Personnel Psychology***, 56(1): 75-102.

Lucifora, C., & Simmons, R. 2003. Superstar effects in sport evidence from Italian soccer. ***Journal of Sports Economics***, 4(1): 35-55.

Martin, N. 2016. Even to Tiger Woods, John Daly's drives are legendary. ***The Washington Post.*** Retrieved on December 8, 2016 from https://www.washingtonpost.com/news/early-lead/wp/2016/04/27/even-to-tiger-woods-john-dalys-drives-are-legendary/?utm_term=.1ac4ed7fa59e;

Newman, M. E. 2002. Assortative mixing in networks. ***Physical Review Letters***, 89(20): 208701.

Oldroyd, J. B., & Morris, S. S. 2012. Catching falling stars: A human resource response to social capital's detrimental effect of information overload on star employees. ***Academy of Management Review***, 37(3): 396-418.

Onyx, J., & Bullen, P. 2000. Measuring social capital in five communities. ***The Journal of Applied Behavioral Science***, 36(1): 23-42.

Osborn, D. P. 1990. A reexamination of the organizational choice process. ***Journal of Vocational Behavior***, 36(1): 45-60.

Ployhart, R.E. & Kim, Y. 2014. Strategic recruiting. In K.Y.T. Yu & D.M. Cable (Ed.), ***The Oxford handbook of recruitment***: 5-20. New York: Oxford University Press.

Ployhart, R. E. 2006. Staffing in the 21st century: New challenges and strategic opportunities. ***Journal of Management***, 32(6): 868-897.

Preacher, K. J., & Hayes, A. F. 2008. Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. ***Behavior Research Methods***, 40(3): 879-891.

Ravid, S. A. 1999. Information, blockbusters, and stars: A study of the film industry. ***The Journal of Business***, 72(4): 463-492.

Rindova, V. P., Williamson, I. O., Petkova, A. P., & Sever, J. M. 2005. Being good or being known: An empirical examination of the dimensions, antecedents, and consequences of organizational reputation. ***Academy of Management Journal***, 48(6): 1033-1049.

Rottenberg, S. 1956. The baseball players' labor market. ***The Journal of Political Economy***: 242-258.

Rynes, S. L. 1991. Recruitment, job choice, and post-hire consequences: A call for new research directions. In M.D. Dunnette & L.M. Hough (Ed.), ***Handbook of industrial and organizational psychology***, vol. 2: 399-444. Palo Alto, CA: Consulting Psychologists Press.

Rynes, S. L., & Barber, A. E. 1990. Applicant attraction strategies: An organizational perspective. ***Academy of Management Review***, 15(2): 286-310.

Rynes, S. L., Bretz, R. D., & Gerhart, B. 1991. The importance of recruitment in job choice: A different way of looking. ***Personnel Psychology***, 44(3): 487-521.

Rynes, S. L., Schwab, D. P., & Heneman, H. G. 1983. The role of pay and market pay variability in job application decisions. ***Organizational Behavior and Human Performance***, 31(3): 353-364.

Saks, A. M., Wiesner, W. H., & Summers, R. J. 1994. Effects of job previews on self-selection and job choice. ***Journal of Vocational Behavior***, 44(3): 297-316.

Schwab, D. P., Rynes, S. L., & Aldag, R. J. 1987. Theories and research on job search and choice. ***Research in Personnel and Human Resources Management***, 5(1): 129-166.

Shapiro, C. 1982. Consumer information, product quality, and seller reputation. ***The Bell Journal of Economics***: 20-35.

Society for Human Resource Management. 2016. Robust benefits packages essential in war for talent, SHRM survey finds. https://www.shrm.org/aboutshrm/ pressroom/pressreleases/ pages/2016strategicbenefitssurvey.aspx, December 20, 2016.

Spence, M. 1973. Job market signaling. ***The Quarterly Journal of Economics***: 355-374.

Stern, I., & James, S. D. 2015. Whom are you promoting? Positive voluntary public disclosures and executive turnover. ***Strategic Management Journal***.

Stroiman, M. 2016. Businesses optimistic for 2017 but must overcome employee recruitment challenges. http://www.prweb.com/releases/2016/12/prweb13912996.htm, December 15, 2016.

Suazo, M. M., Martínez, P. G., & Sandoval, R. 2009. Creating psychological and legal contracts through human resource practices: A signaling theory perspective. ***Human Resource Management Review***, 19(2): 154-166.

Tannen, M. B. 1987. Is the army college fund meeting its objectives? ***Industrial & Labor Relations Review***, 41(1): 50-62.

Taylor, M.S. & Collins, C.J. 2000. Organizational recruitment: Enhancing the intersection of theory and practice. In C.L. Cooper & E.A. Locke (Eds.), ***Industrial and organizational psychology: Linking theory and practice***: 304-334. Oxford, UK: Basil Blackwell.

Terry, R. P., & McGee, J. E. 2016. Starstruck: An examination of signals that contribute to star employee compensation premiums. In J. Humphreys (Ed.), **Proceedings of the Seventy-sixth Annual Meeting of the Academy of Management,** 1597-1602. Anaheim, CA.

Turban, D. B. 2001. Organizational attractiveness as an employer on college campuses: An examination of the applicant population. ***Journal of Vocational Behavior***, 58(2): 293-312.

Turban, D. B., & Cable, D. M. 2003. Firm reputation and applicant pool characteristics. ***Journal of Organizational Behavior***, 24(6): 733-751.

Turban, D. B., & Greening, D. W. 1996. Corporate social performance and organizational attractiveness to prospective employees. ***Academy of Management Journal***, 40(3): 658-672.

Turban, D. B., & Keon, T. L. 1993. Organizational attractiveness: An interactionist perspective. ***Journal of Applied Psychology***, 78(2): 184.

Uggerslev, K. L., Fassina, N. E., & Kraichy, D. 2012. Recruiting through the stages: A meta-analytic test of predictors of applicant attraction at different stages of the recruiting process. ***Personnel Psychology***, 65(3): 597-660.

Vroom, V. 1964. ***Work and motivation***. New York: Wiley.

Wayne, J. H., & Casper, W. J. 2012. Why does firm reputation in human resource policies influence college students? The mechanisms underlying job pursuit intentions. ***Human Resource Management***, 51(1): 121-142.

Williams, M. L., & Bauer, T. N. 1994. The effect of a managing diversity policy on organizational attractiveness. ***Group & Organization Management***, 19(3): 295-308.

Williamson, I. O., King, J. E., Jr., Lepak, D., & Sarma, A. 2010. Firm reputation, recruitment web sites, and attracting applicants. ***Human Resource Management***, 49(4): 669-687.

Wright, P. M., McMahan, G. C., & McWilliams, A. 1994. Human resources and sustained competitive advantage: A resource-based perspective. ***International Journal of Human Resource Management***, 5(2): 301-326.

Yildirmaz, A. 2016. The war for talent: Employers offer premium wages to draw skilled workers. http://www.bizjournals.com/bizjournals/how-to/human-resources/2016/12/employers-offer-premium-wages-skilled-workers.html December 20, 2016.

Zhang, Y., & Wiersema, M. F. 2009. Stock market reaction to CEO certification: The signaling role of CEO background. ***Strategic Management Journal***: 693-710.

TABLE 1

Means, Standard Deviations, Correlations and Internal Consistency Estimates

Variable	M	SD	1	2	3	4	5	6	7
1. Star Present	0.5	0.501							
2. Compensation	0.52	0.501	-0.1						
3. Anticipated HC Development	5.95	0.83	0.058	0.11	(.93)				
4. Anticipated SC Development	5.44	1.13	-0.01	0.018	.637**	(.87)			
5. Perceived Org Reputation	5.31	1.16	.172*	0.102	.457**	.556**	(.92)		
6. Organizational Attraction	4.78	1.63	0.022	-0.04	.350**	.556**	.601**	(.95)	
7. Likelihood of Pursing Application	4.79	1.6	0.027	-0.03	.322**	.499**	.525**	.849**	(.93)

Note. n = 184; internal consistency estimates (Cronbach's alpha's) are presented in parentheses on the diagonal.

*p < .05

**p < .01

TABLE 2

Results of Mediation Tests Predicting Organizational Attractiveness and Likelihood of Pursuing Application Process Further: Indirect Effects of Star Present and Compensation through Anticipated Human Capital Development, Anticipated Social Capital Developement, and Perceived Organizational Reputation.

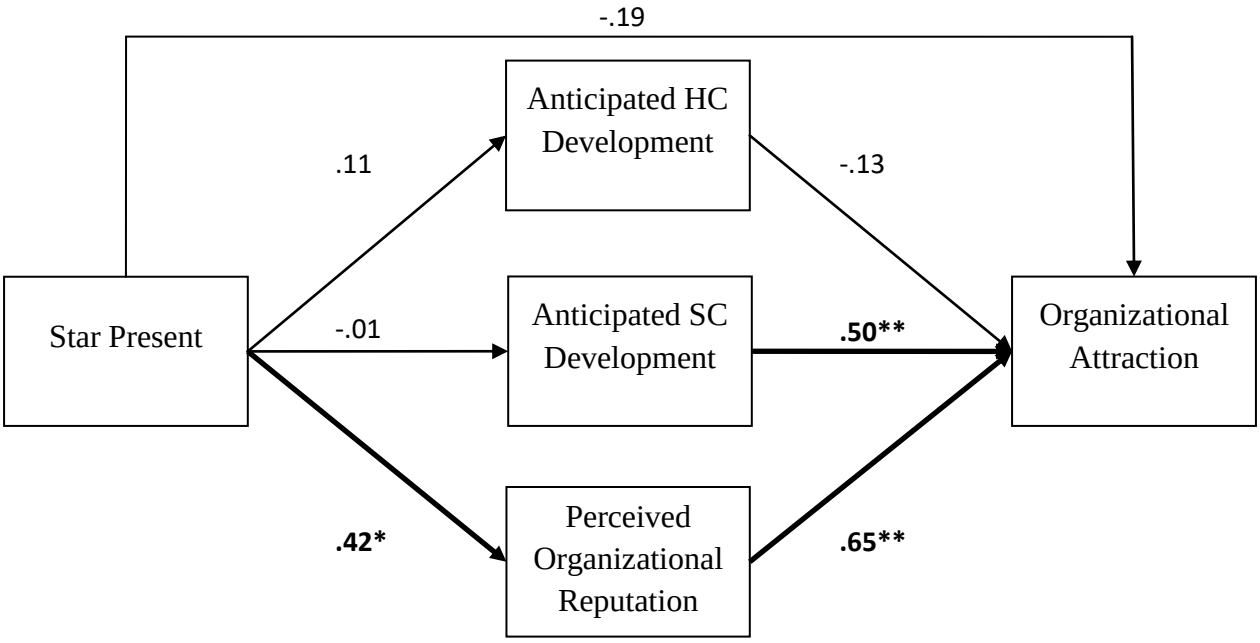
	Organizational Attractiveness				Likelihood of Pursuing Application			
			BC 95% CI				BC 95% CI	
Indirect Effects	**Estimate**	**SE**	**Lower**	**Upper**	**Estimate**	**SE**	**Lower**	**Upper**
Total: Star	0.26	0.18	-0.08	0.6	0.21	0.15	-0.08	0.53
Unique indirect effects through:								
1. Anticipated HC	-0.01	0.03	-0.12	0.02	-0.01	0.03	-0.12	0.02
2. Anticipated SC	-0.003	0.08	-0.17	0.17	-0.003	0.08	-0.16	0.15
3. Perceived Rep	**0.27**	0.13	0.06	0.57	**0.22**	0.11	0.05	0.49
Total: Compensation	0.17	0.17	-0.14	0.53	0.15	0.15	-0.14	0.45
Unique indirect effects through:								
1. Anticipated HC	-0.02	0.04	-0.15	0.03	-0.02	0.04	-0.14	0.04
2. Anticipated SC	0.02	0.09	-0.14	0.2	0.02	0.08	-0.13	0.18
3. Perceived Rep	0.18	0.12	-0.02	0.46	0.15	0.1	-0.02	0.39

Note. n = 184. BC 95% CI refers to the bias-corrected 95% confidence interval: Estimate refers to the effect estimate using 5,000 bootstrap samples; estimates with CIs that do not include zero are statistically significant and bolded. Each model controled for the other independent variable.

FIGURE 1

Path Coefficients for the Indirect Effects of the Presence of a Star Employee on Organizational Attraction and Likelihood of Pursuing Application While Controlling for Compensation

Note: * $p < .05$
** $p < .001$



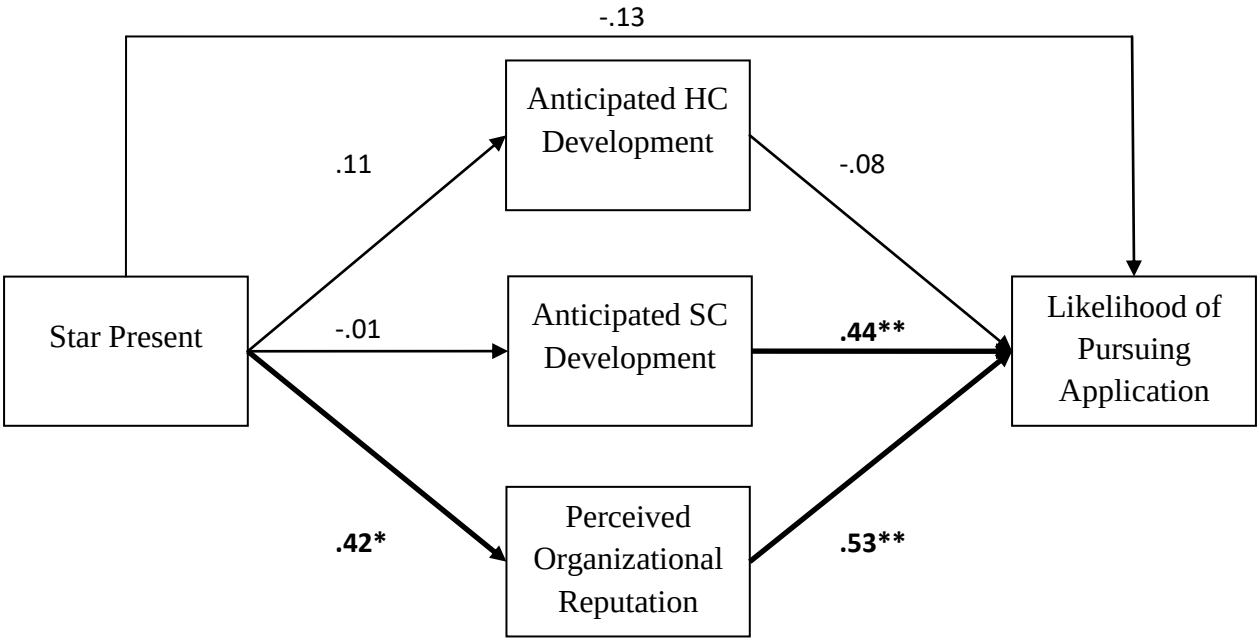
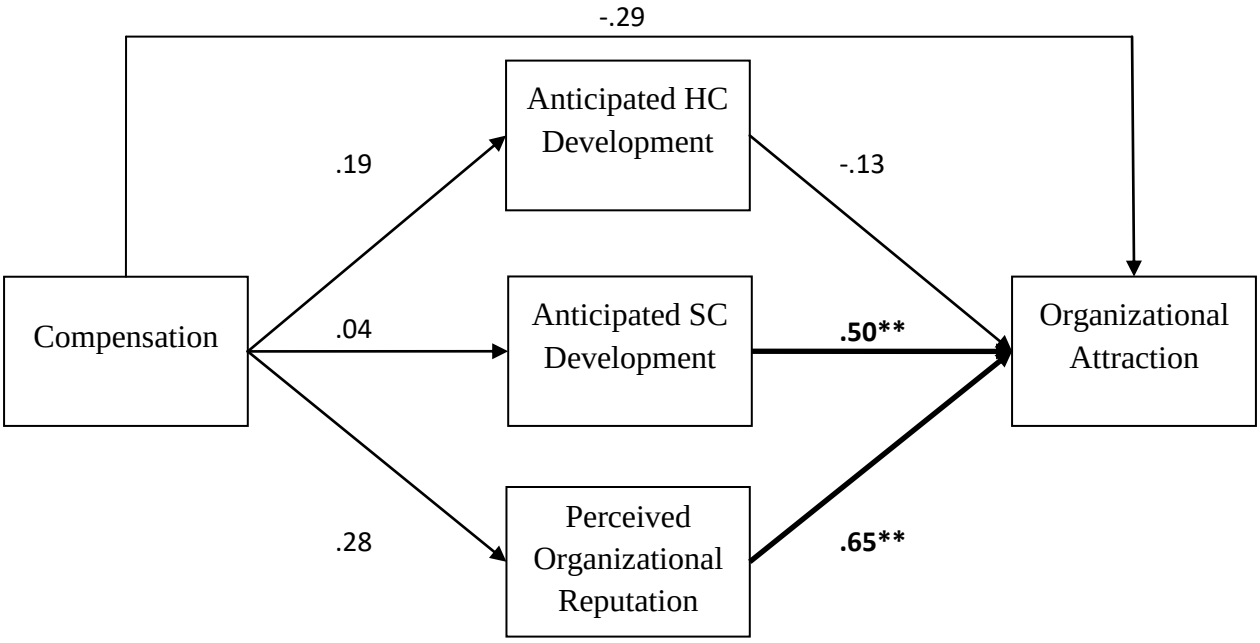
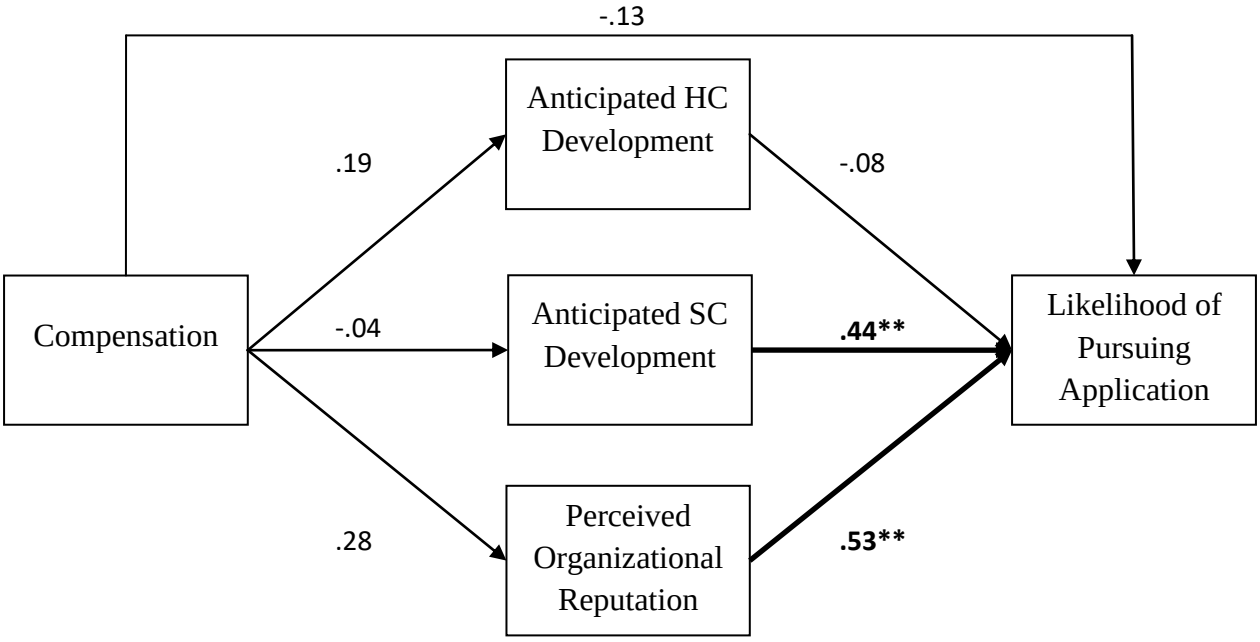


FIGURE 2

Path Coefficients for the Indirect Effects of the Compensation on Organizational Attraction and Likelihood of Pursuing Application While Controlling for the Presence of a Star Employee

Note: * $p < .05$
** $p < .001$





APPENDIX A

Experimental Scenarios

Please let us know what you think of the following job advertisement targeting students interested in a management-track position. Because this is an active job advertisement, the name of the organization has been changed.

Job Description:
The Royal Group is a full-service management consulting firm with a mission to help our clients realize their potential and achieve competitive advantage within their industry. Our Management Training Program was created to develop the future leaders of our organization. This program provides an opportunity for personal and professional development that a classroom cannot offer.

As a Management Trainee, you will work in a fast-paced environment and play a key role in ensuring that appropriate human and financial resources are allocated to meet client demands and achieve our standards of continuous improvement and excellence. This involves tough and demanding work that is stressful, includes weekend and evening hours, requires meeting stringent deadlines, and there is tough competition for promotions. Collaboration with your mentor and peers is essential to your success in this position.

[Star present condition] Among those in our mentoring program is Casey Williams. Casey has gained industry-wide fame for being voted last year's All-Star Consultant—an annual award that recognizes the individual who has accomplished the greatest achievements and made the most significant contributions to the consulting profession. Casey is a well-connected industry leader and a role model for others to emulate.

[Star absent condition] Among those in our mentoring program is Casey Williams. Casey has a bachelor's degree from a small college and has been with us for one year. Casey does not have many professional connections and has not won any professional awards yet. Casey is learning about the requirements to complete the Management Trainee Program to become a more effective mentor.

To ensure we attract the best talent to our organization, we offer a competitive **[salary that is 15% above industry-average/industry-average salary].**

Qualifications:
Bachelor's degree in a business-related discipline
Ability to communicate effectively
Proficiency in social media
Attention to detail

Application Instructions:
To apply for this position, please submit a cover letter, a current resume, and list of three professional or academic references through our website. Should you have any questions about this position, please contact Linda Robinson, Vice President of Recruitment at linda.robinson@royalgroup.com.

APPENDIX B

Scale Items

Dependent variables:
Organizational attraction (Turban & Keon, 1993)
I would like to work for The Royal Group
I would accept a job offer from The Royal Group
I am not interested in The Royal Group except as a last resort

Likelihood of pursuing the application process further (Feldman, Bearden, & Hardesty, 2006)
How likely would you be to contact The Royal Group for more information about the job being offered?
How likely would you be to ask for a job application?
How likely would you be to complete the job application process?
How likely is it that you will actually receive a job offer from The Royal Group?
How likely would you be to accept the job if it were offered to you?

Indirect effect variables:

Expectation of human capital development (Lee, Cornwell, & Babiak, 2012)
I expect to develop new knowledge and skills to better my life at The Royal Group.
I expect to develop knowledge and skills in daily work at The Royal Group.
I expect to improve problem solving skills in daily life and work at The Royal Group.
I expect to increase competence in daily life and work at The Royal Group.
I expect to increase competence in my ability to learn and develop important skills at The Royal Group.

Expectation of social capital development (Onyx & Bullen, 2000)
I expect to feel like part of the community at The Royal Group.
I expect to feel like part of the team at The Royal Group.
I expect to be able to get help from colleagues when needed at The Royal Group.

Organizational reputation (Cable & Graham, 2000)
The Royal Group has an excellent reputation.
The Royal Group is probably very reputable.