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A Study on the Application of Signaling Effects in Strategic Human Resource Information Disclosure

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ABSTRACT

Strategic human resource information disclosure has emerged as an important mechanism through which firms communicate their human capital quality and management capabilities to external stakeholders. Drawing upon signaling theory, this study develops a theoretical framework to examine how signaling effects operate in the context of strategic human resource disclosure. The analysis identifies three distinct signaling mechanisms: signaling to capital markets regarding firm value, signaling to labor markets regarding employment conditions, and signaling to internal stakeholders regarding organizational commitment. The study further explores the conditions under which HR disclosure signals are credible, including signal costliness, observability, and imitation difficulty. Boundary conditions that moderate signaling effectiveness are examined, including firm characteristics, disclosure attributes, and stakeholder characteristics. The theoretical framework reveals that HR disclosure signals may have differential effects on multiple receiver groups, creating potential trade-offs for firms. The study contributes to the literature by providing a comprehensive theoretical account of signaling mechanisms in HR disclosure and offers implications for both research and practice.

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INTRODUCTION

In contemporary organizations, human capital has become increasingly central to competitive advantage. However, the quality and value of human capital are inherently difficult for external stakeholders to observe (Campbell, Coff, & Kryscynski, 2012;Coff, 1997). This information asymmetry creates challenges for firms seeking to communicate their human resource strengths to investors, potential employees, and other stakeholders. Strategic human resource information disclosure—the voluntary communication of information about workforce composition, human resource practices, and talent development initiatives—represents one mechanism through which firms may address this asymmetry.

Signaling theory provides a useful lens for understanding how firms communicate unobservable qualities to external parties (Connelly, Certo, Ireland, & Reutzel, 2011;Spence, 1973). According to signaling theory, when information asymmetry exists between two parties, the informed party may engage in costly signaling to credibly convey information to the uninformed party. In the context of human resource disclosure, firms with superior human capital may choose to disclose detailed information about their workforce and HR practices, using disclosure as a signal to differentiate themselves from firms with inferior human resources.

Despite the intuitive appeal of signaling theory for understanding HR disclosure, several important questions remain unanswered. How do signaling effects operate in the context of strategic HR disclosure? What makes HR disclosure signals credible? How do different stakeholder groups interpret and respond to HR disclosure signals? What conditions moderate the effectiveness of HR disclosure signaling? The existing literature provides fragmented insights into these questions. Some studies have examined HR disclosure from a signaling perspective in specific contexts (Chang, 2018;Stern & James, 2016), while others have explored the relationship between HR disclosure and organizational outcomes (Lin, Huang, Du, & Lin, 2012; Pandya & Rao, 2021). However, a comprehensive theoretical account of signaling effects in strategic HR disclosure remains lacking.

This study addresses these gaps by developing a theoretical framework that examines how signaling effects operate in the context of strategic human resource information disclosure. Drawing upon signaling theory and related literature, the framework identifies three distinct signaling mechanisms: signaling to capital markets, signaling to external labor markets, and signaling to internal stakeholders. The study analyzes the conditions required for credible signaling, including signal costliness, observability, and imitation difficulty. Boundary conditions that moderate signaling effectiveness are examined, including firm characteristics, disclosure attributes, and stakeholder characteristics. The framework also considers how a single HR disclosure signal may be interpreted differently by multiple receiver groups, creating potential trade-offs for firms.

The study makes several contributions. First, it provides a comprehensive theoretical account of signaling mechanisms in strategic HR disclosure, addressing a gap in the existing literature. Second, it identifies the conditions under which HR disclosure signals are likely to be credible, offering insights into why some disclosures are more effective than others. Third, it examines the differential effects of HR disclosure signals on multiple stakeholder groups, revealing potential complexities and trade-offs. Fourth, it offers a foundation for future empirical research and provides implications for managerial practice.

Theoretical Foundations of Signaling in HR Disclosure

Signaling Theory: Core Concepts and Conditions

The Signaling theory addresses situations of information asymmetry, where one party possesses information that the other party does not (Spence, 1973). In such situations, the informed party (the signaler) may take actions to convey information to the uninformed party (the receiver). The seminal work of Spence (1973) on job market signaling demonstrated how individuals use education credentials to signal their productivity to employers, even when education itself does not directly enhance productivity.

For a signal to be effective in conveying credible information, it must satisfy several conditions. First, signals must be observable; the receiver must be able to perceive and interpret the signal (Connelly et al., 2011). Second, signals must be costly; if signaling were costless, all signalers would send the same signals, and signals would cease to convey meaningful information. Third, signals must be difficult to imitate; signalers with inferior attributes should be unable to credibly mimic the signals of superior signalers (Bergh, Connelly, Ketchen, & Shannon, 2014). When these conditions hold, signals can create a separating equilibrium in which different types of signalers send different signals, enabling receivers to distinguish among them.

Signaling theory has been applied across multiple domains, including corporate governance (Certo, 2003), initial public offerings (Certo, Daily, & Dalton, 2001), and corporate social responsibility (Dhaliwal, Li, Tsang, & Yang, 2011). In each context, the theory explains how organizations use observable actions to communicate unobservable qualities to external stakeholders.

Strategic Human Resource Disclosure as a Signaling Mechanism

Strategic human resource disclosure refers to the voluntary communication of information about a firm's workforce, human resource practices, and talent management activities. Such disclosure may include information about employee demographics, skill composition, training programs, compensation structures, performance management systems, and employee development initiatives (Lin et al., 2012; Pandya & Rao, 2021).

From a signaling perspective, strategic HR disclosure can serve as a mechanism through which firms communicate their human capital quality to external stakeholders. Firms with superior human capital—in terms of workforce skills, motivation, and organizational capabilities—may choose to disclose detailed information about their HR practices and outcomes. Such disclosure is costly, requiring investment in data collection, verification, and reporting systems. It is also difficult for firms with inferior human capital to credibly imitate because they lack the underlying workforce quality and HR capabilities to support such claims (Chang, 2018).

The signaling function of HR disclosure is distinct from other forms of corporate disclosure in several respects. First, unlike financial disclosure, which is subject to standardized accounting rules and auditing requirements, HR disclosure is largely voluntary and unregulated, making signal credibility a central concern. Second, HR disclosure signals are directed toward multiple receiver groups, including investors, potential employees, current employees, and other stakeholders, each with different information needs and interpretation frameworks. Third, the quality being signaled—human capital—is inherently complex and multidimensional, making signal design and interpretation challenging (Campbell et al., 2012).

Information Asymmetry in Human Capital Markets

Information asymmetry is particularly pronounced in markets for human capital. Unlike physical assets, which can be inspected and valued using standard methods, human capital is embedded within individuals and organizational routines, making its quality difficult to observe externally (Coff, 1997). This asymmetry affects multiple stakeholder relationships.

For investors, assessing a firm's human capital quality is challenging because financial statements provide limited information about workforce capabilities, motivation, or organizational culture. Investors must infer human capital quality from observable indicators such as financial performance, but these indicators are noisy and reflect many factors beyond human capital (Healy & Palepu, 2001). This creates an opportunity for firms to use HR disclosure to signal human capital quality directly.

For potential employees, assessing the quality of employment conditions and career opportunities is similarly challenging. Job applicants have limited information about organizational culture, management practices, and development opportunities before joining a firm (Chang, 2018). This information asymmetry can lead to inefficient matching in labor markets, with qualified candidates failing to apply to firms that would provide good matches. HR disclosure can serve as a signal that reduces this asymmetry, attracting candidates who value the disclosed attributes.

For current employees, HR disclosure signals the firm's commitment to human capital development and employee welfare. While employees have direct experience with HR practices, they may not have complete information about the firm's strategic intentions or future investments. Disclosure can signal organizational priorities and reinforce employee perceptions (Bowen & Ostroff, 2004).

Signaling Mechanisms in Strategic HR Disclosure

Signaling to Capital Markets

One primary signaling function of strategic HR disclosure is to communicate firm value to capital markets. Investors seek information about firm capabilities that may affect future cash flows and risk. Human capital represents one such capability, potentially influencing innovation, productivity, and adaptability (Ployhart, Nyberg, Reilly, & Maltarich, 2014).

When firms disclose detailed information about their workforce quality, training investments, and human resource practices, they provide investors with information that may not be captured in financial statements. This disclosure can reduce information asymmetry between firms and investors, leading to more accurate valuation. Studies have found that human capital disclosure is positively associated with market-to-book ratios and return on assets, suggesting that investors value such information (Lin et al., 2012).

The signaling effectiveness of HR disclosure to capital markets depends on signal credibility. Investors are likely to discount HR disclosure that appears unverifiable or easily imitated. Disclosure that includes quantitative metrics, third-party certifications, or industry benchmarks may be perceived as more credible. Similarly, disclosure that is integrated with other corporate communications and consistent over time may enhance credibility (Stern & James, 2016).

However, HR disclosure signals to capital markets may have unintended consequences. When firms disclose positive information about their value creation activities, they may also signal the capabilities of individual executives to external labor markets, potentially increasing executive turnover (Stern & James, 2016). This finding highlights the complexity of signaling effects, where a single signal may have multiple effects on different receiver groups.

Signaling to External Labor Markets

A second signaling function of strategic HR disclosure is to communicate employment conditions and career opportunities to potential employees. In competitive labor markets, firms compete to attract qualified candidates. HR disclosure can serve as a recruitment tool, signaling that the firm offers favorable working conditions, development opportunities, and organizational culture.

Research on recruitment signaling has demonstrated that firms implementing commitment-oriented HR practices—such as training programs, performance-based pay, and employee involvement initiatives—tend to signal more detailed HR information on their websites (Chang, 2018). This signaling, in turn, affects recruitment outcomes, with firms that provide more detailed HR information attracting more applicants. Importantly, the effect of signaling on recruitment operates as a before-experience outcome; potential employees rely on signals because they lack direct experience with the firm's HR practices.

The signaling function to external labor markets is particularly important for firms seeking to attract high-quality candidates. Such candidates often have multiple employment options and may use HR disclosure to differentiate among potential employers. Firms that disclose information about career development programs, training opportunities, and employee benefits may be perceived as more attractive employers (Backes-Gellner & Tuor, 2010).

However, HR disclosure signals to labor markets must be credible to be effective. If firms make claims about HR practices that are not supported by actual conditions, candidates who join the firm may experience disappointment, leading to turnover and negative word-of-mouth. Research suggests that while signaling affects recruitment outcomes, employee ratings of firms are influenced more by actual HR practices than by signals (Chang, 2018). This finding underscores the importance of aligning signals with underlying realities.

Signaling to Internal Stakeholders

A third signaling function of strategic HR disclosure is to communicate organizational commitment and priorities to current employees. While employees have direct experience with HR practices, they may not have complete information about the firm's strategic direction or its commitment to human capital development. HR disclosure can serve as an internal signal, reinforcing employee perceptions and shaping organizational culture.

When firms publicly disclose information about training investments, career development programs, and employee welfare initiatives, they signal to current employees that these areas are organizational priorities. This signaling can enhance employee commitment, motivation, and retention by demonstrating that the firm values its workforce. Research suggests that perceived organizational support is influenced by both direct experience with HR practices and communication about organizational priorities (Eisenberger, Huntington, Hutchison, & Sowa, 1986).

Internal signaling through HR disclosure also serves a governance function. When firms commit to disclosing HR information, they subject themselves to external scrutiny regarding their HR practices. This scrutiny may create pressure to maintain or improve HR practices, creating a feedback loop from disclosure to actual practice. The disciplining effect of disclosure has been documented in other contexts, such as corporate social responsibility reporting (Christensen, Hail, & Leuz, 2021), and may operate similarly for HR disclosure.

However, internal signaling effects may be complicated by the fact that employees have direct experience with HR practices. If disclosed information contradicts employee experiences, the signal may be discounted or may create negative perceptions. Consistency between HR disclosure and actual HR practices is therefore important for internal signaling effectiveness.

Multiple Receivers and Potential Trade-offs

A distinctive feature of strategic HR disclosure signaling is that a single disclosure may be received and interpreted by multiple stakeholder groups simultaneously. This creates potential complexity, as signals that are effective for one receiver group may have unintended effects on another.

The research by Stern and James (2016) illustrates this complexity. Their study found that when firms voluntarily disclose positive information about their value creation activities, they send positive signals to managerial labor markets regarding executives' capabilities. This signaling, while potentially beneficial for investor relations, increased the likelihood of voluntary executive turnover, as executives' enhanced reputations made them more attractive to other employers. This finding suggests a trade-off between the benefits of signaling to capital markets and the costs of increased executive mobility.

Similar trade-offs may exist for HR disclosure signaling to different receiver groups. Disclosure designed to attract potential employees may be interpreted by current employees as signaling that the firm is focused on external recruitment rather than internal development. Disclosure designed to signal commitment to employees may be interpreted by investors as indicating excessive focus on employee welfare at the expense of shareholder returns. Understanding these potential trade-offs is important for managers designing HR disclosure strategies.

The multiple receiver nature of HR disclosure also suggests that firms may need to consider the consistency of signals across different channels and over time. Inconsistent signals — such as claiming commitment to employee development while reducing training budgets—may be detected by stakeholders and reduce overall credibility.

Conditions for Credible Signaling in HR Disclosure

Signal Costliness

For HR disclosure to function as a credible signal, it must be costly to produce and difficult for firms with inferior human capital to imitate. Several forms of costliness are relevant in the HR disclosure context.

First, HR disclosure requires investment in data collection and verification systems. To disclose detailed information about workforce composition, training outcomes, and employee satisfaction, firms must have systems in place to collect, analyze, and report such data. These systems require financial investment and organizational commitment, representing a cost that not all firms can afford.

Second, HR disclosure may reveal information that could be used by competitors. Disclosing detailed information about workforce skills, training programs, or talent management strategies may provide competitors with insights that could be used to recruit key employees or develop competitive responses. This competitive risk represents a cost that makes disclosure costly for all firms but particularly costly for firms with valuable human capital.

Third, HR disclosure creates accountability. Once a firm has publicly disclosed information about its HR practices and outcomes, it may be held accountable by stakeholders if it fails to maintain or improve those practices. This accountability imposes costs in terms of organizational commitment and reduced flexibility, serving as a credible commitment mechanism.

Signal Observability

For HR disclosure signals to be effective, they must be observable to intended receiver groups. Observability has multiple dimensions in the HR disclosure context.

Channel observability refers to whether the disclosure is made through channels that target stakeholders are likely to access. Annual reports, sustainability reports, corporate websites, and social media platforms each reach different audiences. Firms may need to consider which channels are most effective for reaching particular stakeholder groups.

Content observability refers to whether the disclosed information is presented in a form that receivers can understand and interpret. Technical jargon, ambiguous language, or information overload may reduce observability. Clear, specific, and relevant information is more likely to be perceived and interpreted.

Timing observability refers to whether disclosures are made at times when receivers are likely to attend to them. Disclosures made during periods of high stakeholder attention, such as annual report releases or investor presentations, may be more observable than disclosures made at other times.

Signal Imitation Difficulty

For HR disclosure signals to maintain credibility, they must be difficult for firms with inferior human capital to imitate. If all firms can make the same claims regardless of their actual HR quality, signals cease to differentiate among firms.

Imitation difficulty arises from several sources. First, as noted above, the costs of disclosure may be prohibitive for some firms, preventing imitation. Second, the organizational capabilities required to produce credible HR disclosure—including data systems, analytical capabilities, and management commitment—may be themselves correlated with HR quality, making imitation difficult. Third, the consequences of imitation, including accountability and scrutiny, may deter firms from making claims they cannot support.

The concept of "signaling equilibrium" suggests that credible signals are those that only firms with the underlying quality can afford to send (Connelly et al., 2011). In the HR disclosure context, this implies that firms with superior human capital should be able to disclose more detailed, verifiable information than firms with inferior human capital, creating a separating equilibrium where disclosure quality reveals underlying HR quality.

Boundary Conditions and Moderating Factors

Firm Characteristics

The effectiveness of HR disclosure signaling may depend on firm characteristics. Firm size may moderate signaling effects, with smaller firms potentially benefiting more from HR disclosure because they have less pre-existing reputation and face greater information asymmetry (Lin et al., 2012). However, smaller firms may also have fewer resources to invest in disclosure systems, limiting their signaling capacity.

Knowledge intensity may moderate the relationship between HR disclosure and stakeholder responses. In knowledge-intensive industries where human capital is central to value creation, HR disclosure signals may be particularly valued by stakeholders. Research suggests that knowledge intensity has a positive moderating effect on the HR disclosure-performance relationship (Lin et al., 2012). In industries where human capital is less central, HR disclosure may have weaker effects.

Ownership structure may also influence signaling effectiveness. Publicly traded firms face greater scrutiny from capital markets and may have stronger incentives for HR disclosure than privately held firms. State-owned enterprises may face different stakeholder expectations and disclosure practices than private firms (Chen, Ding, & Xu, 2021).

Disclosure Attributes

The attributes of HR disclosure itself may moderate signaling effectiveness. Content type matters; disclosures that focus on outcomes rather than processes may be more credible because outcomes are more verifiable. Disclosures that provide quantitative, comparable metrics may be more informative than qualitative descriptions.

Detail level may affect signaling effectiveness. Highly detailed disclosures provide more information for receivers but may also impose greater costs on firms and may create information overload. The optimal level of detail may vary across receiver groups and contexts.

Verifiability is critical for signal credibility. Disclosures that can be verified through third-party audits, external certifications, or industry benchmarks are likely to be more credible than unverifiable claims. Third-party endorsements, such as recognition as a "best place to work," may enhance signal credibility.

Stakeholder Characteristics

The characteristics of signal receivers may influence how HR disclosure signals are interpreted and responded to. Receiver expertise matters; sophisticated investors may be better able to interpret HR disclosure than less sophisticated investors. Similarly, experienced job seekers may be more discerning in evaluating HR disclosure than inexperienced ones.

Receiver needs and values influence which signals are attended to and valued. Investors focused on long-term value may value HR disclosure more than short-term oriented investors. Job seekers with strong career development motivations may value training and development disclosure more than those focused on compensation.

Receiver skepticism may affect signaling effectiveness. Stakeholders who have had negative experiences with corporate disclosure may discount signals regardless of content. Building credibility over time through consistent, accurate disclosure may help overcome skepticism.

CONCLUSION AND RECOMMENDATION

Summary of Theoretical Contributions

This study has developed a theoretical framework for understanding how signaling effects operate in the context of strategic human resource information disclosure. Drawing upon signaling theory and related literature, the framework identified three distinct signaling mechanisms: signaling to capital markets regarding firm value, signaling to external labor markets regarding employment conditions, and signaling to internal stakeholders regarding organizational commitment. The study analyzed the conditions required for credible signaling, including signal costliness, observability, and imitation difficulty. Boundary conditions that moderate signaling effectiveness were examined, including firm characteristics, disclosure attributes, and stakeholder characteristics.

The theoretical contributions are threefold. First, the study provides a comprehensive theoretical account of signaling mechanisms in HR disclosure, addressing a gap in the existing literature. Second, it identifies the conditions under which HR disclosure signals are likely to be credible, offering insights into why some disclosures are more effective than others. Third, it examines the differential effects of HR disclosure signals on multiple stakeholder groups, revealing potential complexities and trade-offs that managers must consider.

Implications for Practice

The theoretical framework has several implications for managerial practice. For firms considering HR disclosure strategies, the framework suggests that disclosure should be designed with specific receiver groups in mind, recognizing that a single disclosure may be interpreted differently by different stakeholders. Firms should consider the credibility of their disclosures, investing in systems and processes that make disclosure verifiable and difficult to imitate.

The framework also suggests that firms should be aware of potential trade-offs in HR disclosure signaling. Disclosures that are effective for attracting potential employees may have unintended effects on current employees or competitors. Coordination among strategy, human resources, and corporate communications functions may help firms weigh the benefits and costs of different disclosure approaches (Stern & James, 2016).

Finally, the framework suggests that consistency between HR disclosure and actual HR practices is important for maintaining credibility over time. Inconsistent signals may be detected by stakeholders, reducing credibility and potentially damaging stakeholder relationships.

FURTHER STUDY

This study has several limitations. As a theoretical study, it does not provide empirical evidence for the proposed relationships. The framework requires empirical testing using appropriate data and methods. Future research should examine the proposed signaling mechanisms, investigating how different stakeholder groups interpret and respond to HR disclosure signals.

Several specific research directions emerge. First, research should examine the conditions under which HR disclosure signals are most credible. Experimental studies could manipulate disclosure characteristics to test how they affect stakeholder perceptions. Field studies could examine how actual disclosure practices relate to stakeholder outcomes.

Second, research should investigate the trade-offs in HR disclosure signaling. How do different stakeholder groups respond to the same disclosure? What factors determine which group's response dominates? How do firms manage potential conflicts among stakeholder interests?

Third, research should examine the dynamics of HR disclosure signaling over time. How do signaling effects change as stakeholders accumulate experience with firms? How do firms build credibility through repeated disclosure? How do changes in disclosure practices affect stakeholder relationships?

Fourth, cross-country research could examine how institutional context affects HR disclosure signaling. Differences in regulatory environments, cultural values, and capital market development may influence both disclosure practices and stakeholder responses. Understanding these contextual differences is important for developing generalizable knowledge.

Fifth, research should examine the costs of HR disclosure signaling. While the framework assumes that benefits exceed costs for firms that choose to disclose, understanding the costs of disclosure—including direct costs of data systems and reporting, competitive risks, and accountability costs — is important for understanding when disclosure is likely to occur.

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