

CHRO Compensation and Strategic Human Capital Management

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Abstract

Human capital is increasingly the key determinant of productivity; yet, we have a limited understanding of how it is managed within firms. Using proprietary survey data on Chief Human Resources Officer (CHRO) compensation for a broad sample of U.S. public firms, we construct a firm-level measure-the CHRO-to-CEO pay ratio-to proxy for the priority firms assign to human-capital management at the top of the organization. We show that higher CHRO pay ratios are associated with improved human capital management, as evidenced by various measures related to employee turnover, workforce composition, and employee sentiment. These firms also show greater accumulation of knowledge capital, which subsequently predicts abnormal stock returns. Although CHRO compensation is typically not disclosed, we show that it is a useful summary statistic for the degree of strategic human capital management at firms.

Keywords: Executive compensation, Human capital management, Intellectual capital, Intangible assets, Chief Human Resources Officer (CHRO)

JEL Classifications: J24, J31, M12, M52, O31

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CHRO Compensation and Strategic Human Capital Management

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Abstract

Human capital is increasingly the key determinant of productivity; yet, we have a limited understanding of how it is managed within firms. Using proprietary survey data on Chief Human Resources Officer (CHRO) compensation for a broad sample of U.S. public firms, we construct a firm-level measure—the CHRO-to-CEO pay ratio—to proxy for the priority firms assign to human-capital management at the top of the organization. We show that higher CHRO pay ratios are associated with improved human capital management, as evidenced by various measures related to employee turnover, workforce composition, and employee sentiment. These firms also show greater accumulation of knowledge capital, which subsequently predicts abnormal stock returns. Although CHRO compensation is typically not disclosed, we show that it is a useful summary statistic for the degree of strategic human capital management at firms.

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1. Introduction

The rapid evolution towards a knowledge economy has accelerated firms’ reliance on human capital and, to win the “war for talent,” firms now invest substantial resources in human capital management (HCM) strategies and programs. Accordingly, a critical development has been the elevation of top human resource executives within publicly traded firms, where many senior human resource executives are now granted substantial power to oversee an organization’s human capital strategy (e.g., [Hamilton, Larcker, Miles, and Tayan, 2019](#)).¹ However, despite their growing importance, we often have a limited understanding of their impact due to a lack of available data on firms’ human capital management practices (e.g., [Banks, Brest, Coates, Davis, Grundfest, Honigsberg, Jackson, Rajgopal, Rouen, and Taylor, 2022](#)).

This study sheds light on these issues by examining the compensation of executives responsible for overseeing them, namely Chief Human Resources Officers (CHROs). Leveraging proprietary survey data on the compensation of CHROs for a broad sample of U.S. public firms, we construct a firm-level measure based on the compensation allocated to CHROs relative to top leadership (i.e., the “CHRO pay ratio”) within the organization. We find that higher CHRO pay ratios are associated with various measures of improved human capital management. We also demonstrate that these changes have important value implications,

¹For much of the 20th century, HR managers focused primarily on administrative duties and labor compliance ([Pophal, 2023](#)). By the 1990s, firms increasingly viewed workforce quality as a competitive advantage, popularized by McKinsey in its famous article “War for Talent” ([Keller and Meaney, 2017](#)). In response, some firms elevated their top HR executive to the C-suite under titles such as “Chief Human Resources Officer” or “Chief People Officer,” expanding their responsibilities to include strategic initiatives such as workforce planning, talent acquisition and development, compensation and benefits, culture, and employee engagement (e.g., [Wright, Schepker, Nyberg, Steinbach, and Yadav, 2024](#); [Batish, Chen, Colombo, Klewin, Shimizu, and Shin, 2024](#); [Charan, Barton, and Carey, 2015](#)).

as these human capital outcomes predict firms’ overall level of intellectual capital and financial performance. Although our inferences are inherently descriptive, evidence from CHRO appointments suggests that these executives play a significant role in shaping firms’ human capital strategies, thereby influencing firm value.

Our focus on CHRO compensation is motivated by prior theoretical and empirical evidence on wage efficiency (e.g., [Krueger and Summers, 1988](#); [Dal Bo, Finan, and Rossi, 2013](#)) and optimal contracting among corporate executives (e.g., [Jensen and Murphy, 1990](#); [Hall and Liebman, 1998](#)). Firms that prioritize human capital management are likely to structure CHRO compensation to attract and incentivize more qualified CHROs who are better able to enhance workforce quality. Moreover, the higher relative pay of these executives within the firm also reflects greater resources dedicated to human capital management and indicates the degree of authority given to the CHRO. Collectively, better-incentivized CHROs (i.e., “strategic CHROs”) should result in stronger human capital outcomes and, ultimately, better firm performance.

We begin our analyses by documenting several descriptive facts about firms’ adoptions of CHROs and their compensation. First, the prevalence of CHROs has increased dramatically over the last decade, with the number of CHROs among publicly traded firms increasing by approximately 120% during our 2014 – 2023 sample period. Second, highlighting the limited disclosure surrounding these executives’ incentives, only 15% of firms with identified CHROs report CHRO compensation in their proxy statements. Third, firms exhibit significant heterogeneity in CHRO pay relative to CEOs, with the top quartile of CHRO pay ratios approximately 75% larger than those in the bottom quartile.

Leveraging this heterogeneity, we next examine whether CHRO pay ratios predict firms’

future human capital management outcomes. Consistent with more active human capital management in firms that allocate greater pay to CHROs, we find that higher CHRO pay ratios are associated with increased employee turnover. This association is strongest among employees in revenue-generating functions, suggesting that CHROs play an active role in managing critical talent pipelines. These results also suggest that strategic CHROs, implement more rigorous performance-evaluation systems and possess the authority to act on them by removing poor-performing employees.

While increased turnover could indicate deteriorating employee morale and a loss of knowledge capital, we provide supporting evidence that shows the opposite. We find that CHRO pay ratios are positively associated with enhanced workforce quality. Specifically, firms with higher CHRO pay ratios are better able to attract employees from direct competitors and candidates with stronger educational credentials. At the same time, departing employees tend to accept lower compensation at their subsequent jobs. These findings suggest that CHRO-driven changes improve employee talent, rather than drive it away.

Beyond workforce composition, we show higher CHRO pay ratios are also associated with improvements in employee sentiment. Specifically, using Glassdoor ratings, we find strong positive associations between the CHRO pay ratio and future employee sentiment related to career opportunities, compensation and benefits, workplace culture, and work-life balance. These findings underscore the role of strategic CHROs in human capital management, extending beyond changes in workforce composition. These findings are particularly notable, as employee satisfaction is a critical dimension of human capital management practices that influences firm performance (e.g., [Edmans, 2011](#); [Green, Huang, Wen, and Zhou, 2019](#); [Graham, Grennan, Harvey, and Rajgopal, 2022](#)).

While our findings highlight that strategic CHROs play a pivotal role in attracting, retaining, and motivating talent, a natural question is whether these efforts ultimately translate into improved firm performance. To address this issue, we map the direct output of firms' human capital functions to performance outcomes. We first show strong positive associations between the human capital metrics we study and various measures of intangible capital. We then show that increases in these intangible capital measures map into increases in abnormal returns. Collectively, these results suggest that the workforce changes associated with strategic CHROs enhance firms' abilities to generate intangible capital, which in turn leads to improved stock market performance.

Although the above findings suggest that strategic CHROs lead to improvements across a range of firm outcomes, the endogenous nature of CHRO compensation limits our ability to fully separate these improvements to strategic CHROs or underlying firm characteristics. While our analyses are inherently descriptive, we conduct several additional tests to link these improvements more directly to strategic CHROs.

We begin by utilizing detailed data that links employees to their patent output to examine whether strategic CHROs hire individuals who generate more intangible capital for their firms. We find that, on average, CHROs with higher pay ratios tend to recruit employees who produced more patents in the one to three years prior to joining the firm. Importantly, these employees continue to show higher productivity in the one to three years after being hired, indicating that the hires made under strategic CHROs play a significant role in the increases in intangible capital described above.

Next, we examine the dynamics of human capital management outcomes in firms following the appointment of new CHROs. Using a matched-sample difference-in-differences

design, we find that CHRO appointments have minimal impact on heightened employee turnover, improvements to workforce quality, and employee sentiment. However, for firms with above-median CHRO pay ratios, such appointments are associated with increased employee turnover rates and enhanced employee sentiment. These findings support the idea that differences in the relative compensation of CHROs reflects differences in their abilities and influence within their firms.

Our final analyses examine the equity market reactions immediately surrounding CHRO appointments. On average, these announcements are statistically insignificant, suggesting that markets do not view the average CHRO as value enhancing. However, we find the cumulative abnormal return is significantly higher when the CHRO has a greater pay ratio. Together with the evidence above, these findings reinforce the idea that CHRO pay ratios capture meaningful variation in their competence and influence, further establishing this measure as a reliable proxy for identifying strategically significant executives.

The paper relates to several strands of literature. First, our study contributes to research on the role of C-suite executives and the design of their compensation contracts in shaping corporate outcomes. A broad literature in accounting, economics, and finance has focused primarily on CEOs and directors, leaving comparatively little attention to other senior executives.² This focus has been partly data-driven, as U.S. disclosure requirements only mandate

²A broad literature links the compensation of CEOs and directors to various firm outcomes, including firm financial performance (e.g., [Core, Holthausen, and Larcker, 1999](#); [Larcker, Richardson, and Tuna, 2007](#); [Edmans, Gosling, and Jenter, 2023](#)), risk-taking (e.g., [Guay, 1999](#); [Rajgopal and Shevlin, 2002](#); [Park and Vrettos, 2015](#)), and other organizational practices (e.g., [Healy, 1985](#); [Bertrand and Schoar, 2003](#); [Armstrong, Larcker, Ormazabal, and Taylor, 2013](#); [Chi, Huang, and Sanchez, 2017](#)). This also includes some of the innovation outcomes we study in this paper (e.g., [Xue, 2007](#); [Baranchuk, Kieschnick, and Moussawi, 2014](#); [Mao and Zhang, 2018](#)). A significantly smaller literature explores these issues within the context of other executives, such as CFOs (e.g., [Indjejikian and Matějka, 2009](#); [Jiang, Petroni, and Wang, 2010](#); [Feng, Ge, Luo, and Shevlin, 2011](#)). For reviews on the topic, see [Bushman and Smith \(2001\)](#), [Core, Guay, and Larcker \(2003\)](#), and [Edmans, Gabaix, and Jenter \(2017\)](#) among others.

compensation reporting for the five highest-paid executives and board directors. As a result, the role of other senior executives has been more difficult to study. By using proprietary survey data, we overcome this limitation for CHROs to demonstrate their importance as key drivers of human capital management at firms.³

Second, we contribute to the extensive literature on firms' human capital, particularly its measurement and impact on firm operations. One line of research examines how specific dimensions of firms' human capital relate to firm outcomes, such as hiring employees with particular expertise (e.g., [DeFond, Hann, Xuesong, and Engel, 2005](#); [Drymiotes and Sivaramakrishnan, 2021](#); [Armstrong, Kepler, Larcker, and Shi, 2024](#)), the provision of equity-based incentives to rank-and-file employees (e.g., [Ittner, Lambert, and Larcker, 2003](#); [Chang, Fu, Low, and Zhang, 2015](#); [Call, Kedia, and Rajgopal, 2016](#)), or overall levels of employee satisfaction (e.g., [Edmans, 2011](#); [Huang, Li, and Markov, 2020](#); [Mkrtchyan, Sandvik, and Xu, 2024](#)). Another line explores how various corporate events or processes impact labor practices (e.g., [Dube and Zhu, 2021](#); [Choi, Pacelli, Rennekamp, and Tomar, 2023](#); [deHaan, Li, and Zhou, 2023](#); [Sran, 2025](#)). Our study adds to this literature by presenting a novel, compensation-based measure of human capital management based on proprietary survey data, which allows us to evaluate the strategic role of human capital in shaping workforce outcomes and, ultimately, firm performance.

Finally, our paper contributes to the broader literature emphasizing both the rising im-

³Empirical work on CHROs predominantly consists of practitioner small-sample surveys and case studies. Prior studies on CHROs document limited but increasing demographic diversity ([HRO Today, 2024](#)), broader skill requirements ([Forrest, Kreit, Murphy, Mahto, Weisz, and Britton, 2025](#)), rising board appointments ([Batish et al., 2024](#)), and a high share of external hires ([Wright et al., 2024](#)). Surveys also suggest that CEOs and CHROs perceive the CHRO role as central in developing talent strategies and firm culture (e.g., [Hamilton et al., 2019](#)). While these studies underscore the strategic importance of CHROs, a key limitation is their reliance on self-reported perceptions, which may be positively biased.

portance of intangible assets (e.g., [Srivastava, 2014](#); [Green, Louis, and Sani, 2022](#); [Barth, Li, and McClure, 2023](#)) and the challenges inherent in measuring them (e.g., see [Glaeser and Lang, 2024](#) for a review). As the economy has shifted toward the new economy, intangibles have become key to understanding firm productivity and output (e.g., [Peters and Taylor, 2017](#); [Lev, 2019](#); [Kepler, McClure, and Stewart, 2025](#)). At the same time, the limited recognition and disclosure of these assets increases the uncertainty of their value (e.g., [Kothari, Laguerre, Leone, and Simon, 2002](#); [Bell, Landsman, Miller, and Yeh, 2002](#); [Shi, 2003](#)). Among these assets, human-capital-based investments are increasingly viewed as a central form of intangible capital (e.g., [Babenko and Sen, 2016](#); [Sun and Xiaolan, 2019](#); [Ewens, Peters, and Wang, 2025](#)), yet their contribution to firm value remains inherently difficult to quantify ([Jones, 2014](#)). We offer a novel, economically grounded measure of firm-level human capital: the compensation of the executive responsible for cultivating and developing the workforce. This measure captures meaningful variation in workforce-related capabilities that accounting-based measures of intangibles overlook.

2. Data

2.1. CHRO pay ratio data

Our CHRO compensation data comes from a leading provider of executive compensation intelligence (hereafter, “Data Vendor”). The Data Vendor draws the data from two sources: proxy disclosures and proprietary surveys. When the CHRO is a named executive officer (NEO) and among the top five highest-paid employees, the Data Vendor extracts detailed

compensation information directly from proxy filings.⁴ This coverage is supplemented with data from a series of highly structured annual compensation surveys of executives from over 1,400 current and formerly public firms. The Data Vendor identifies CHROs in these surveys by performing a comprehensive keyword search of job titles, including terms such as “Human Resources,” “Human Relations,” “Human Capital,” “HR,” “People,” “Experience,” “Personnel,” “Talent,” and “Culture.” To qualify as a CHRO, the employee must also be a member of the C-suite and include “Chief” in their job title. We tabulate the common job titles and their distributions in Appendix A.

Leveraging these data, we construct a novel measure of the strategic importance of CHROs within the firm based on the CHRO’s compensation relative to the CEO’s. By focusing on relative pay rather than absolute pay, this measure effectively controls for any firm-specific characteristics that affect the compensation in the firm’s executive team. Our benchmarking to CEO pay mirrors practice, as the CEO’s compensation is commonly used as the primary benchmark for determining other executives’ pay (e.g., [Bowers and Whittlesey, 2010](#); [Canavan, 2024](#); [Hodgson, 2025](#)).

Prior empirical studies also support our choice to benchmark to CEO compensation. [Bebchuk, Cremers, and Peyer \(2011\)](#) studies CEO pay relative to the compensation of the other top five executives, interpreting the ratio as a measure of the CEO’s relative importance, an approach conceptually similar to ours. In addition, a growing number of studies also focus on recent amendments to the SEC’s Regulation S-K, which require firms to disclose the ratio of the median employee pay to the CEO’s (e.g., [Pan, Pikulina, Siegel, and Wang, 2022](#);

⁴Unlike ExecuComp and ISS, which focus on roughly the S&P 1500, the Data Vendor collects proxy data across the entire universe of U.S. public companies, covering approximately 4,000–5,000 filings per year. While this provides substantially broader coverage, relatively few firms report CHROs as NEOs, limiting the number of proxy statements that contain CHRO compensation data.

Chang, Dambra, Schonberger, and Suk, 2023; LaViers, Sandvik, and Xu, 2024). Together, the prevailing practice and empirical literature reinforce the idea that CEO compensation serves as a meaningful internal benchmark.

We compute the CHRO-to-CEO pay ratio ($CHRO\ Pay\ Ratio_{i,t}$) as the ratio of CHRO’s total direct compensation to that of the CEO. Following [Bebchuk et al. \(2011\)](#), “total direct compensation” for both executives includes salary, bonus, stock, options, and performance-based awards. Our primary measure is the decile rank of the CHRO-to-CEO compensation ratio, which helps account for the significant skew created by firms with one-dollar CEOs.⁵

2.2. Descriptives on CHROs and their pay

Given the limited understanding of CHROs as a corporate phenomenon, we begin with descriptive evidence. Because not all public firms respond to the Data Vendor’s surveys, we use Revelio Labs’ profile-level data to supplement our sample, and apply the same keyword-based algorithm as the Data Vendor to estimate the total number of firms with CHROs. [Figure 1](#) shows a steady rise in the number of firms in the number of Compustat-CRSP firms with CHROs, from 580 in 2014 to 1,295 in 2023 (a 123% increase), consistent with anecdotal evidence of their growing importance. Firms with CHRO compensation data from the Data Vendor show a similar pattern, increasing from 218 in 2014 to 365 in 2023. Despite this growth, CHROs are rarely designated as NEOs, as we find that only 15.6% of firms with CHROs report them in proxy filings. This lack of disclosure highlights the value of our

⁵Untabulated analyses confirm our findings are robust to alternative specifications of the CHRO-to-CEO pay ratio, including the untransformed ratio, its logarithm, versions excluding ratios above one, and within-year decile ranks. The results also hold when scaling CHRO pay by alternative benchmarks, including the highest-paid executive, the highest-paid non-CEO NEO, or average NEO pay. In addition, replacing the ratio with separate CHRO and CEO pay levels yields similar inferences: CHRO pay remains strongly associated with workforce dynamics and employee sentiment, whereas CEO pay does not.

proprietary data in understanding how firms strategically manage human capital through their CHROs.

Within the sample of firms with CHRO pay ratio data, we find considerable cross-sectional variation. As shown in Figure 2, Panel A, the median CHRO pay ratio is approximately 0.2, meaning that the median CHRO earns 20% of the CEO’s compensation. The distribution is right-skewed, with a mean of 0.29, indicating that some firms award their CHROs with substantially higher pay. Panel B shows that the distribution has remained relatively stable over the sample period. Given the sample window of only 10 years, during which the strategic role of CHROs had already emerged, the lack of strong time-series variation is not entirely surprising.

Panel A of Table 1 reports how the pay of CHROs varies across industries. CHROs receive higher compensation in new economy sectors—particularly in technology—where human capital is often central to value creation. By contrast, traditional manufacturing sectors, such as manufacturing, consumer durables, utilities, and chemicals, have lower CHRO pay ratios consistent with the idea that human capital plays a less central role in these industries.

In Panel B of Table 1, we report the summary statistics of the pay ratio and total compensation for CHROs. We find that the average total compensation is roughly three million dollars.⁶ Consistent with NEOs being the highest-paid executives, CHROs who are also NEOs earn an average of \$3.3 million, compared with \$2.7 million for the full sample. Like the pay ratio in Figure 2, this panel shows considerable heterogeneity in CHRO compensation, with an interquartile range of \$1.0 to \$2.7 million. This dispersion suggests

⁶This number is comparable to statistics in industry reports. For example, [HRO Today \(2024\)](#) reports an average total compensation of \$2.7 million for CHROs in Fortune 1000 firms in 2024.

that even among firms with a CHRO, compensation levels differ substantially—differences that may lead to meaningful differences in firms’ human capital management by affecting both the quality of talent attracted and the effort exerted.

2.3. Sample and summary statistics

To construct our sample, we assemble a firm-year panel of all CRSP-Compustat firms and then intersect with the CHRO compensation data from the Data Vendor. Our sample begins in 2014 to coincide with the first year covered by the Data Vendor’s survey, and our sample ends in 2023, which is the last year of data. To examine how investment in CHROs relates to firm outcomes, we further merge this panel with other datasets that capture various dimensions of corporate behavior, including workforce dynamics, innovation, and intangible investment.

We use data from Revelio Labs for firm-level hiring and firing activity as well as employee sentiment. We incorporate measures of corporate innovation from [Kogan, Papanikolaou, Seru, and Stoffman \(2017\)](#), new product launches from the Capital IQ Key Developments database, and knowledge capital estimates from [Peters and Taylor \(2017\)](#). Because each of these data sources has slightly different coverage, sample sizes vary across our analyses. All continuous variables are winsorized at the 1st and 99th percentiles to reduce the influence of outliers. Appendix [B](#) provides definitions of variables and their corresponding data sources.

Panel A of Table [2](#) presents summary statistics that characterize the workforce dynamics, employee sentiment, and innovative activity of our sample firms with a CHRO. On average, annual employee turnover is approximately 17%, with inflows slightly exceeding outflows,

which reflects overall firm growth during our sample period. Roughly 25% of new hires come from competitors, suggesting significant employee inter-industry mobility. Employee satisfaction, measured on a five-point scale, averages around 3, suggesting moderate but not exceptional employee satisfaction. In terms of innovation, firms produce about 2 to 3 patents, new products, and related intangible outputs per year, although a sizeable fraction report no measurable innovation activity. Average knowledge capital is approximately \$14 million, although this amount is highly skewed and concentrated among a subset of firms.

Because not all firms respond to the Data Vendor’s survey, and among those that do, only a subset have CHROs, it is important to understand how our sample compares to the broader Compustat-CRSP universe. Columns (1) and (2) of Table 2 Panel B present this comparison, showing that our sample firms tend to be larger, more leveraged, more profitable, and more growth-oriented—characteristics consistent with a greater reliance on human capital to drive performance. Columns (3) and (4) further distinguish between firms with CHROs who are NEOs and those who are not. While both subsamples have similar growth and book-to-market ratios, firms where the CHRO is not an NEO tend to be larger and more profitable. This likely reflects the fact that in large firms, compensation for other executives can displace CHROs from the list of the top five highest-paid executives. Overall, this panel highlights that our main sample is not a random subset of public firms. Rather, it tilts toward firms where strategic human capital management is more likely to matter.

2.4. Determinants of CHRO pay ratio

A critical assumption underlying our measure is that the compensation of CHROs reflects the priority that firms place on human-capital management. Many channels could drive this relation, ranging from the ability of firms to attract more talented CHROs to the resources and decision-making authority provided to them. If this logic holds, CHRO compensation should vary systematically with firm- and CHRO-level characteristics that indicate the strategic importance of the role.

In Table 3, we model *CHRO Pay Ratio* as a function of firm characteristics, CHRO attributes, and HR team structure. As we show in Table 3, larger firms exhibit lower pay ratios, potentially because CEO compensation in such firms includes more equity. In contrast, firms with stronger growth opportunities, greater market power, or new-economy profiles show higher ratios, consistent with CHROs being more valuable in organizations where human-capital management and talent acquisition matter more for firm value.

Turning to CHRO characteristics, experience—especially within the same firm—is strongly associated with higher compensation. Meanwhile, *CHRO Prestige* (based on Revelio’s education- and experience-based index) adds little incremental explanatory power when direct experience is included, suggesting that more detailed experience subsumes this index-based measure. These findings highlight that higher-paid CHROs tend to have more relevant experience.

Finally, we show that firms with larger HR teams tend to pay CHROs more, consistent with the idea that CHROs receive higher compensation when they are provided more resources and support within their organizations. At the same time, CHRO pay ratios

do not correlate with average HR-staff pay, indicating that the ratio is not simply a reflection of broader HR compensation structures. Overall, these patterns suggest that the *CHRO Pay Ratio* reflects both firms’ demand for high-quality human capital management and the underlying credentials and capabilities CHROs bring to the role.

3. Empirical design

To understand how the CHRO pay ratio influences firm outcomes, we estimate a regression linking this measure to firm outcomes in the following year. Specifically, we estimate the following model:

$$y_{i,t+1} = \alpha + \beta \times CHRO\ Pay\ Ratio_{i,t} + X\gamma + \delta_j + \eta_t + \epsilon_{i,t}, \quad (1)$$

where $y_{i,t+1}$ captures outcomes such as hiring or corporate culture for firm i in year $t + 1$. Our main variable of interest is $CHRO\ Pay\ Ratio_{i,t}$, the decile rank of the ratio of CHRO to CEO total direct compensation.

The vector $X_{i,t}$ includes time-varying firm characteristics, such as firm size, return on assets, book-to-market, leverage, and asset growth. These controls are intended to address the concern that any observed associations between the CHRO pay ratio and outcome variables may simply reflect underlying firm characteristics. In addition to these common controls, we also include the price-cost margin to control for product-market competition (e.g., [Autor, Dorn, Katz, Patterson, and Reenen, 2020](#)), as firms’ strategic human capital management is an important function of their business environment ([Barney, 1991](#)).

In our main specification, we include industry fixed effects to eliminate latent confounding factors common to all firms in a given industry, which may influence the level of CHRO compensation. For example, firms in a new economy industry might offer higher CHRO pay relative to the CEO because human capital is a more important resource in this industry or have more turnover. We also include year fixed effects to control for time-varying trends that could affect CHRO pay or the outcome variables, such as employee labor market conditions. We do not use firm fixed effects because more than half of our sample has just one or two years with non-missing pay ratio data per firm. Throughout the study, we cluster our standard errors by firm to account for within-firm correlations.⁷

4. CHRO pay and human capital management

4.1. *Employee turnover*

We begin our analysis of human capital management outcomes by examining employee turnover. A key role of the CHRO is to handle complex personnel matters and engage in “talent curation,” replacing underperformers while strengthening the talent pipeline (Cox, 2024).⁸ This focus is particularly important in roles central to the business, where talent management is essential to firm strategy (e.g., Lepak and Snell, 1999; Collings and Mellahi, 2009). Accordingly, we expect a positive association between CHRO pay ratio and mea-

⁷The validity of clustered standard errors is unaffected by the number of observations per cluster; thus, firms with only one observation do not pose estimation problems when clustering by firm. Given the possibility of within-firm correlations, firm clustering provides a conservative baseline for our inferences.

⁸While significant turnover can be costly, prior studies in management highlight that some degree of employee turnover is healthy for organizations (e.g., Dalton and Todor, 1979; Glebbeek and Bax, 2004; Hancock, Allen, Bosco, McDaniel, and Pierce, 2013). Practitioner sources support this idea, as active management of a firm’s talent is one of CHROs’ most important roles, which includes letting go of underperforming employees (e.g., Khetan, 2024) and strengthening the talent pipeline (e.g., TalentHR, 2024).

asures of employee hiring and firing and, in particular, those roles most important for value generation at firms.

Table 4 estimates Equation (1) using measures of employee turnover as the outcome variable. Panel A includes controls, and Panel B includes controls and industry and year fixed effects. Column (1) shows that firms with higher CHRO pay ratios experience significantly greater turnover: a one-decile increase is associated with a 0.162% – 0.266% increase in turnover. Because turnover reflects both employee inflows and outflows, columns (2) and (3) disaggregate these two effects and show that the increase in turnover is driven by both new hires and departures. This pattern suggests that well-compensated CHROs are not focused solely on hiring or solely on firing, but are instead actively reshaping the workforce.

To further understand whether this turnover reflects deliberate talent curation, we examine whether it is concentrated in strategically important roles.⁹ Directly identifying which positions are central to a firm is challenging, as this depends on each firm’s unique business model and strategy. Following [Larcker, Mcclure, Shi, and Watts \(2025\)](#), we address this challenge by partitioning employees into quartiles based on their average salary using Revelio Labs’ 150 job classifications and estimated salaries, with higher salaries assumed to reflect more strategically important roles for the firm. Column (4) reports results for the top quartile and shows that employee turnover is most pronounced in core business roles, such as engineering and product development. Untabulated results suggest that both the magnitude and statistical significance decrease monotonically across lower quartiles. This pattern suggests that highly-compensated CHROs focus their efforts on reshaping the most

⁹For example, the former CHRO of GE and American Express, Kevin Cox, highlighted the importance of talent curation in revenue-generating functions: “You have a great talent strategy if you have your most talented professionals in the roles that make the biggest difference to the strategy you’re trying to pull off” ([Cox, 2018](#)).

strategically important parts of the workforce, consistent with deliberate talent curation.¹⁰

Finally, to capture turnover in a single measure, we apply principal component analysis (PCA) to the measures in columns (1)-(4). The procedure yields a single component with an eigenvalue greater than one, which we label *Turnover PCA*. Column (5) uses this composite measure and shows that well-paid CHROs are still associated with high turnover. Together, the findings in Table 4 provide preliminary evidence that well-incentivized CHROs actively manage the workforce.

4.2. *Workforce quality*

Although our evidence suggests that CHROs engage in talent curation through heightened turnover, it does not by itself establish that their efforts improve workforce quality. This distinction matters because headline turnover can reflect voluntary exits of employees, which erodes firm-specific human capital and reduces firm value (e.g., [Hancock et al., 2013](#); [Li, Lourie, Nekrasov, and Shevlin, 2022](#)). We therefore complement the turnover analysis with evidence on the quality of employees turning over.

As employee quality is latent and multidimensional, we rely on three measures that indirectly capture employee quality. The first is the fraction of new hires recruited from competitors. Such employees are likely to be of higher quality as they bring industry-specific expertise, established networks, and tacit knowledge that can be immediately deployed,

¹⁰In an untabulated analysis, we examine turnover by seniority and show that it is concentrated among mid-level employees. We find no evidence that CHRO pay is associated with higher turnover among entry-level workers, as these employees are more easily replaceable and less likely to have strategic value to firms. We also do not find CHRO pay is correlated with heightened turnover among senior executives, where appointments are more directly influenced by the board of directors.

making such hires a strong signal of both employee quality and strategic intent.¹¹ The second measure focuses on the educational background of newly hired employees. Employers often prefer candidates with degrees from higher-ranking universities (Rivera, 2011), so if incoming employees have degrees from higher-ranked schools, it may indicate that firms with highly-paid CHROs are better able to attract higher-quality employees. The final measure focuses on those who leave the firm. If high-quality employees depart because they can easily find outside opportunities, they should receive higher compensation from their new employers. By contrast, if CHROs are primarily managing out low performers, we expect departing employees are more likely to accept lower pay when they find new employment.

Table 5 reports the findings. Column (1) examines our first proxy of quality: the percentage of new hires recruited from direct competitors. We define competitors using a proprietary industry classification developed by Revelio Labs. An important advantage of these classifications is that they include both public and private firms, allowing for a more comprehensive view of the competitive landscape. The result reveals a positive association between the CHRO pay ratio and the percentage of new hires from competitors. A one-decile increase in the CHRO pay ratio is associated with a 0.516 – 0.570 percentage-point increase in new hires coming from industry rivals. This result suggests that firms with more highly compensated CHROs are more effective at attracting experienced and potentially higher-quality talent.

In column (2), we examine how CHRO pay relates to the educational background of new hires. We measure the educational quality of new hires using Revelio Labs’ dynamic

¹¹In some cases, this signal is amplified (and possibly distorted) by “predatory” tactics. For example, Meta has lured away top OpenAI researchers by offering compensation packages reported to reach \$300million over four years, underscoring both the value of these peer hires and the potential for rent-seeking in talent markets (Jin, Hagey, and Cohen, 2025).

university rankings, which assign each employee a school rank based on the institution where they earned their highest degree. For each firm-year, we calculate the average ranking of new hires' schools and multiply it by -1 so that higher values correspond to more prestigious universities. This transformation allows a positive regression coefficient to be interpreted as higher-paid CHROs being associated with more credentialed hires. We find that higher-paid CHROs are linked to hiring from higher-ranked schools.

In column (3), we turn to the quality of departed employees using the percentage of departing employees who, when they take a new position, receive lower pay in their new role. The result indicates that well-incentivized CHROs are associated with a higher percentage of such departures, consistent with CHROs managing out lower performers. Because each of these measures captures a different dimension of turnover quality, we again use PCA to combine them into a summary measure, which we call *Workforce Quality PCA*. As we show in column (4), *CHRO Pay Ratio* is positively associated with this composite index, *Workforce Quality PCA*, our summary measure of workforce quality.

Taken together, the results in Table 5 suggest that firms with more highly compensated CHROs actively manage employee turnover to improve the composition and capability of their workforce. The patterns of selective hiring and strategic exits are consistent with CHROs playing a proactive role in enhancing human capital.

4.3. *Employee sentiment and morale*

The preceding analysis highlights how well-compensated CHROs reshape human capital by attracting top talent and removing low performers. Yet altering workforce composition is

only one dimension of human capital management. An equally important role for CHROs is motivating current employees and curating corporate culture to maintain employee sentiment (Del Mar, 2024). This is particularly so given significant evidence that highlights employee satisfaction play a critical role in sustaining employee productivity and, through this, firm value (e.g., Edmans, 2011; Green et al., 2019; Huang et al., 2020).

We follow some of the aforementioned studies and rely on Glassdoor employee ratings as a proxy for how employees perceive their firms. These ratings, derived from online reviews, capture employee sentiment across several dimensions of the workplace. In addition to aggregate ratings, we focus on two types of employee incentives: *economic incentives* associated with compensation, benefits, and career opportunities, and *social incentives* related to culture, values, and work-life balance.

Columns (1) and (2) of Table 6 focus on economic incentives by estimating Equation (1) using employee ratings related to compensation and benefits and career opportunities as dependent variables, respectively. This panel shows that firms with highly-paid CHROs receive significantly higher ratings on both dimensions. These results suggest that well-compensated CHROs are associated with more favorable employee perceptions of reward structures and career development programs.

Columns (3)-(4) explore the social aspects of the workplace, using employee ratings related to culture and values and work-life balance as dependent variables in Equation (1). We find that the CHRO pay ratio is positively associated with both outcomes. These results suggest that firms that emphasize human capital through the CHRO role tend to foster organizational environments that promote employee well-being, which, in turn, can help strengthen employee retention and motivation.

Building on these results, we next examine broader indicators of employee sentiment: firms’ overall Glassdoor ratings and a composite index from PCA that summarizes all types of employee ratings (*Sentiment PCA*). Columns (5) and (6) show positive associations with both the overall Glassdoor ratings and the PCA employment sentiment measure, respectively. These broader indicators support the notion that when CHROs are well-compensated, they are associated with stronger overall employee sentiment and a more positive workplace climate.

Overall, these results suggest that well-paid CHROs play a meaningful role not only in attracting talent but also in shaping the employee experience. By aligning economic and social incentives with strategic objectives, empowered CHROs contribute to higher satisfaction, retention, and possibly performance of the workforce. These associations underscore the CHRO’s role as a credible signal of the firm’s commitment to human capital development. Importantly, the findings also help mitigate the concern that turnover is driven by dissatisfied high-quality employees leaving for better opportunities.

5. Human capital management and value creation

5.1. Intangible capital

To the extent strategic CHROs effectively recruit, retain, and incentivize high-quality employees, we would ultimately expect these factors to create value for firms. We begin by studying the most direct product these employees produce—intellectual capital—which is one of the primary intangible assets firms have to drive shareholder value. To do so,

we examine whether the earlier documented changes in workforce dynamics and employee sentiment are associated with firms’ intellectual capital creation.

Given that intellectual capital is inherently multidimensional, we rely on multiple proxies to capture its different facets. Our first two measures relate to patents, as they are a direct output of firms’ intangible capital creation (e.g., [Jaffe, 1986](#); [Griliches, 1999](#)). Following [Kogan et al. \(2017\)](#), we use two complementary proxies: the number of patents, which reflects the productivity of innovation, and the inflation-adjusted patent values, which reflect their commercial significance based on the stock market reaction. While patents provide a direct measure of firms’ innovative activities, they only capture one channel through which employees create value. As such, our third measure focuses on new product launches, which represent the culmination of a firm’s innovation process and signal not only the application of new technologies but also the use of intangible investments in design, branding, market knowledge, and complementary capabilities. Our fourth measure is the replacement cost of knowledge capital, as estimated by [Peters and Taylor \(2017\)](#). This measure captures the accumulated stock of firm-specific knowledge. Finally, we use PCA to aggregate the multiple dimensions of intellectual capital into a summary measure, which we call *IC PCA*.

To implement this test, we re-estimate Equation (1) but replace the CHRO pay ratio as the main explanatory variable with each of the workforce variables in Tables 4–6 on the four intellectual capital measures. This approach allows us to examine whether workforce changes linked to well-paid CHROs ultimately map into intellectual capital creation. Although this analysis does not directly involve CHRO pay ratio data, we limit our sample to firms with CHRO pay ratios to maintain consistency with earlier tests; however, our findings are not sensitive to this sample restriction. For parsimony, we report results using the summary

PCA measures for the main analysis in Table 7.

Table 7 reports the relation between intellectual capital and human capital management. Panels A and B show that firms with higher turnover and workforce quality exhibit greater innovative output, as evidenced by more patents, higher patent value, more launches of new products, and larger replacement costs of knowledge capital. Panel C examines employee sentiment and similarly shows that firms with more positive employees generate more intellectual capital. Together, these results suggest that CHRO-driven improvements in workforce composition and morale are closely linked to firms’ intellectual capital creation.

5.2. *Firm value*

Having documented that CHRO-driven workforce improvements are associated with the creation of intellectual capital, we next examine whether these gains are reflected in firm value. As stock prices are forward-looking and embed investors’ expectations about the payoffs to intangible and knowledge capital (e.g., Kogan et al., 2017; Peters and Taylor, 2017; Ewens et al., 2025), we focus on stock returns to estimate the value of increased knowledge capital we document.¹² To the extent that strategic CHROs’ contributions map into firm value, we expect positive correlations between intellectual capital and subsequent firm returns.

To test this prediction, we regress future stock returns on *IC PCA*, the summary measure of intellectual capital, while controlling for standard risk factors and firm characteristics.

¹²Accounting-based performance measures are less suited to these analyses, and they recognize such investments only gradually, sometimes many years in the future. This leads to significantly reduced power, particularly given sample attrition. This noted, in untabulated analyses, we obtain similar inferences when using Tobin’s Q as the dependent variable and somewhat weaker results when using the price–earnings ratio, the EV–EBITDA ratio, and profit growth.

We evaluate three return metrics based on stock returns in year $t + 1$: raw returns, market-adjusted returns, and characteristic-adjusted returns following [Daniel, Grinblatt, Titman, and Wermers \(1997\)](#) (DGTW). Together, these measures provide complementary perspectives on whether CHRO-induced improvements in intellectual capital creation— facilitated by strategic CHROs—are recognized by investors and translate into superior stock performance.

Table 8 presents the results. Across all three return measures—raw returns (Panel A), market-adjusted returns (Panel B), and DGTW-adjusted returns (Panel C)—*IC PCA* loads positively and significantly, suggesting that firms with greater intellectual capital creation earn higher subsequent returns. These findings are consistent with markets recognizing and rewarding the CHRO-induced improvements in workforce dynamics and employee sentiment that underpin intellectual capital creation.¹³

6. Linking CHROs to firm-level outcomes

Thus far, our evidence linking highly compensated CHROs to human capital management and firm performance is inherently descriptive. Because CHRO pay is endogenously determined, the patterns we document may partly reflect selection rather than CHRO effects. To connect these findings more directly to the CHRO’s strategic role, we conduct several additional analyses: (i) studying the knowledge production of specific employees hired during the CHRO’s tenure, (ii) a matched-sample difference-in-differences design on the previously

¹³Untabulated path analyses traces a similar causal path. Specifically, we find that higher CHRO pay ratios are associated with improved turnover quality and more positive employee sentiment, both of which foster intellectual capital creation, which, in turn, predicts higher stock returns. This path analysis highlights the mechanism by which well-compensated CHROs can shape workforce outcomes that ultimately translate into higher market performance.

examined outcomes, (iii) an event-study of stock returns around CHRO appointment announcements.

6.1. CHROs and new-hire innovation

Our analyses thus far show that strategic CHROs are associated with better human-capital management practices and that improved human-capital management among these firms is associated with higher intellectual capital. Given the endogenous nature of both relationships, an important consideration is the extent to which the former findings drive the latter. To provide direct evidence on this, we study how strategic CHROs relate to the hiring of specific patentees, a context in which knowledge capital can be directly mapped to human capital management practices.

To conduct these analyses, we use Revelio Labs’ employee-linked patent data, which directly maps patentees to their employment histories. For each year, we track the trailing and leading patent production of patentees at the firm over a one- to three-year span. This provides us with measures of both their prior productivity at the time of hire and their subsequent productivity once they join the firm. We then examine the average values of each productivity metric of new hires for each firm in a given year.

Table 9 reports the results. Columns (1) and (2) present patentees’ patenting activity one and three years before hiring, while columns (3) and (4) report their patenting activity after joining the firm. Panel A excludes industry and year fixed effects, whereas Panel B includes them. In both panels, columns (1) and (2) show that patentees hired by firms with higher-paid CHROs have more patents before being hired, consistent with these firms attracting higher-quality and more productive employees.

More importantly, Columns (3) and (4) show that this productivity advantage persists in the one and three years following hiring. In other words, employees brought in during more strategic CHROs tenures are more productive. Taken together, these findings suggest that firms with higher-paid CHROs identify more productive employees who then sustain this productivity once they join the organization. This evidence is consistent with strategic CHROs contributing to the intellectual capital gains documented in prior sections.

6.2. *CHRO appointments and human capital management*

We next examine whether changes in firms' human capital management coincide with the appointment of CHROs. If we observe improvements in human capital outcomes following these appointments, it would create a more direct connection between the changes in human capital management practices and the CHROs themselves. Such a finding, especially among higher-compensated CHROs, would strengthen our interpretation of CHRO compensation as a significant indicator of firms' priorities regarding human capital.

To explore these dynamics at the extensive margin (i.e., the decision to hire a CHRO), we use a stacked-cohort difference-in-differences regression analogous to [Cengiz, Dube, Lindner, and Zipperer \(2019\)](#). We treat the first appearance of a CHRO in our data as the appointment event, given the need to identify strategic CHROs through their compensation.¹⁴ To ensure at least one pre- and post-event year, we exclude appointments in 2014 and 2023, the first and last years of our sample. For each survey firm with a CHRO, we match it to ten other firms without a CHRO in the same industry using a propensity score based on the firm

¹⁴Specifically, we define the appointment/treatment event as the first year a CHRO appears in the Data Vendor's surveys. This is due to sampling limitations and our need to separate between strategic (i.e., highly compensated) and non-strategic CHROs. Any resulting timing noise should bias our estimates toward zero, as pre-periods would exhibit partial treatment effects, indicating our results are likely conservative.

characteristics of the vector X of Equation (1) measured in the year before the appointment.

Using the above sample, we estimate:

$$y_{i,t} = \alpha + \beta_1 \text{Treat}_i \times \text{Post}_{i,t} + \beta_2 \text{Treat}_i + \beta_3 \text{Post}_{i,t} + X\gamma + \delta_{c,j} + \eta_{c,t} + \epsilon_{i,t}, \quad (2)$$

where Treat_i is an indicator for firms that reported CHRO pay ratio in the Data Provider’s survey, and $\text{Post}_{i,t}$ is an indicator for the fiscal years after the firm first reported having a CHRO. The dependent variables are the three summary measures of strategic human capital management: *Turnover PCA*, *Workforce Quality PCA*, and *Sentiment PCA*. The control variables are the same as in Equation (1). We include industry-cohort ($\delta_{c,j}$) and year-cohort ($\eta_{c,t}$) fixed effects and base our inferences on standard errors clustered by firm. The coefficient of interest, β_1 , provides estimates of the effect of CHRO appointments in our sample on various human capital outcomes.

Table 10, Panel A reports the results. Columns (1)-(3) show that employee turnover, workforce quality, and employee sentiment are not statistically significantly associated with the existence of a CHRO. Overall, these findings provide evidence that, on average, the adoption of a CHRO has a limited impact on firm human capital outcomes.

As our within-CHRO analyses indicate, lower-paid CHROs are less likely to drive meaningful change, which may explain the muted effects in Panel A. To test this, in Panel B of Table 10, we augment Equation (2) and partition the interaction term into two groups based on whether the CHRO pay ratio is above or below the sample median. If CHRO compensation reflects the extent to which companies prioritize human capital management, we should observe significantly stronger effects among higher-paid CHROs. Consistent with

this prediction, across all three columns, the effects are concentrated entirely in the above-median subsample. Wald tests further show that the differences between high- and low-pay groups are statistically significant in each column.

To further strengthen inferences, we plot these effects in event time. Specifically, in Figure 3, we re-estimate the specification in Table 10, Panel B, replacing $Post_{i,t}$ with event-year indicators and report the coefficients for the above-median CHRO pay subsample. We observe no statistically significant changes in employee turnover, workforce dynamics, or employee sentiment in the years leading up to CHRO appointments. By contrast, we observe statistically significant increases in turnover (Panel A) and turnover quality (Panel B) beginning in the year following the appointment of highly compensated CHROs. In Panel C, we document gradual increases in employee sentiment, particularly beyond the first two years. Intuitively, this highlights that improvements in culture and employee sentiment take longer to materialize. Taken together, the findings indicate that the mere existence of a CHRO has limited impact, but cross-sectional differences in the strategic importance firms assign to the role—as proxied by compensation—are closely tied to meaningful shifts in human capital outcomes.

6.3. *CHRO appointments and short-term market reactions*

Our final set of analyses examines short-term stock market reactions to CHRO appointments. If investors view CHROs as value-enhancing, these announcements should elicit positive market reactions (e.g., DeFond et al., 2005; Gow, Wahid, and Yu, 2018). Consistent with our determinants analysis, where higher CHRO pay ratios reflect both stronger

CHRO qualifications and greater organizational commitment to human capital, we expect any market reactions to be concentrated among firms that appoint strategic CHROs, who command higher pay. Such a pattern does not imply markets react to the compensation itself, which is typically unobservable at the time of appointment. Rather, it would indicate that CHRO pay ratios capture underlying differences in CHRO ability and signal changes in firms’ emphasis on human capital investments.

To test these ideas, we first examine how stock-market participants respond to CHRO appointment announcements. Because our compensation data is annual and does not provide appointment dates, we identify announcements by searching headlines in Capital IQ’s Key Development database.¹⁵ For each event, we compute the cumulative abnormal returns using the Carhart four-factor model over various event windows. The results, reported in Table 11 Panel A, show overall positive but economically modest and statistically insignificant market reactions (-0.046 to 0.507 percentage points). This muted response is consistent with our earlier finding in Table 10, which shows little average effect of CHRO appointments, and with the notion that heterogeneity in CHRO quality leads to differential effects on firm value.

In Panel B, we examine whether investors respond more favorably to the hiring of higher-paid CHROs, under the premise that greater compensation reflects higher quality. Following prior studies, we focus on the event windows $[-5, +10]$ (Flammer, 2021) and $[-10, +10]$ (Krüger, 2015) to capture both the anticipation and reaction to the announcement. We estimate announcement returns as a function of the CHRO pay ratio, controls, and industry and year fixed effects, following prior studies (e.g., Nguyen and Nielsen, 2010). If higher

¹⁵Specifically, we use the same keywords in Appendix A to identify headlines mentioning CHROs, and require the headline to include either “appoint” or “promote.” We manually review a subsample of announcements to ensure that our approach excludes other types of personnel announcements.

CHRO pay is a proxy for better CHRO quality and investors recognize this, we would expect a positive and statistically significant association between CHRO pay and announcement returns. Consistent with this prediction, in all specifications, we find stock returns around CHRO appointments are significantly higher for firms with higher average CHRO pay ratios. These results suggest that higher-paid CHROs are perceived as more value-enhancing and that investors distinguish between higher- and lower-paid CHROs, underscoring the notion that variation in CHRO compensation reflects intrinsic differences in firms' emphasis on human capital management.

7. Concluding remarks

Leveraging proprietary data from a top compensation data provider, we introduce a novel, compensation-based measure of firms' commitment to strategic human capital management, the CHRO pay ratio. Using this measure, we show that higher CHRO pay ratios are consistently associated with better human capital management, which in turn is associated with greater knowledge-capital outputs and improved stock returns. Complementary analyses indicate that the market reacts more favorably to the appointment of well-compensated CHROs, and that such appointments are followed by various improvements in workforce dynamics. Overall, our findings highlight the importance of strategic CHROs in managing human capital at firms and demonstrate the usefulness of the CHRO pay ratio as a measure of this role.

As with most empirical work on executive compensation and corporate governance, our findings are inherently descriptive and should be interpreted accordingly. Specific to our

setting, both the existence of a CHRO and the compensation allocated to that executive are jointly determined with other firm policies, such as overall resources dedicated to human-capital management. Given this co-determination, our analyses do not isolate the marginal effect of CHRO pay itself. Instead, our evidence highlights robust predictive associations between CHRO pay ratios and various labor outcomes within organizations.

Notwithstanding this caveat, our findings take an important step toward understanding the impact of an increasingly important member of the C-suite. Anecdotal evidence suggests that CHROs often serve as close confidantes to the CEO and are actively involved in broader aspects of corporate strategy (Crouse, Moore, Penfold, Pugh, and Huntington, 2025). While we focus on workforce hiring and intellectual capital creation, many other avenues of exploration remain. For example, strategic CHROs may play an important role in leadership succession planning or in shaping human capital strategy during M&As (e.g., Lott, 2022; Colletta, 2025). We leave these questions open as a promising avenue for future research, particularly as firms continue to place greater emphasis on human capital.

Our study also has potential policy implications regarding disclosure regulation. There has been growing recognition in recent years of the central importance of human capital yet investors struggle to assess firms' practices using existing disclosures. Although recent SEC amendments have expanded human-capital disclosures, the limited standardization and disclosure of quantitative metrics hamper their usefulness (e.g., Batish, Gordon, Kepler, Larcker, Tayan, and Yu, 2021; Bourveau, Chowdhury, Le, and Rouen, 2025). Our study points to a potentially simple summary statistic on firms' commitment to human capital—the compensation allocated to the executive in charge of it—a measure that is currently disclosed by only a small fraction of public firms.

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Appendix A. Common CHRO Titles

This table summarizes common CHRO titles by frequency. CHROs typically assume hierarchical ranks such as executive vice president or senior vice president, which are removed during standardization. Other standardizations include removing spelling out abbreviations, e.g., “hr” and “human resources” are interchangeable. The titles in the “Other” category are mostly variants of the titles reported in the table, such as “Corporate Chief Human Resources Officer,” “Chief People Outreach Officer,” “Chief People, Culture, and Corporate Strategy Officer,” “Chief People and Inclusion Officer,” “Chief People, Culture, and Corporate Strategy Officer,” among others.

Standardized Title	Frequency
Chief Human Resources Officer	70.8%
Chief People Officer	17.2%
Chief Talent Officer	1.3%
Chief People and Culture Officer	0.8%
Chief Culture Officer	0.3%
Chief People and Communications Officer	0.2%
Chief People and Diversity Officer	0.2%
Chief People Services Officer	0.2%
Chief HR and Diversity Officer	0.2%
Chief Experience Officer	0.2%
Other	8.6%
Total	100%

Appendix B. Variable definitions

This table contains descriptions of the primary variables used throughout this paper. Sources include Revelio Labs (RL), the Data Vendor (DV), Capital IQ (CIQ), Compustat (COMP), the Center for Research in Security Prices (CRSP), [Peters and Taylor \(2017\)](#) (PT), and [Kogan et al. \(2017\)](#) (KLSS).

Variable	Definition
Firm characteristics	
Asset Growth	Year-over-year asset growth for firm i from year $t - 1$ to year t . (COMP)
BM	Book value of equity scaled by market value of equity for firm i in year t . (COMP)
Leverage	Total liabilities divided by total assets for firm i in year t . (COMP)
New Economy Firm	An indicator for whether firm i is in the technology sector in year t . (COMP)
PCM	Sales minus Cost of Goods Sold, divided by sales for firm i in year t . (COMP)
ROA	Return on assets for firm i in year t . (COMP)
Size	Market capitalization of equity for firm i in year t . (COMP)
Human resources division	
CHRO Pay Ratio	The decile rank of CHRO total direct compensation divided by CEO total direct compensation for firm i in year t . (DV)
HR Team Size	Natural logarithm of the number of rank-and-file employees in the HR department for firm i in year t . (RL)
HR Pay	Natural logarithm of weighted average pay for rank-and-file employees in the HR department for firm i in year t . (RL)
Mean CHRO Pay Ratio	The average CHRO Pay Ratio for firm i . (DV)
Prestige	A proprietary score based on the CHRO's education and work experience for firm i in year t . (RL)
Prior Experience (Other Firm)	An indicator for whether the CHRO has prior work experience from other firms for firm i in year t . (RL)
Prior Experience (Same Firm)	An indicator for whether the CHRO has prior work experience from the same firm for firm i in year t . (RL)
Workforce dynamics	
% Competitors	Percentage of newly hired employees from peer firms in the Revelio Labs mapped 50 industry classifications for firm i in year t . (RL)
% Lower Pay	Percentage of departed employees receiving lower salary in the subsequent job for firm i in year t . (RL)
Core	The sum of the newly hired and departed employees in revenue-generating functions, divided by two times total number of employees for firm i in year t . (RL)
Degree Ranking	Weighted average degree institution rankings for newly hired employees for firm i in year t , multiplied by minus one. The rankings vary by year, with each employee's rank determined by their graduation year. (RL)
Inflow	Number of newly hired employees divided by total number of employees for firm i in year t . (RL)
Outflow	Number of departed employees divided by total number of employees for firm i in year t . (RL)
Turnover	The sum of the newly hired and departed employees, divided by two times total number of employees for firm i in year t . (RL)
Turnover PCA	The first component from a principal component analysis of the following variables: Turnover, Core, Inflow, Outflow for firm i in year t .
Workforce Quality PCA	The first component from a principal component analysis of the following variables: Degree Ranking, % Competitors, and % Lower Pay for firm i in year t .
Employee ratings	

Career Opportunities	Employee ratings on career opportunities for firm i in year t . (RL)
Comp & Benefits	Employee ratings on compensation and benefits for firm i in year t . (RL)
Culture & Values	Employee ratings on culture and values for firm i in year t . (RL)
Glassdoor	Overall employee ratings for firm i in year t . (RL)
Sentiment PCA	The first component from a principal component analysis of the following variables: Career Opportunities, Comp & Benefits, Culture & Values, Glassdoor, Work-life Balance for firm i in year t .
Work-life Balance	Employee ratings on work-life balance for firm i in year t . (RL)
Intellectual capital	
IC PCA	The first component from a principal component analysis of the following variables: Patents, Patent Value, New Products, and Peters & Taylor, for firm i in year t .
New Products	Natural logarithm of new product announcements for firm i in year t . (CIQ)
Patents	Natural logarithm of the number of patents for firm i in year t . (KPSS)
Patent Value	Natural logarithm of real patent value for firm i in year t . (KPSS)
Peters & Taylor	Natural logarithm of the replacement cost of knowledge capital for firm i in year t . (PT)
PostHirePatent1Yr	Natural logarithm of the number of patents in which newly hired employees appointed by firm i in year t are listed as inventors in $t + 1$. (RL)
PostHirePatent3Yr	Natural logarithm of the number of patents in which newly hired employees appointed by firm i in year t are listed as inventors in $t + 1$ through $t + 3$. (RL)
PreHirePatent1Yr	Natural logarithm of the number of patents in which employees newly appointed by firm i in year t are listed as inventors, in the year prior to appointment. (RL)
PreHirePatent3Yr	Natural logarithm of the number of patents in which employees newly appointed by firm i in year t are listed as inventors, in the three years prior to appointment. (RL)
Stock market	
AdjRet	Market excess return in percentages for firm i in year t , calculated as the difference between raw return and CRSP value-weighted market return. (CRSP)
$CAR^{[T_0, T_1]}$	Cumulative abnormal return in percentages, calculated as the sum of the daily abnormal returns (AR) over the event window from T_0 to T_1 , relative to event date 0. $AR_{it} = R_{i,t} - \hat{R}_{i,t}$, where $R_{i,t}$ is the daily raw stock return for firm i on date t , and $\hat{R}_{i,t}$ is the expected return from the Carhart four-factor model. The model estimation window is $[-150, -50]$ trading days prior to each event, and we require a minimum of 50 non-missing return observations. (CIQ, CRSP)
DGTWRet	DGTW-adjusted return in percentages for firm i in year t , calculated as the difference between raw return and DGTW benchmark return. (COMP, CRSP)
Ret	Raw return in percentages for firm i in year t . (CRSP)
Difference-in-differences analysis	
HighPay	An indicator for whether a treated firm's CHRO pay ratio in the event year is above the sample median. (DV)
LowPay	An indicator for whether a treated firm's CHRO pay ratio in the event year is below the sample median. (DV)
Post	An indicator for whether a firm-year occurs after the event year. (DV)
Treat	An indicator for whether a firm ever has pay ratio data. (DV)

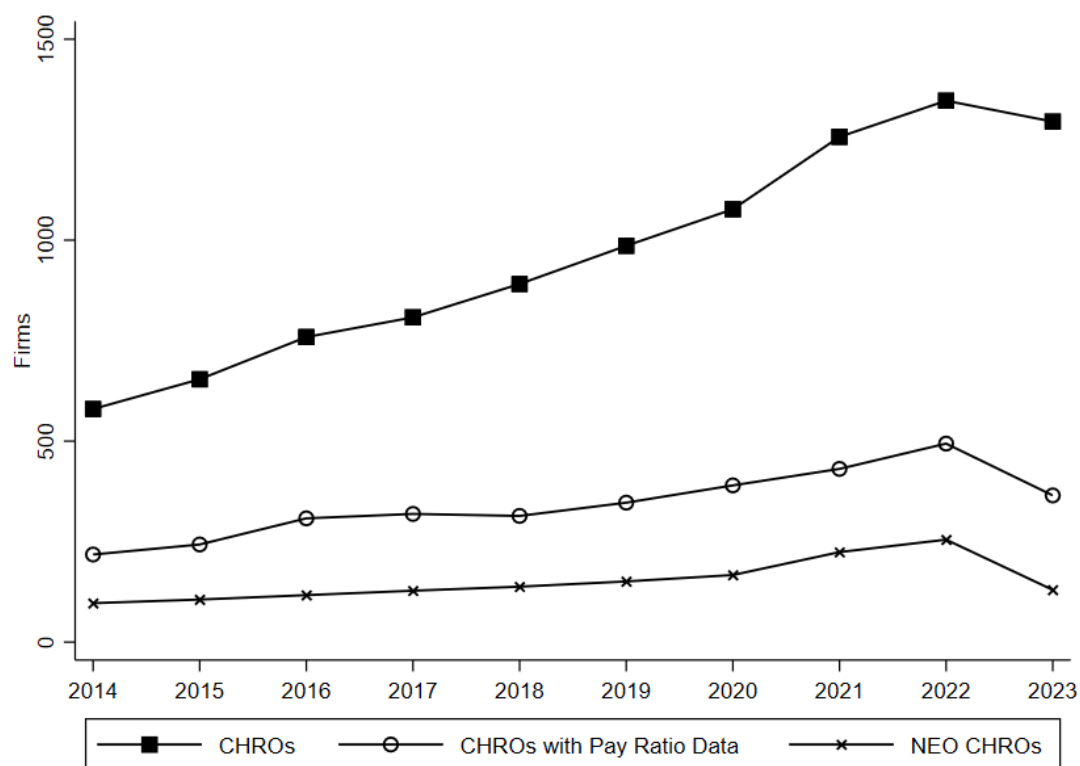
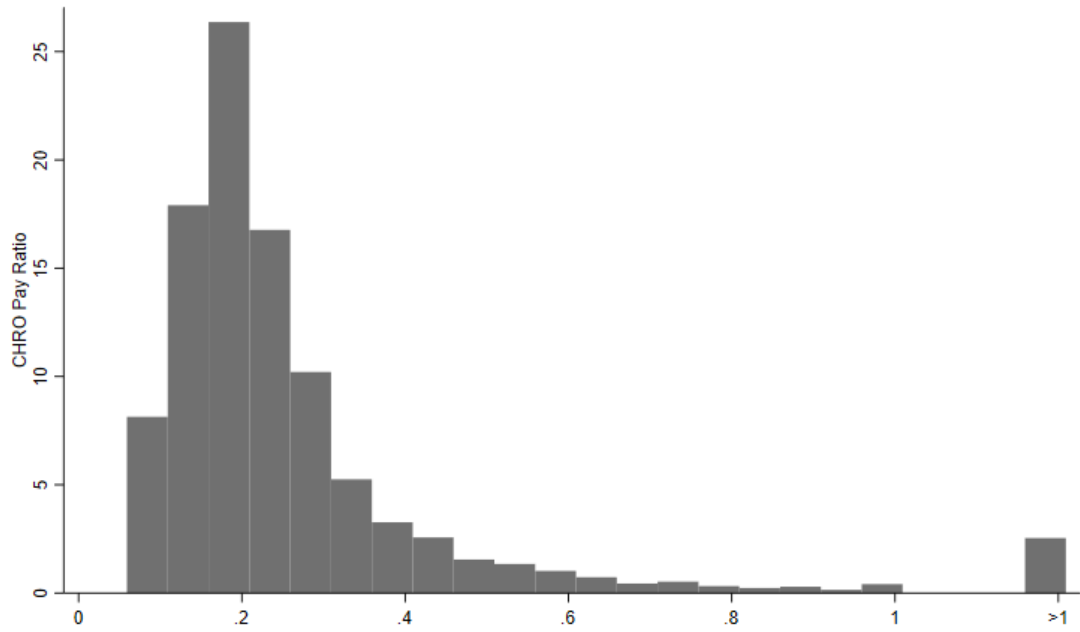
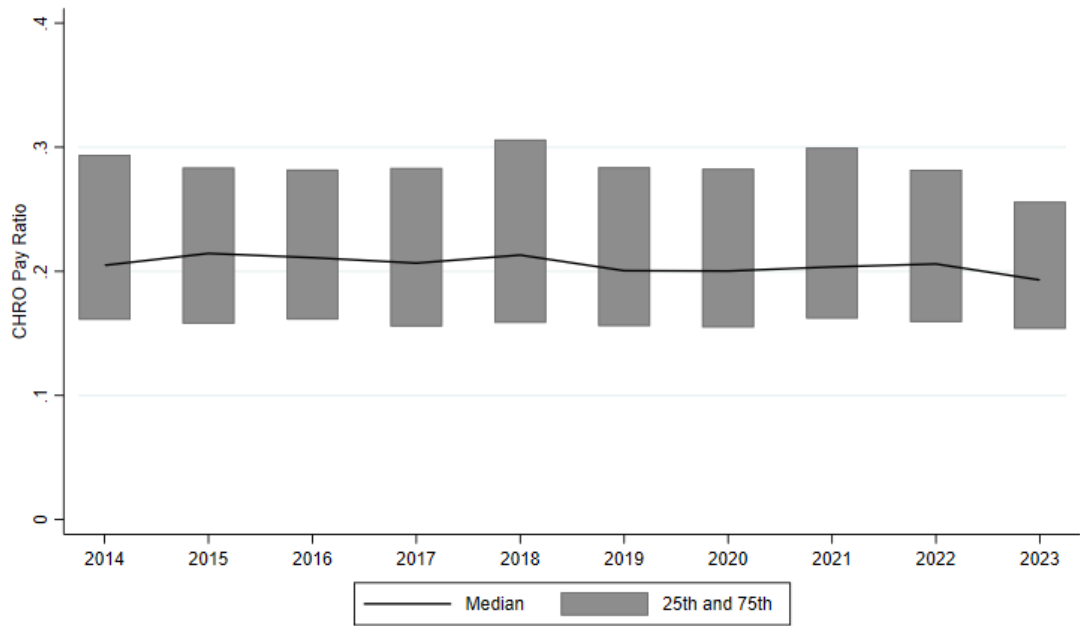


Fig. 1 CHRO over time. This figure reports the number of firms with a CHRO (square), the number of CHROs with compensation data in our sample (circle), and the number of firms with a CHRO listed as a Named Executive Officer (NEO) in proxy statements ($\times$). CHROs are identified through a keyword search of job titles in Revelio Labs' profile-level data. Pay ratio data come from the Data Vendor. NEO CHROs are identified through proxy statements and are supplied to us through the Data Vendor. Identification of CHROs follows a keyword search process outlined in Appendix A.

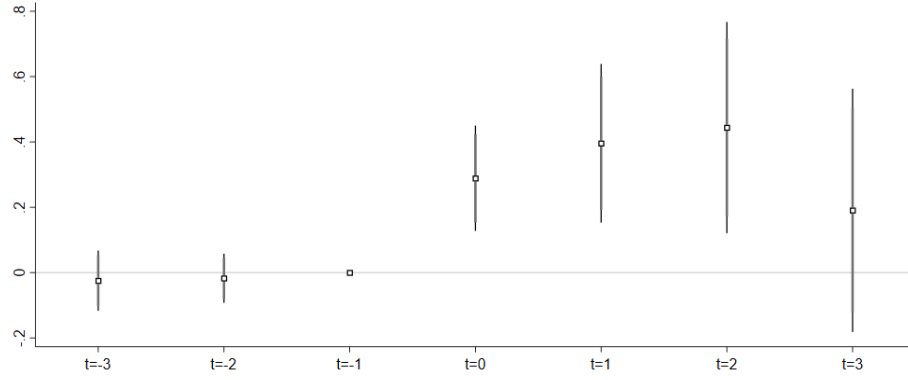


Panel A: Distribution of CHRO pay ratio

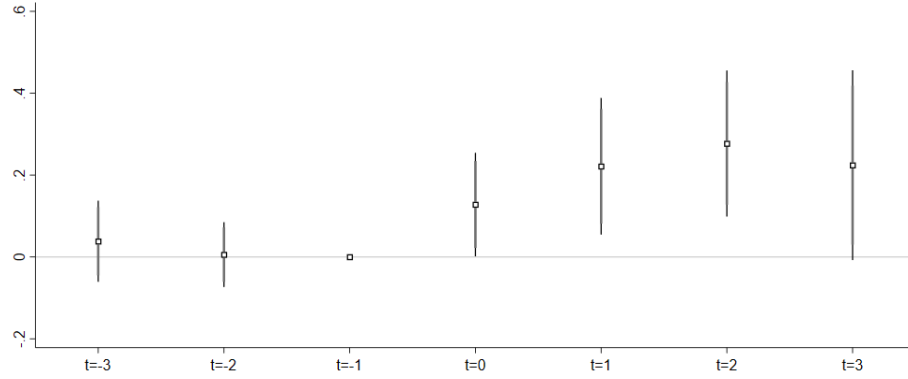


Panel B: CHRO pay ratio distribution by year

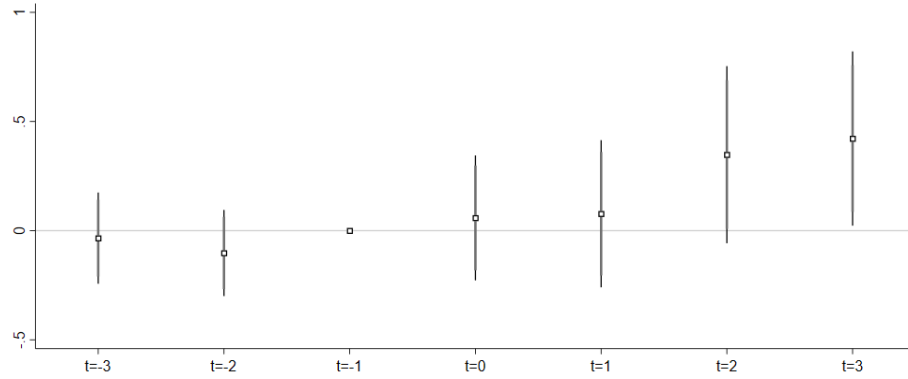
Fig. 2 CHRO pay ratio. This figure presents the distribution of the CHRO to CEO pay ratio. Panel A reports the distribution in 0.05 increments, with ratios greater than one bundled. Most of the cases with a CHRO to CEO pay ratio greater than one involve dollar pay CEOs. Panel B reports the 25th percentile, median, and 75th percentile CHRO pay ratio by year.



Panel A: Employee turnover



Panel B: Workforce quality



Panel C: Employee sentiment

Fig. 3 The effect of highly compensated CHROs in event time. This figure presents an event-time analysis of key outcome variables in our analysis. Panels A, B, and C report summary measures of employee turnover (*Turnover PCA*), workforce quality (*Workforce Quality PCA*), and employee sentiment (*Sentiment PCA*) as the dependent variables, respectively. The sample used for this analysis is identical to the sample used for the analysis tabulated in Table 10 Panel B. The coefficients reported are for the *HighPay* group, i.e., those with above median CHRO pay ratios. The grey bars and the black lines represent 90% and 95% confidence intervals, respectively. Inferences are based on standard errors clustered by firm.

Table 1
CHRO existence and compensation

Panel A: CHRO pay ratio by industry

	(1) Mean	(2) Median
Fama French 12 Industry		
Business Equipment (e.g., Computer, Software, Electronic Equipment)	0.42	0.24
Healthcare, Medical Equipment, and Drugs	0.28	0.20
Other (e.g., Equipment, Bus. Service)	0.28	0.22
Finance	0.27	0.21
Wholesale, Retail, and Some Services	0.25	0.21
Consumer Non-Durables	0.25	0.19
Telephone and Television Transmission	0.24	0.20
Oil, Gas, and Coal Extraction and Products	0.24	0.19
Manufacturing	0.23	0.19
Consumer Durables	0.22	0.18
Utilities	0.21	0.17
Chemicals and Allied Products	0.20	0.18

Panel B: CHRO compensation

	(1) Mean	(2) SD	(3) 25 th	(4) 50 th	(5) 75 th
CHRO Pay Ratio					
All	0.29	0.36	0.16	0.20	0.29
Excluding Firms with Dollar Pay CEOs	0.24	0.14	0.16	0.20	0.28
Total Direct Compensation					
Full Sample	2,996	10,903	1,006	1,567	2,719
Survey Sample	2,771	10,038	1,043	1,630	2,710
Disclosure Sample	3,283	11,918	950	1,503	2,738

This table presents statistics on the compensation of CHROs. Panel A reports the mean and median CHRO pay ratios across the Fama-French 12 industries. Panel B summarizes the distribution of the CHRO pay ratio and CHRO total direct compensation. “All” includes all CHROs with pay ratio data. “Excluding Firms with Dollar Pay CEOs” excludes CHROs with pay ratios higher than one. Total direct compensation (in thousands) includes base salary, bonus, equity, and other cash/non-cash compensation. This measure is computed as the product of the CHRO pay ratio and the CEO total direct compensation. “Full Sample” includes all CHROs with pay ratio data. “Survey Sample” includes CHROs not in proxy statements, and “Disclosure Sample” includes all CHROs in proxy statements as NEOs.

Table 2
Descriptive statistics and sample selection

Panel A: Descriptive statistics

	(1) Mean	(2) SD	(3) 25 th	(4) 50 th	(5) 75 th
Firm characteristics:					
Asset Growth	0.09	0.28	-0.02	0.04	0.12
BM	0.41	0.46	0.16	0.32	0.60
Leverage	0.67	0.24	0.52	0.67	0.82
PCM	0.33	1.78	0.25	0.38	0.56
ROA	0.03	0.10	0.01	0.04	0.08
Size	8.74	1.63	7.68	8.69	9.87
Workforce dynamics:					
% Competitors	24.51	18.23	10.84	20.60	34.42
% Lower Pay	37.10	8.73	31.68	36.71	41.55
Core	4.48	3.98	1.89	3.27	5.63
Degree Ranking	-192.97	50.54	-219.03	-191.11	-162.76
Inflow	17.79	9.67	11.34	15.96	21.75
Outflow	15.91	7.12	10.96	14.71	19.50
Turnover	16.86	7.94	11.41	15.42	20.56
Turnover PCA	0.14	1.41	-0.83	-0.14	0.80
Workforce Quality PCA	-0.22	0.77	-0.77	-0.28	0.25
Employee ratings:					
Career Opportunities	2.83	0.58	2.50	2.81	3.13
Comp & Benefits	3.04	0.62	2.66	3.00	3.41
Culture & Values	2.94	0.66	2.56	2.92	3.29
Glassdoor	3.46	0.57	3.14	3.48	3.82
Sentiment PCA	0.08	1.33	-0.68	0.03	0.80
Work-life Balance	2.95	0.63	2.57	2.92	3.30
Intellectual capital:					
IC PCA	0.51	2.05	-1.17	-0.38	1.46
New Products	0.72	0.86	0.00	0.69	1.39
Patents	0.80	1.44	0.00	0.00	1.10
Patent Value	1.59	2.61	0.00	0.00	3.19
Peters & Taylor	2.64	3.18	0.00	0.00	5.65
Firm performance:					
AdjRet	0.16	35.66	-20.71	-2.29	17.24
DGTWRet	0.21	34.50	-19.47	-1.94	16.51
Ret	11.09	38.91	-12.76	8.25	30.49
Market Reactions:					
CAR ^[-5,10]	0.32	7.44	-4.12	-0.36	4.66
CAR ^[-10,10]	-0.05	8.90	-5.18	-0.11	5.52
Employees and Patents:					
PreHirePatent1Yr	0.56	0.93	0.00	0.00	0.69
PreHirePatent3Yr	0.94	1.26	0.00	0.00	1.61
PostHirePatent1Yr	0.56	0.88	0.00	0.00	1.10
PostHirePatent3Yr	0.96	1.25	0.00	0.00	1.79

Table 2

Descriptive statistics and sample selection

Panel B: Sample selection

Firm characteristics	(1) CCM	(2) Pay Ratio	(3) NEO	(4) Non-NEO	(5) (1)=(2)	(6) (3)=(4)
Asset Growth	0.11	0.09	0.09	0.09	***	
BM	0.62	0.41	0.40	0.42	***	
Leverage	0.60	0.67	0.65	0.69	***	***
PCM	-0.71	0.33	0.24	0.41	***	**
ROA	-0.07	0.03	0.02	0.04	***	***
Size	7.14	8.74	8.13	9.23	***	***

This table summarizes the key variables in our analysis and documents how the CHRO sample differs from the broader Compustat-CRSP universe. Panel A reports summary statistics for firm characteristics, hiring and firing metrics, employee ratings, and intellectual capital measures. Panel B compares sample means of key firm characteristics across four groups: the full Compustat-CRSP universe (CCM), our CHRO pay ratio sample, the CHRO subsample where the CHRO is a Named Executive Officer (NEO), and the subsample where they are not (Non-NEO). Columns (1)–(4) display the means for each group, while columns (5) and (6) report the t-statistics for CCM vs. CHRO and NEO vs. Non-NEO mean differences. All variables are defined in Appendix B, and all continuous measures are winsorized at 1% and 99%. t-statistics are based on standard errors clustered by firm. Levels of significance are presented as follows: *p<0.1; **p<0.05; ***p<0.01.

Table 3
Determinant analysis

	(1)	(2)	(3)	(4)	(5)	(6)
CHRO Pay Ratio						
Firm Characteristics:						
Size	-0.352*** (-6.82)			-0.463*** (-5.40)	-0.463*** (-5.38)	-0.391*** (-3.98)
BM	0.426*** (2.68)			0.353** (1.98)	0.365** (2.05)	0.351* (1.90)
ROA	-3.217*** (-4.77)			-3.592*** (-4.23)	-3.762*** (-4.36)	-3.586*** (-4.23)
Leverage	0.823** (2.51)			0.153 (0.39)	0.180 (0.46)	-0.135 (-0.29)
PCM	0.027 (1.20)			0.038* (1.85)	0.040** (1.97)	0.066*** (2.95)
Asset Growth	0.057 (0.29)			0.157 (0.63)	0.158 (0.63)	0.167 (0.66)
New Economy Firm	0.874*** (3.80)			0.897*** (3.22)	0.899*** (3.23)	
CHRO Characteristics:						
Prior Experience (Other Firms)		0.367 (1.56)		0.447* (1.81)	0.462* (1.87)	0.480** (1.98)
Prior Experience (Same Firm)		0.404*** (2.61)		0.485*** (2.96)	0.486*** (2.98)	0.485*** (3.05)
Prestige		0.237 (0.96)		0.295 (1.20)	0.291 (1.18)	0.385 (1.64)
HR Team Characteristics:						
HR Team Size			-0.150** (-2.54)	0.271** (2.50)	0.275** (2.53)	0.151 (1.32)
HR Pay			-0.160 (-0.32)	0.214 (0.35)	0.368 (0.56)	0.455 (0.60)
Constant	7.773*** (16.71)	5.027*** (27.15)	7.875 (1.40)	4.993 (0.71)	3.213 (0.43)	2.499 (0.29)
Fixed Effects	No	No	No	No	Year	Ind, Year
Observations	3,317	2,538	2,723	2,152	2,152	2,147
Adjusted R ²	0.073	0.003	0.005	0.082	0.082	0.120

This table analyzes the determinants of CHRO-to-CEO pay ratio. The sample comprises all firm-years with non-missing CHRO pay ratios and determinants. All variables are defined in Appendix B. Cluster robust t-statistics, by firm, are included in parentheses. Levels of significance are presented as follows: *p<0.1; **p<0.05; ***p<0.01.

Table 4
CHRO and workforce dynamics

Panel A: No fixed effects

	(1)	(2)	(3)	(4)	(5)
	Turnover	Inflow	Outflow	Core	Turnover PCA
CHRO Pay Ratio	0.266*** (3.78)	0.289*** (3.59)	0.251*** (3.75)	0.172*** (4.44)	0.054*** (4.22)
Controls	Yes	Yes	Yes	Yes	Yes
Ind, Year Fixed Effects	No	No	No	No	No
Observations	2,539	2,539	2,539	2,539	2,539
Adjusted R ²	0.084	0.098	0.059	0.085	0.094

Panel B: Industry and year fixed effects

	(1)	(2)	(3)	(4)	(5)
	Turnover	Inflow	Outflow	Core	Turnover PCA
CHRO Pay Ratio	0.162*** (2.71)	0.175** (2.51)	0.154*** (2.75)	0.096*** (2.96)	0.032*** (2.98)
Controls	Yes	Yes	Yes	Yes	Yes
Ind, Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	2,537	2,537	2,537	2,537	2,537
Adjusted R ²	0.426	0.404	0.396	0.401	0.435

This table reports analyses of the association between firm-level employee turnover and CHRO pay ratio. *CHRO Pay Ratio* is the decile rank of the CHRO's total direct compensation divided by the CEO's. In each panel, the dependent variable in column (1) is *Turnover*, defined as the sum of employees joining and leaving the firm divided by twice the total number of employees. The dependent variables in columns (2)–(3) are *Inflow* and *Outflow*, measured as the number of employees joining or leaving the firm divided by the total number of employees. Column (4) focuses on turnover in revenue-generating functions (*Core*). Employees are classified into four categories by the average salary of each position, with “core” functions defined as those in the top quartile. Turnover for core functions is calculated as the number of employees joining and leaving in that group divided by the total number of employees. In column (5), the dependent variable is the first component from a principal component analysis of the four dependent variables in columns (1)–(4). All regressions include firm size, book-to-market, ROA, leverage, price–cost margin, and asset growth as control variables. Panel B additionally includes two-digit SIC industry and year fixed effects. Cluster robust t-statistics, by firm, are included in parentheses. Levels of significance are presented as follows: *p<0.1; **p<0.05; ***p<0.01.

Table 5
CHRO and quality of workforce dynamics

Panel A: No fixed effects

	(1)	(2)	(3)	(4)
	% Competitors	Degree Ranking	% Lower Pay	Workforce Quality PCA
CHRO Pay Ratio	0.570*** (3.20)	1.719*** (3.52)	0.262*** (2.87)	0.045*** (5.21)
Controls	Yes	Yes	Yes	Yes
Ind, Year Fixed Effects	No	No	No	No
Observations	2,417	2,327	2,286	2,044
Adjusted R ²	0.069	0.025	0.015	0.061

Panel B: Industry and year fixed effects

	(1)	(2)	(3)	(4)
	% Competitors	Degree Ranking	% Lower Pay	Workforce Quality PCA
CHRO Pay Ratio	0.516*** (3.33)	1.364*** (2.84)	0.194** (2.33)	0.036*** (4.50)
Controls	Yes	Yes	Yes	Yes
Ind, Year Fixed Effects	Yes	Yes	Yes	Yes
Observations	2,413	2,324	2,283	2,040
Adjusted R ²	0.337	0.103	0.239	0.261

This table presents analyses of the association between the quality of firm-level workforce dynamics and the CHRO pay ratio. In each panel, the dependent variable in column (1) is the percentage of new hires from firms in the same industry (*% Competitors*), calculated as the number of new hires from firms in the same industry divided by the total number of new hires. We use a proprietary industry classification developed by Revelio Labs, which groups firms into 50 industries that cover all firms in the Revelio Labs database, including private firms. The dependent variable in column (2) is the average of each new hire's highest degree-granting institution's ranking. For ease of interpretation, this variable is multiplied by -1 so that higher values indicate degrees from higher-ranked institutions. In column (3), the dependent variable is *% Lower Pay*, the percentage of departed employees whose subsequent job pays less than their prior position. In column (4), the dependent variable (*Workforce Quality PCA*) is the first component from a principal component analysis (PCA) of the three dependent variables in columns (1)-(3). All regressions include firm size, book-to-market, ROA, leverage, price-cost margin, and asset growth as control variables. Panel B additionally includes two-digit SIC industry and year fixed effects. Cluster robust t-statistics, by firm, are included in parentheses. Levels of significance are presented as follows: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table 6
CHRO and employee sentiment

Panel A: No fixed effects

	(1) Comp & Benefits	(2) Career Opportunities	(3) Culture & Values	(4) Work-life Balance	(5) Glassdoor	(6) Sentiment PCA
CHRO Pay Ratio	0.006 (1.01)	0.011** (2.06)	0.012* (1.91)	0.015** (2.52)	0.010* (1.81)	0.027** (2.11)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Ind, Year Fixed Effects	No	No	No	No	No	No
Observations	2,230	2,230	2,230	2,230	2,230	2,230
Adjusted R ²	0.012	0.025	0.015	0.012	0.035	0.019

Panel B: Industry and year fixed effects

	(1) Comp & Benefits	(2) Career Opportunities	(3) Culture & Values	(4) Work-life Balance	(5) Glassdoor	(6) Sentiment PCA
CHRO Pay Ratio	0.011** (2.17)	0.011** (2.32)	0.011* (1.91)	0.010* (1.96)	0.011** (2.30)	0.028** (2.36)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Ind, Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,227	2,227	2,227	2,227	2,227	2,227
Adjusted R ²	0.229	0.128	0.136	0.178	0.204	0.148

This table presents analyses of the association between employee sentiment and CHRO pay ratio. In each panel, the dependent variables are employee ratings of the employer's compensation and benefits (*Comp & Benefits*), career opportunities (*Career Opportunities*), culture (*Culture & Values*), work-life balance (*Work-life Balance*), and overall employee ratings (*Glassdoor*) in columns (1)-(5), respectively. In column (6), the dependent variable (*Sentiment PCA*) is the first component from a principal component analysis (PCA) of the five dependent variables in columns (1)-(5). All regressions include firm size, book-to-market, ROA, leverage, price-cost margin, and asset growth as control variables. Panel B additionally includes two-digit SIC industry and year fixed effects. Cluster robust t-statistics, by firm, are included in parentheses. Levels of significance are presented as follows: *p<0.1; **p<0.05; ***p<0.01.

Table 7
Intellectual capital creation

Panel A: Employee turnover

	(1)	(2)	(3)	(4)	(5)
	Patents	Patent Value	New Products	Peters & Taylor	IC PCA
Turnover PCA	0.196*** (4.92)	0.338*** (4.98)	0.136*** (6.00)	0.420*** (6.72)	0.358*** (6.92)
Controls	Yes	Yes	Yes	Yes	Yes
Ind, Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	2,853	2,853	2,853	2,537	2,537
Adjusted R ²	0.381	0.400	0.274	0.652	0.536

Panel B: Quality of workforce dynamics

	(1)	(2)	(3)	(4)	(5)
	Patents	Patent Value	New Products	Peters & Taylor	IC PCA
Workforce Quality PCA	0.149** (2.35)	0.197* (1.87)	0.134*** (3.60)	0.375*** (3.01)	0.303*** (3.40)
Controls	Yes	Yes	Yes	Yes	Yes
Ind, Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	2,290	2,290	2,290	2,044	2,044
Adjusted R ²	0.380	0.402	0.278	0.648	0.523

Panel C: Employee sentiment

	(1)	(2)	(3)	(4)	(5)
	Patents	Patent Value	New Products	Peters & Taylor	IC PCA
Sentiment PCA	0.111*** (4.19)	0.170*** (3.95)	0.048*** (3.13)	0.315*** (5.77)	0.195*** (5.31)
Controls	Yes	Yes	Yes	Yes	Yes
Ind, Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Observations	2,476	2,476	2,476	2,220	2,220
Adjusted R ²	0.373	0.399	0.242	0.649	0.519

This table presents analyses of the association between measures of intellectual capital and summary measures of workforce dynamics or employee sentiment. In each panel, the dependent variables are the natural logarithm of patents (*Patents*), the CPI-adjusted patent value (*Patent Value*), the number of new products (*New Products*), the [Peters and Taylor \(2017\)](#) knowledge capital measure (*Peters & Taylor*), and the first component (*IC PCA*) from a principal component analysis of the four intellectual capital measures, respectively. Patent measures are sourced from [Kogan et al. \(2017\)](#). New product announcement data come from Capital IQ. In Panel A, the independent variable (*Turnover PCA*) is the first component from a principal component analysis (PCA) of the key variables in Table 4. In Panel B, the independent variable *Workforce Quality PCA* is the first component from a PCA analysis of key variables in Table 5. In Panel C, the independent variable *Sentiment PCA* is the first component from a PCA analysis of the ratings variables in Table 6. All regressions include firm size, book-to-market, ROA, leverage, price–cost margin, and asset growth as control variables, as well as two-digit SIC industry and year fixed effects. Cluster robust t-statistics, by firm, are included in parentheses. Levels of significance are presented as follows: *p<0.1; **p<0.05; ***p<0.01.

Table 8
Stock returns

Panel A: Raw returns

	(1)	(2) Ret	(3)
IC PCA	0.690** (2.33)	0.724** (2.35)	1.292*** (3.10)
Controls	No	Yes	Yes
Ind, Year Fixed Effects	No	No	Yes
Observations	3,348	3,236	3,232
Adjusted R ²	0.001	0.001	0.120

Panel B: Market excess returns

	(1)	(2) AdjRet	(3)
IC PCA	1.014*** (3.56)	0.978*** (3.31)	1.319*** (3.18)
Controls	No	Yes	Yes
Ind, Year Fixed Effects	No	No	Yes
Observations	3,348	3,236	3,232
Adjusted R ²	0.003	0.004	0.037

Panel C: DGTW excess returns

	(1)	(2) DGTWRet	(3)
IC PCA	0.679** (2.21)	0.909*** (2.74)	1.538*** (3.33)
Controls	No	Yes	Yes
Ind, Year Fixed Effects	No	No	Yes
Observations	2,787	2,707	2,703
Adjusted R ²	0.001	0.002	0.031

This table presents analyses of the association between stock returns and the summary measure of intellectual capital. Panels A, B, and C report results using raw returns (*Ret*), market excess returns (*AdjRet*), and [Daniel et al. \(1997\)](#) excess returns (*DGTWRet*) as the dependent variable, respectively. In each panel, the independent variable is the first component (*IC PCA*) from a principal component analysis of the four intellectual capital measures in Table 7, including *Patents*, *Patent Value*, *New Products* and *Peters & Taylor*. Control variables include firm size, book-to-market, ROA, leverage, price-cost margin, and asset growth. Some specifications also include two-digit SIC industry and/or year fixed effects. Cluster robust t-statistics, by firm, are included in parentheses. Levels of significance are presented as follows: *p<0.1; **p<0.05; ***p<0.01.

Table 9

Quality of new hires and subsequent innovation

Panel A: No fixed effects

	(1) PreHirePatent1Yr	(2) PreHirePatent3Yr	(3) PostHirePatent1Yr	(4) PostHirePatent3Yr
CHRO Pay Ratio	0.025*** (3.17)	0.034*** (3.27)	0.025*** (3.54)	0.035*** (3.55)
Controls	Yes	Yes	Yes	Yes
Ind, Year Fixed Effects	No	No	No	No
Observations	2,711	2,711	2,711	2,711
Adjusted R ²	0.239	0.284	0.252	0.287

Panel B: Industry and year fixed effects

	(1) PreHirePatent1Yr	(2) PreHirePatent3Yr	(3) PostHirePatent1Yr	(4) PostHirePatent3Yr
CHRO Pay Ratio	0.024*** (3.31)	0.031*** (3.50)	0.024*** (3.89)	0.034*** (4.05)
Controls	Yes	Yes	Yes	Yes
Ind, Year Fixed Effects	Yes	Yes	Yes	Yes
Observations	2,708	2,708	2,708	2,708
Adjusted R ²	0.378	0.454	0.410	0.464

This table presents an analysis of the quality of employees hired and their subsequent performance using patent data. In each panel, the first two columns report the logarithm of the number of patents produced in the one or three years prior to joining the firm, capturing new-hire credentials. The third and fourth columns report the logarithm of the number of patents produced in the one or three years after joining the firm, capturing subsequent performance. All regressions include firm size, book-to-market, ROA, leverage, price-cost margin, and asset growth as control variables. We additionally control for the logarithm of the number of new hires. Panel B additionally includes two-digit SIC industry and year fixed effects. Cluster robust t-statistics, by firm, are included in parentheses. Levels of significance are presented as follows: *p<0.1; **p<0.05; ***p<0.01.

Table 10
Difference-in-differences analysis

Panel A: Average effects

	(1)	(2)	(3)
	Turnover PCA	Workforce Quality PCA	Sentiment PCA
Treat $\times$ Post	0.036 (0.88)	0.041 (1.40)	0.038 (0.61)
Controls	Yes	Yes	Yes
Ind-Cohort, Year-Cohort Fixed Effects	Yes	Yes	Yes
Observations	22,236	14,164	16,148
Adjusted R ²	0.292	0.259	0.077

Panel B: Variation in CHRO pay ratio

	(1)	(2)	(3)
	Turnover PCA	Workforce Quality PCA	Sentiment PCA
[1] Treat $\times$ Post $\times$ LowPay	-0.032 (-0.74)	0.012 (0.39)	-0.000 (0.04)
[2] Treat $\times$ Post $\times$ HighPay	0.325*** (3.54)	0.165*** (3.03)	0.185* (1.71)
[1] = [2] p-value	0.000	0.006	0.077
Controls	Yes	Yes	Yes
Ind-Cohort, Year-Cohort Fixed Effects	Yes	Yes	Yes
Observations	22,236	14,164	16,148
Adjusted R ²	0.293	0.260	0.077

This table presents difference-in-differences analyses of CHRO appointments. Treated firms are those with CHRO pay ratio data. For each treated firm, we define the event year as the first year with pay ratio data and match it to 10 firms without CHROs using propensity score matching based on firm characteristics in the year prior to the event. Specifically, in each calendar year, we pool firms with event years and firms without CHROs in our sample period, and estimate a propensity score model using all control variables from our regression analysis together with Fama-French 12 industry fixed effects. We then retain all treated firms and a subset of matched control firms. For both treated and control firms, we keep three years before and after the event year to form a cohort. We repeat this procedure for all years in our sample, except 2014 (which lacks pre-treatment years) and 2023 (which lacks post-treatment years), and stack the resulting cohorts to construct the final sample. Panel A reports the results for average treatment effects. Panel B examines whether the effect varies with the CHRO pay ratio. Specifically, we partition the DiD estimator into two non-overlapping indicators: one for firm-years with above-median CHRO pay ratios and one for firm-years with below-median pay ratios. We compare the two coefficients using a Wald test of equality. All regressions include firm size, book-to-market, ROA, leverage, price-cost margin, and asset growth as control variables, as well as two-digit SIC industry-cohort and year-cohort fixed effects. Cluster robust t-statistics, by firm, are included in parentheses. Levels of significance are presented as follows: *p<0.1; **p<0.05; ***p<0.01.

Table 11

Market reactions to CHRO appointments

Panel A: Average stock market reactions to CHRO appointments

	(1) Mean CAR	(2) t-statistic	(3) Positive: Negative
$[-1, 5]$	0.238	0.88	161:147
$[-1, 10]$	0.507	1.39	166:141
$[-5, 5]$	0.038	0.11	145:163
$[-5, 10]$	0.317	0.75	147:160
$[-10, 10]$	-0.046	-0.09	152:155

Panel B: CHRO pay ratio and stock market reactions

	(1) CAR $^{[-5,10]}$	(2)	(3)	(4) CAR $^{[-10,10]}$
Mean CHRO Pay Ratio	0.501** (2.37)	0.594** (2.32)	0.560** (2.30)	0.664** (2.22)
Controls	Yes	Yes	Yes	Yes
Fixed Effects	Year	Ind, Year	Year	Ind, Year
Observations	303	303	303	303
Adjusted R ²	0.035	-0.011	0.042	-0.005

This table presents an analysis of market reactions to CHRO appointments. Panel A presents the results for average market reactions using various measurement windows. Columns (1), (2), and (3) report the mean cumulative abnormal returns (CAR), t-statistics from a test of whether the returns equal zero, and the number of positive and negative stock price reactions. Panel B presents results from regressions of CAR on the firm average CHRO pay ratio. The dependent variable is CAR from $t \in [-5, 10]$ or $[-10, 10]$, with expected returns computed using the Carhart four-factor model. The estimation model uses a 150-day estimation window, requiring a minimum of 50 non-missing returns for estimation, and a 15-day gap between the end of the model estimation period and the start of the event window. *Mean CHRO Pay Ratio* is the average *CHRO Pay Ratio* at the firm level. We compute firm averages because the exact pay ratio in the initial year of appointment is not necessarily available. CHRO appointments are identified through Capital IQ's Key Development database with keyword searches. We use the keywords in Appendix A to identify CHROs. We delete CHRO departures by dropping news events containing "retire" "depart" "resign" "cessation" "step down" and "no longer" in the title. We further require "appoint" or "promote" to be in the news headline to capture appointments. We retain appointments for firms in our sample. All regressions include firm size, book-to-market, ROA, leverage, price-cost margin, and asset growth as control variables. Some specifications also include two-digit SIC industry and/or year fixed effects. Levels of significance are presented as follows: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

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