Financial Capital and Human Capital in American Corporations: How Ownership by Activist Hedge Funds and Index Investors Affects Employee Satisfaction

by

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DEDICATION

This dissertation is dedicated to everyone who strives to make their and others' workplaces a better place to work.

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ABSTRACT

Two major trends in the American capital market affect whether firms adopt a long-term or a short-term orientation. The first trend is the growing concentration of ownership of public companies by index investors, such as Blackrock, Vanguard, and State Street, which are decade-long stockholders. The second is the growing control of activist hedge funds on corporate boards, whose median holding period is known to be around 20 months. What do these trends mean for employee relations? This dissertation tests whether ownership by activist hedge funds, which have a relatively short-term investment time horizon, negatively affect employee satisfaction by reducing managerial attention to employees while increasing managerial attention to shareholders and stock market performances. This dissertation also tests whether a concentrated ownership by large index investors, which has a relatively long-term investment time horizon, positively affects employee satisfaction by increasing managerial attention to employees while reducing managerial attention to shareholders and stock market performances. I answer these questions by studying all publicly traded US companies from 2008 to early 2018, and by using big data – firms' annual reports and anonymous employer reviews on Glassdor.com. More specifically, I developed new measures for firms' attention to their human capital and its management practices by conducting text analysis of the risk factors section of the annual report where firms list their anticipated risks. Additionally, I analyze the relationship between employee satisfaction and firms' financial performance.

The results of my analyses show that ownership by most activist hedge funds and large index funds do not have a direct effect on employee satisfaction. However, ownership by Gamco Investors, one of the most active hedge funds in terms of the number of campaigns, reduces employee satisfaction. These findings suggest that activist hedge funds may have different strategies and goals, which affect employee satisfaction differently. These results also suggest that large index funds' engagement with their portfolio firms on human capital issues is limited, leaving us with a question about the role of the powerful investors. This dissertation also found that shareholders affect managerial attention, such that ownership by activist hedge funds increased managerial attention to shareholders, and ownership by large index funds reduced managerial attention to firms' stock market performance. Firms' attention to employees was only reduced when firms were under Gamco Investors' ownership. Additionally, ownership by activist hedge funds led managers to give less consideration to how employee issues can be associated with future cost. On the other hand, ownership by large index funds led managers to be less concerned about their employees as important resources for the firms. Finally, the results show that employee satisfaction is not the cause of firms' financial performance, but rather the consequence of high firm performance.

This dissertation contributes to the corporate governance and human capital management literature by examining labor implications of currents trends in shareholder ownership. Also, it makes a practical contribution to organizational researchers, investors, policy makers, and employees who need standardized measures for firms' attention to human capital and human capital management practices and performances.

Keywords: corporate governance, activist hedge funds, index funds, human capital management, managerial attention, risk factors, employee satisfaction

CHAPTER I

Introduction

Both financial and human capital are critical to the success of a firm. However, there is an imbalance between how much information we know about firms' financial capital and their human capital. While we know a lot about firms' financial data, especially if firms are publicly traded companies, we know little about firms' human capital. For example, we can easily find in companies' income statements their financial performance over a specific accounting period, such as revenue and expenses. Also, a firm's financial state, including assets and liabilities, is described in their balance sheet in a detailed manner. In addition to these mandatory filings, firms' real time stock price, which is known to reflect their market value, is publicly available in the stock market. Furthermore, firms' investment relations departments frequently communicate with their financial communities to disseminate key information on the companies' affairs that can affect their financial value. Yet, we do not know much about the basic information related to firms' human capital, such as workforce composition, skills and training, compensation, safety, turnover, and employee satisfaction. It is even harder to understand the more intangible factors that affect employees such as corporate culture and values.

One main reason why there is an imbalance between how much we know about firms' financial capital and their human capital is because firms are not required to report their human capital management practices and performances. The only information that is mandated for public

firms to disclose in their annual report related to their human capital is the total number of employees and the ratio of the CEO's pay to that of the median-paid employee. Lack of data on human capital poses challenges not only to researchers studying labor issues in management but also to investors, policy makers, and employees themselves. It leads to the following practical question: "How can we better understand firms' human capital and its management when we lack available data?"

I take on this question by designing and validating new measures for firms' attention to human capital and its management practices using big data. More specifically, I use the risk factors section of firms' annual report, where firms list their anticipated risks, to develop the following set of variables: firms' attention to human capital, firms' attention to each human capital management practice (i.e. recruitment, turnover, benefits, etc.), and firms association of their employees with a resource versus a cost. I also measure employee satisfaction using anonymous employer review data on the website, Glassdoor.com.

The new measures are used to answer the following theoretical question: What is the labor implication of the growing ownership and control by activist hedge funds and large index funds, the two notable trends in the US financial market? I empirically test whether and how ownership by activist hedge funds and large index funds affects employee satisfaction through influencing firms' attention to human capital. More specifically, I examine whether ownership by activist hedge funds negatively affects employee satisfaction by reducing firms' attention to employees. Also, I analyze whether ownership by large index funds positively affects employee satisfaction by increasing firms' attention to employees. Additionally, I test the relationship between employee satisfaction and firms' financial performance.

My dissertation contributes to the two following areas. First, my dissertation contributes to corporate governance and human capital management research by studying the labor consequences of current trends of shareholder ownership. Previous research has focused on analyzing how shareholders' ownership and engagement affect shareholder value of the target firms. My dissertation shows that shareholders' ownership also affects managerial attention to firms' human capital and its management practices.

Second, my dissertation makes a practical contribution to researchers, investors, policy makers, and employees who need more information on firms' human capital. For example, large institutional investors may want to integrate human capital-related risks into their investment decisions. Other groups of investors have also called for standardized reporting guidelines on human capital management for publicly traded companies. I created an unobtrusive standardized measure for firms' attention to human capital-related risks using big data that can be used widely among organizational scholars and various stakeholders. It is my hope that these new measures can meet the increasing demand from institutional investors and the public calling for more transparent information on firms' human capital.

CHAPTER II

Context – Changing Financial Capital Markets and Corporate Ownership Since the Financial Crisis

There are two big trends in the US capital market: the growing concentration of ownership by passive index funds and exchange-traded funds (ETFs), and the rise of hedge fund activism. The first trend in the US capital market is a growing concentration of ownership by passive index funds and ETFs. The leading institutional investors in the passive index fund and ETF industry are Blackrock, Vanguard, and State Street, which together constitute the largest shareholder in 88 percent of the S&P 500 firms (Fichtner, Heemskerk, & Garcia-Bernardo, 2017). Blackrock's assets under management increased from $3.346 trillion in 2009 to $6.288 trillion in 2017, of which 50% were invested in index funds and ETFs in 2009 and 66% in 2017 (Blackrock, 2018). According to the data I collected, the three companies' collective ownership of S&P 500 companies grew from 8.4% in 2008 to 19.9% in 2017. In other words, in the current capital market in the US, three large institutional investors own on average one-fifth of shares of all S&P 500 companies.

Second, American corporations are under greater threat of activist hedge funds. According to FactSet, a financial research firm, the number of high impact campaigns by activist shareholders increased from 238 in 2011 to 364 in 2019. Hedge fund activists' reach is growing wider as well. Although hedge funds have traditionally targeted small-cap companies, they also began to target

larger companies beginning around 2013. The median market cap of target companies increased from $55 million in 2009 to $283 million in 2015, and between 2009 and 2015, 15% of S&P 500 companies faced activist campaigns. For example, large companies such as Apple, GE, and Qualcomm were targeted by Carl Icahn, Trian Fund Management, and JANA Partners, respectively. Activist hedge funds aim to change the way a company is managed to maximize the company's performance and shareholder value. In this chapter, I analyze each trend in depth and discuss potential implications.

Increasing Concentration of Ownership by Index Funds

Ownership in American corporations has traditionally been dispersed. Berle and Means described in their seminal book published in 1932, *The Modern Corporation and Private Property*, that the share ownership of American corporations in the 20th century was greatly dispersed among thousands of shareholders. The reason is as follows: as the US economy underwent a rapid growth during the 19th and the early 20th centuries, American corporations grew enormously in size. The growing need of capital by large American corporations was met by investors around the country, resulting in a dispersed stock ownership.

The typical shareholder of large American corporations did not have the knowledge, experience, and commitment to be involved in the day-to-day activities of the firms. As a result, salaried managers who have little share ownership managed the firms' activities without effective shareholder control. "Managerialism" arose as ownership was separated from control, and as managers became more influential than shareholders in managing the companies.

Dispersed ownership is a central problem in the study of corporate governance. By the 1970s, law and economics scholars started to question the widely accepted theory of managerialism. How could a diffused share ownership become so prevalent in modern corporations if it leads to mismanagement? Defining public corporations as the nexus-of-contracts among individuals, Jensen and Meckling (1976) focused on the problem that agency cost is inherent in the relationship between shareholders and managers. However, they suggested that a capital market and a market for managers incentivize managers to orient toward shareholder value and to reduce agency cost. Fama and Jensen (1983) also explained that the agency problems resulting from separation of decision management from risk-bearing functions could be controlled by separating the management (initiation and implementation) and control (ratification and monitoring) of decisions.

Yet, sociologists and organizational theorists criticized the contractarian and functionalist view of the corporations held by law and economics scholars (Granovetter, 1985). Critics pointed out the problem that the contractarian approach failed to consider social structure and politics in the functioning of the governance systems. Also, critics argued that the functionalist approach - explaining corporations and surrounding institutions by their function of promoting stock market value - neglected the dynamics and diversity of governance institutions. Sociologists and organizational theorists responded to the limitation of the contractarian and functionalist approach by providing alternative interpretations of corporate governance systems based on history, power, and culture (Fligstein, 1990; Roy, 1997; Davis, 2005).

Ownership has become more concentrated in the hands of index funds since 2008. Beginning from the early 1980s, American households increased their participation in the equity market by purchasing shares in mutual funds for their personal pension plans. As a result, a

handful of popular mutual funds, such as Fidelity, have become the most significant corporate owners, holding almost 30% of US corporate ownership as a group in mid 2000s (Davis, 2008). While these mutual funds had the potential power to influence corporate governance of their invested firms, they were reluctant to engage with their invested firms partly due to conflicts of interest. Yet, research shows that mutual funds tend to vote with management when they have business ties with the firms (Davis and Kim, 2007). Another possible reason that mutual funds remained passive in general was because they rarely maintained their ownership block for more than 5 years, routinely liquidating their large holdings. In sum, mutual funds in the late 1990s and early 2000s passively controlled their invested firms, and were actively managed.

Since 2008, a massive shift has occurred from expensive, actively managed mutual funds towards cheap, passively managed index mutual funds and exchange traded funds (ETFs). Consequently, Blackrock, Vanguard, and State Street - the three biggest index fund managers in the US - collectively constitute the largest shareholder in at least 40 percent of all US public companies and 88 percent of the S&P 500 companies (Fichtner, Heemskerk, and Garcia-Bernardo, 2017).

Largely due to the inexpensive nature of passive index funds, their returns are higher than the returns of most actively managed funds. Therefore, it was not by chance that passive index funds attracted institutional and retail investors around the country during the past decade. In 2007, Warren Buffett, a renowned investor and a chairman of Berkshire Hathaway, betted against Protege Partners that an index fund would outperform a basket of actively managed hedge funds in the following decade. After 10 years, Buffet's prediction turned out to be correct as his S&P500 index fund returned 7.1% compounded annually, while a basket of hedge funds selected by Protege Partners returned an average of 2.2%.

ETFs are securities that are created to behave the same way as a specific index or a collection of different securities. ETFs became popular investment tools as they combine desirable traits of index funds and stocks. Like index funds, ETFs are low-cost, diversified, and mostly passively managed. Like stocks, ETFs are traded on stock exchanges whenever the market is open through broker-dealers. The largest ETF by AUM is SPDR S&P 500 from State Street, which is also the oldest ETF that tracks the S&P 500. The second largest ETF is iShares Core S&P 500 from Blackrock, and the third largest ETF is the Vanguard Total Stock Market ETF that tracks the entire U.S. stock market. In addition to tracking a specific index, ETFs can also be created by combining a set of stocks in a specific sector or a country.

I explain below a brief history of the three largest index funds in the U.S - Blackrock, Vanguard, and State Street.

BlackRock, Inc.

Blackrock was founded in 1988 as an institutional asset manager by Laurence Fink and his former colleagues from First Boston investment bank. Laurence Fink and his team started their business under the umbrella of The Blackstone Group as The Blackstone Group offered a $5 million credit line to launch a joint venture. However, due to a disagreement regarding methods of compensation, Laurence Fink and his team branched out on their own in 1994, naming their asset management operation Blackrock.

After going public on the New York Stock Exchange in 1999, Blackrock broadened their platform in the asset management industry partly through M&As. Blackrock acquired State Street Research & Management's holding company in 2005, including its mutual fund business.

In 2009, Blackrock acquired Barclays Global Investors (BGI) which included its exchange-traded-fund (ETF) business called iShares. Since Blackrock's acquisition of BGI, iShares asset under management (AUM) increased from $385 billion to $2.2 trillion, now comprising 30% of Blackrock's AUM. In addition to ETF business, Blackrock also grew its index investment business. Its non-ETF index investment now comprises of 36% of its AUM, while its active investment comprises of 26%. In 2019, Blackrock's revenue reached $14.5 billion, leaving $4.5 billion of net income. At the end of 2019, Blackrock had $7.4 trillion of assets under management. Due to the coronavirus pandemic, Blackrock's assets under management fell to $6.5 trillion AUM on March 31st, 2020.

The Vanguard Group, Inc.

Vanguard, the largest mutual fund company, was founded in 1974 by John Bogle. John Bogle was a pioneer investor who saw an opportunity in low-cost index funds. He knew from his earlier years that tracking the benchmark index could be more profitable than investing in actively managed funds that charged a high management fee. In 1976, he created the first mutual index fund that tracked the performance of S&P 500, and made it available to the general public. Although the first index fund was not well received by the public at first, John Bogle persisted with his original model, growing the fund to be one of the largest in the world today (now called the Vanguard 500 Index Fund). After offering the second mutual fund in 1986, Vanguard successfully launched a series of other index funds, including a total stock market index fund and a small cap index fund. One of the reasons why Vanguard could keep their expense ratio low (0.10%), less than one-fifth that of the industry average (0.58%), is because it is a mutual fund company that is owned by its fund investors. Because Vanguard does not have outside owners

like many other investment management companies, it can return profits to their fund investors in the form of low expenses. As of 2019, Vanguard has $5.6 trillion in assets under management, and operates about 190 funds in the U.S. and 220 funds abroad.

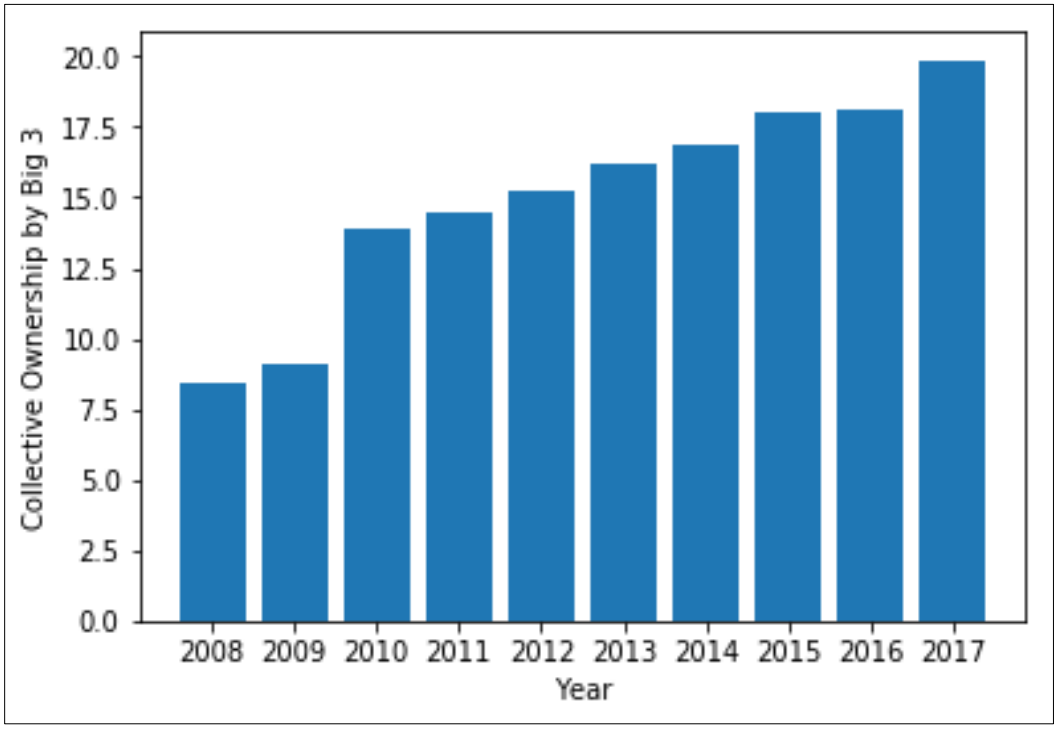
State Street Corporation

State Street's predecessor, Union Bank, was founded in 1792. Union Bank later became the National Union Bank of Boston, and in 1925, it merged with State Street Deposit & Trust which was established in 1891. The State Street name survived, but because the merged bank operated under National Union's charter, it is regarded as the second oldest US bank in continuous operation.

State Street created the first ETF in 1993. In late 1980s, when American Stock Exchange (Amex) had been losing behind the NYSE and Nasdaq, Nathan Most, the VP of Amex new product development, and his colleague Steven Bloom came up with a new product idea that later became the first ETF. At first, Most and Bloom approached Vanguard to establish a partnership. However, John Bogle disliked the idea of frequent trading as he was afraid that it would drive up the cost. Most and Bloom then approached State Street, and in 1993, the team finally launched the first ETF, called SPDR S&P 500 (Standard & Poor's Depositary Receipts), that tracked S&P 500 index. SPDR S&P 500 was first traded on Amex, but since NYSE Euronext acquired Amex in 2008, it has been listed on NYSE Arca. In 2019, State Street's revenue reached $11.8 billion, leading to $2.2 billion of net income. As of 2019, State Street has $3.1 trillion in assets under management.

Then, how much did the collective ownership by Blackrock, Vanguard, and State Street grow since the financial crisis? Patterns in the data show that for S&P500 companies, the average collective ownership by Big Three index funds more than doubled from 8.4% in 2008 to 19.9% in 2017. As can be seen in Figure II.1, ownership is increasingly concentrated in the hands of three largest index funds.

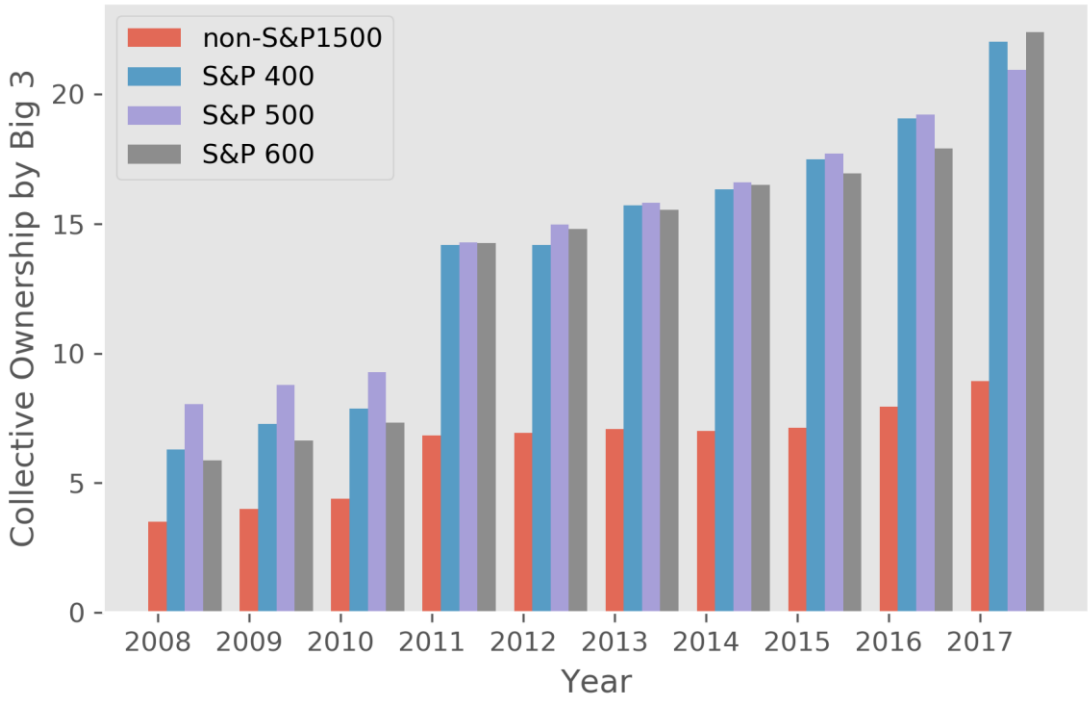
Figure Ⅱ.1. Average collective ownership by Blackrock, Vanguard, and State Street (using 13F data from Thomson Reuters)



Similarly, for S&P1500 companies – 1,500 companies in the S&P 500 large cap, S&P 400 mid cap, and S&P 600 small cap indices – the average collective ownership by Big Three index funds tripled from 7.1% in 2008 to 21.3% in 2017. Figure II.2. reveals that the level of ownership by the Big Three has been similarly increasing across S&P 500, S&P 400, and S&P

600 categories. However, for firms that fall outside of the S&P1500 index, the Big Three's collective ownership increased from 3.6% in 2008 to 9.0% in 2017, reflecting the fact that the increasing concentration of ownership is mainly caused by the growth of index funds.

Figure II.2. Average collective ownership by Big3 index funds for firms in each S&P category (using 13F data from Thomson Reuters)



Increasing concentration can have broad consequences. Some researchers predict that large block holders will have a power and a vested interest in improving firms' governance structures and performance. Because of the nature of index funds, they lack the discretion to buy and sell, and thus their only option is to exercise voice. Also, so long as firms remain in an index, leading index funds are guaranteed to be their long-term block holders. In this line of prediction, research found that passive index funds use their large voting blocs to influence firms to appoint more independent directors and remove takeover defenses and dual-class share structure (Appel,

Gormley, and Keim, 2016). In addition to voting, institutional investors engage with managers and boards behind-the-scenes to improve corporate governance. Research reveals that long-term investors intervene more intensely than short-term investors (McCahery, Sautner, and Starks, 2016).

On the other hand, some researchers argue that concentrated ownership without active engagement will rather weaken the governance structure, leading to managerial entrenchment. Because large index funds cover thousands of stocks and their value comes from their low-cost model, index funds will find active monitoring costly. In this line of prediction, research shows that passive index fund ownership increases the likelihood that the CEO becomes president or chairman and reduces the fraction of newly appointed independent board members (Schmidt and Fahlenbrach, 2017).

Another consequence of increased concentration of ownership by a handful of index funds is an increase in common ownership. Some researchers argue that common ownership will reduce firms' incentive to compete, leading to reduced product market competition. Research shows that common ownership of airline companies resulted in 3-7% higher airline ticket prices, generating hidden social cost (Azar, Schmalz, and Tecu, 2018). In sum, increasing concentration of ownership by Big3 index funds have broad consequences, and several studies show mixed findings.

Then, what are the principles that drive index funds' proxy voting decisions? As can be seen below in the summary of the proxy voting guidelines for Blackrock, Vanguard, and State Street, Big3 index funds encourage - and sometimes require - companies to ensure board accountability and promote long-term growth.

Blackrock's proxy voting guidelines

Blackrock states that its primary concern is the best long-term economic interest of shareholders. In order to protect and enhance shareholders' long-term economic interest, Blackrock exercises its voting rights based on the following guidelines.

First, regarding board composition, Blackrock expects most of the board of directors of their invested firms to be independent so that boards can act in the best interest of the companies. Blackrock specifically requires that all members of key committees - audit, compensation, and nominating/governance committees - should be independent. In addition, in order to ensure that the directors exercise appropriate oversight of management, Blackrock discourages directors from sitting on the board of more than four companies (or, two companies if he/she serves as a CEO of the company under review). Blackrock may vote against directors when a board amends the charter, articles, or bylaws such that the effect may be to significantly reduce shareholder rights (e.g. implementing or renewing a poison pill without shareholder approval). Blackrock asks boards for regular performance reviews and skills assessments and expects the boards to be comprised of diverse individuals based on multiple dimensions such as gender, ethnicity, race, age, experience, geographic location, skills, and perspective in the nomination process. Regarding gender diversity, Blackrock encourages boards to have at least two female directors.

Second, Blackrock has the following voting guidelines regarding governance structures. While Blackrock typically supports the annual election of the boards, it allows for exceptions when boards provide an appropriate strategic rationale for a classified board structure. Blackrock believes that a majority vote standard - requiring directors to be elected by a majority of the shares voted - ensures director accountability, and thus generally opposes cumulative voting. Blackrock defers to boards to choose the most appropriate leadership structure. However, when

companies choose a combined chair / CEO model, Blackrock encourages the board to designate a lead independent director who has the power to provide formal input into board meeting agendas, and to call and preside at meetings of the independent directors. While Blackrock believes that every common stock should have equal voting rights, it allows for multi-class share structures if companies receive shareholder approval on a periodic basis. In general, Blackrock supports standardized proxy access proposals that allow a shareholder who held three percent of a company's shares for at least three years the right to nominate the greater of up to two directors or 20% of the board.

Third, Blackrock believes that compensation committees are in the best position to determine the appropriate compensation plans. While Blackrock defers to compensation committees to make compensation decisions, it requires the compensation committee to clearly demonstrate how the compensation plans reflect corporate strategy and how they incentivize long-term shareholder value creation.

Vanguard's proxy voting guidelines

What are Vanguard's proxy voting guidelines? First, regarding board composition, Vanguard requires a majority of the boards to be independent. If this is not the case, it may vote against the nominating committee and all non-independent board members. If the board continues to be majority non-independent in the second year, Vanguard may vote against the entire board. Vanguard specifically requires all directors in the following key committees - audit, compensation, and nominating and governance committee - to be independent. In order to ensure that each director can fulfill his/her responsibility at each company, Vanguard limits the

maximum number of directorship positions each director can serve to four boards (or, two boards if he/she is a named executive officer of the company under review).

Second, Vanguard generally supports the following governance structures to ensure accountability of the board and management. In general, Vanguard promotes declassified board structure, a majority voting for election of directors, equal voting rights, and proxy access. Vanguard generally votes against the adoption of poison pills.

Third, Vanguard votes case-by-case on executive compensation proposals because it understands that norms and expectations can vary by company size, age, location, and industry. Yet, in order to ensure that compensation plans are linked to long-term shareholder value, Vanguard specifically states that the following factors are to be considered as red flags - the long-term plan making up less than 50% of total pay or having a performance period of less than three years.

State Street's proxy voting guidelines

What are the principles that drive State Street's proxy voting decisions? First, regarding board composition, State Street believes that a sufficiently independent board will effectively perform oversight functions to protect shareholder value. State Street specifically requires directors of key committees - compensation, audit, nomination, and other committees that are required to be fully independent by local market standards - should be independent. When companies demonstrate negative governance practices, State Street will apply stricter standards for director independence. In order to ensure board commitment at each company, State Street may withhold votes from director nominees who sit on more than six public company boards, or

CEOs of a public company who sit on more than three public company boards. State Street expects boards of Russell 3000 to have at least one female board member.

Second, in terms of governance structures, State Street generally supports annual elections for the board of directors, majority vote standard, and equal voting rights. State Street generally votes against the adoption or renewal of poison pills, and supports mandates requiring shareholder approval of a poison pill. While State Street believes that proxy access is a fundamental right for long-term shareholders, it reviews proxy access proposals on a case-by-case basis to provide management the flexibility to design the system. Similarly, State Street analyzes proposals for the separation of chair/CEO on a case-by-case basis to take into account the role of a lead director and the overall governance structure as well as the performance of the company.

Third, State Street supports proposals on executive compensation that have a strong relationship between executive pay and company performance over a five-year period. State Street expects companies to disclose information on absolute and relative pay levels, peer selection, the mix of long-term and short-term incentives, and how executive pay structures are aligned with shareholder interest and company strategy and performance.

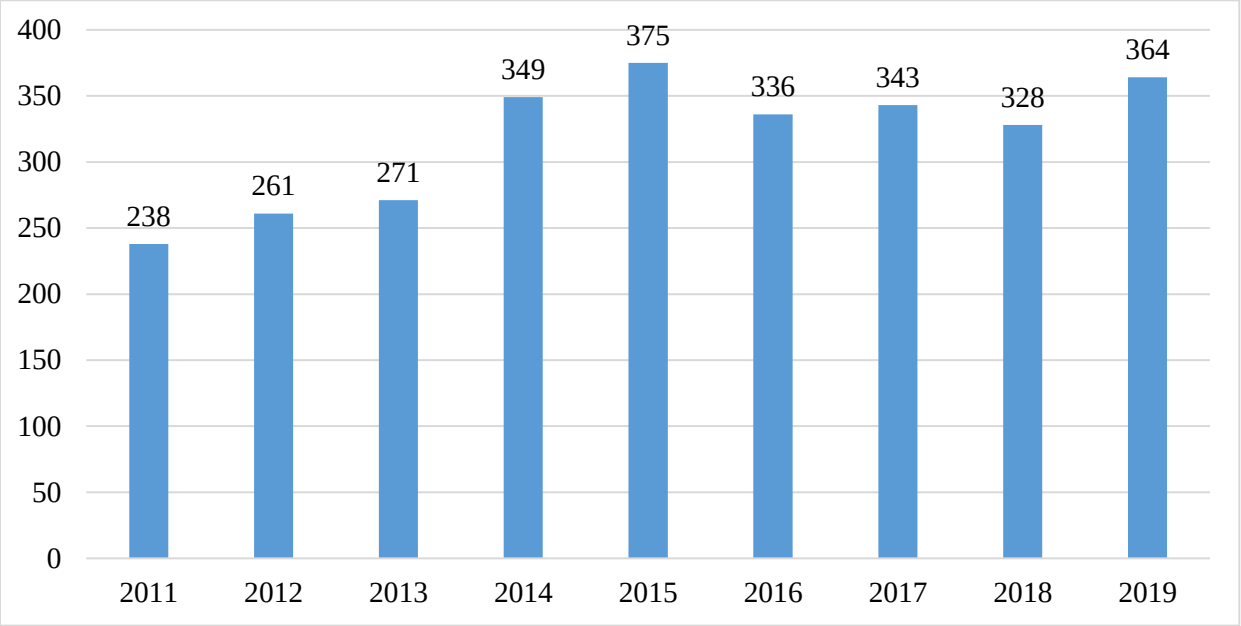
Increasing Threat of Activist Hedge Funds

At the same time, activist hedge funds have become more prevalent. Hedge fund industry has experienced an explosive growth in the past 25 years. From early 1990s to 2003, the number of hedge funds in the US increased from approximately 400 to 6,000 (Staff Report to the US SEC, 2003). During the same period, hedge funds' assets under management grew from $50 billion to $600 billion. As of 2019, there are over 9,000 hedge funds in the US with more than $3.1 trillion AUM.

Hedge fund activism is a relatively recent phenomenon that became prevalent after 2000 (Brav, Jiang, and Kim, 2015). During the early 1990s, less than 50 activisms were initiated annually based on the number of Schedule 13D filings. In 2011, 238 high impact campaigns were announced against US companies, and the number reached 364 in 2019 (FactSet SharkWatch). Figure II.3 shows the number of high impact campaigns in the US from 2011 to 2019. High impact campaigns are defined as campaigns involving market moving objectives: board control, board representation, maximization of shareholder value, public short position/bear raid, removal of director(s), no dissident nominee to fill vacancy, removal of officer(s).

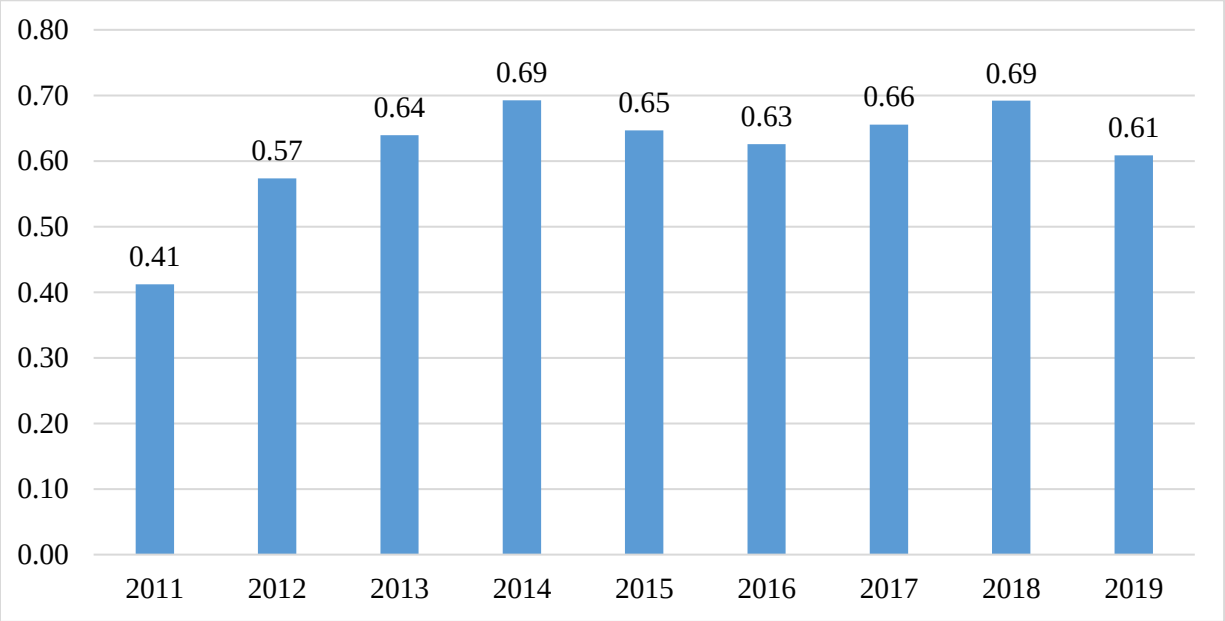
Figure II.3. Number of high impact campaigns from 2011 to 2019

(from FactSet SharkWatch)



Hedge funds and their activism campaigns not only grew in number, but they have also become more successful in obtaining board seats. In 2011, out of 131 campaigns that sought board seats, 54 campaigns obtained a seat, leading to on average 0.41 board seats per campaign. In 2019, 161 campaigns sought board seats, and 98 campaigns received a seat, leading to on average 0.61 board seats per campaign (FactSet SharkWatch). Figure II.4 shows the success rate of high impact campaigns in the US in obtaining board seats from 2011 to 2019.

Figure II.4. Success rate of high impact campaigns in the US in obtaining board seats (from FactSet SharkWatch)



How does hedge fund activism affect target firms? Research shows that hedge fund activism promotes shareholder value and firm performance. Empirical studies found approximately 7% abnormal return around the announcement of activism (Brav, Jiang, Partnoy, and Thomas, 2008) and improvement in a firm's production and innovation efficiency over the five-year period following hedge fund intervention (Brav, Jiang, and Kim 2015; Brav, Jiang, Ma, and Tian, 2018).

Yet, employees of target firms do not share the benefits of the improvements associated with hedge fund activism (Brav, Jiang, and Kim, 2015). Rather, hedge fund activism facilitates transfer of labor rents to shareholders, thus negatively affecting workers' welfare. An empirical study found that activist intervention leads to 7.3% reduction in productivity-adjusted per-hour wages for employees of target companies (Brav, Jiang, and Kim, 2015).

Schedule 13D, commonly referred to as a beneficial ownership report, is used to create activist hedge funds' ownership measures. Any individual or group of persons that acquires more than 5% of a voting class of a company's equity securities with the intent of influencing control of the issuer is required to file Schedule 13D with the U.S. Securities and Exchange Commission (SEC) within 10 days after the purchase. Schedule 13D allows the investing public to understand who the largest shareholders of a company are and the purpose of their transactions. However, institutional investors are eligible to file abbreviated Schedule 13G if they have not acquired the securities with an intent of influencing control of the issuer. Similarly, individuals who are not institutional investors can also file Schedule 13G if they have not acquired the securities with an intent of influencing the issuer and are not beneficial owner of 20% or more of the security.

I explain below how I created activist hedge funds' ownership measures using Schedule 13D. First, I downloaded SEC's index files for all quarters from 2008 to 2018 from the SEC website[1]. SEC's index files provide information on form type, company name, CIK, date of filing, and web address for every filing submitted to SEC. Then, using form type, I read in index files for Schedule 13Ds to pandas DataFrame in Python. In total, 131,853 13D or 13D/A documents were filed with SEC between 2008 and 2018.

Second, using Requests and Beautiful Soup modules and web addresses in the index files, I fetched the names and CIKs of filers and issuers for every 13D filing. It is important to note that not all company names in the index files are names of the filers – approximately half of the company names in the index files are names of the issuers. For this reason, I fetched the names and CIK of filers and issuers from the original 13D filings instead of relying on company

[1] www.sec.gov/Archives/edgar/full-index/

information on index files. Then, when issuers' CIK was in my sample, I fetched information on ownership (%), purpose of transaction, and filing date from the original 13D filings. The second step resulted in 26,549 13D and 13D/A filings.

Third, I coded 1 if the filer of 13D was one of 100 activist shareholders identified by Thomson Reuters Corporate Governance database and 0 otherwise. Table II.1 shows the names of 100 activist shareholders selected by Thomson Reuters. For robustness check, I used FactSet SharkWatch 50 key activists list to identify activist hedge funds. Table II.2 lists the names of 50 key activists selected by FactSet SharkWatch. Table II.2 from FactSet SharkWatch also shows activists' equity assets, assets under management, total number of campaigns initiated by each activist until the end of 2019, and the number of high impact campaigns.

Table Ⅱ.1. List of 100 activist shareholders (from Thomson Reuters database)

	Name		Name
1	Accipiter Capital Management LLC	51	Loeb Partners Corporation
2	Arcadia Capital Management	52	Luminus Management LLC
3	Atticus Capital LP	53	Marathon Partners
4	Barington Capital Group LP	54	Millennium Management LLC
5	Biglari Capital Corporation	55	MMI Investments LP
6	Biotechnology Value Fund LP	56	Nanes Balkany Partners LLC
7	BlueLine Partners LLC	57	New Mountain Vantage LP
8	Breeden Capital Management LLC	58	Newcastle Partners LP
9	Brencourt Advisors LLC	59	Obrem Capital Management LLC
10	Bulldog Investors General Partnership	60	Oliver Press Partners LLC
11	Cannell Capital Management LLC	61	Opportunity Partners LP
12	Carlson Capital LP	62	Osmium Partners LLC
13	Catalyst Fund Managers Pty Ltd	63	Palo Alto Investors LLC
14	Caxton Associates LP	64	Pardus Capital Management LP
15	Centennial Energy Partners LP	65	Paulson & Co Inc
16	Chapman Capital LLC	66	Perry Capital LLC
17	Clinton Group Inc	67	Pershing Square Capital Management
18	Costa Brava Partners	68	Pirate Capital LLC
19	Cowen Group Inc	69	PL Capital LLC
20	Crescendo Partners II LP	70	Q Investments LP
21	D E Shaw & Co LP	71	Quercus Trust
22	DellaCamera Capital Management LLC	72	Raging Capital Management LLC
23	Dialectic Capital Management LLC	73	Red Oak Capital Partners LLC
24	Discovery Group I LLC	74	Relational Investors LLC
25	Dolphin Limited Partnership III LP	75	Richard M. Osborne Trust
26	Eastbourne Capital Management LLC	76	Riley Investment Management LLC
27	Elliott International Capital Advisors	77	SAC Capital Advisors LP
28	Eminence Capital LLC	78	Sandell Asset Management Corp
29	Farallon Capital Management LLC	79	Santa Monica Partners LP
30	Financial Edge Fund LP	80	Shamrock Capital Advisors Inc
31	Firebrand Financial Group Inc	81	Soros Fund Management LLC
32	GAMCO Investors Inc	82	Southeastern Asset Management Inc
33	Greenlight Capital Inc	83	Spencer Capital Management LLC
34	Harbert Management Corporation	84	Steel Partners LLC
35	Harbinger Capital Partners	85	Sterling Capital Management LLC
36	Henry Investment Trust LP	86	Stilwell Value LLC
37	Highfields Capital Management LP	87	Strome Investment Management LP
38	Highland Capital Management LP	88	Susan L Ciciora Trust

39	Icahn Associates Corporation	89	Tang Capital Management LLC
40	JANA Partners LLC	90	Tennenbaum Capital Partners LLC
41	Jewelcor Management Inc	91	Third Point LLC
42	K Capital Partners LLC	92	Toscafund Asset Management LLP
43	Kanders & Co Inc	93	Trian Fund Management LP
44	Karpus Investment Management	94	Trilogy Inc
45	Kingstown Capital Partners LLC	95	Trinad Advisors LLC
46	Lawndale Capital Management LLC	96	ValueAct Capital Partners LP
47	Laxey Partners Limited	97	Wattles Capital Management LLC
48	Lenox Wealth Management Inc	98	Western Investment LLC
49	Liberation Investment Group LLC	99	Wintergreen Advisers LLC
50	Locksmith Capital Management LLC	100	Wynnefield Capital Inc

Table Ⅱ.2. List of 50 key activists (from FactSet SharkWatch database)

	Name	**Equity Assets ($mil)**	**AUM ($mil)**	**Total Campaign**	**High Impact**
1	TCI Fund Management Ltd.	23774.96	0	27	15
2	Icahn Associates Holding LLC	19209.98	0	156	105
3	GAMCO Asset Management, Inc.	10208.55	12973	620	74
4	Elliott Management Corp.	9966.1	67863	188	123
5	ValueAct Capital Management LP	9464.93	13948	115	53
6	Trian Fund Management LP	8294.98	9822	29	28
7	Cevian Capital AB	8181.22	0	17	14
8	Third Point LLC	7647.91	19279	70	46
9	Southeastern Asset Management, Inc.	6141.22	14063	34	23
10	Pershing Square Capital Management LP	5603.28	9629	61	34
11	Carlson Capital LP	4293.47	15990	30	13
12	City of London Investment Management Co. Ltd.	3580.22	5203	42	33
13	Starboard Value LP	3250.48	5549	167	126
14	Karpus Management, Inc.	2803.32	3443	134	68
15	Ancora Advisors LLC	1323.48	4612	49	32
16	Basswood Capital Management LLC	894.3	2640	12	10
17	Greenlight Capital, Inc.	868.33	1857	42	26
18	Engaged Capital LLC	794.35	0	32	29
19	JANA Partners LLC	785.77	3565	69	52
20	Corvex Management LP	758	2417	24	22
21	Sarissa Capital Management LP	698.15	0	15	9
22	Mangrove Partners	466.08	2101	14	11

23	Land & Buildings Investment Management LLC	423.17	577	31	28
24	Raging Capital Management LLC	366.02	1221	37	26
25	Biglari Capital LLC	345.43	1009	21	16
26	Oasis Management (Hong Kong) LLC	311.54	0	25	21
27	Sandell Asset Management Corp.	259.59	491	40	35
28	Legion Partners Asset Management LLC	258	415	22	20
29	Highland Capital Management LP	257.95	5467	25	16
30	PL Capital Advisors LLC	227.73	393	55	42
31	Cannell Capital LLC	213.54	492	54	41
32	Steel Partners LLC	194.6	0	136	74
33	Bulldog Investors LLC	192.29	398	226	171
34	Engine Capital Management LP	175.71	0	29	29
35	Wynnefield Capital, Inc.	126.29	233	99	60
36	Crystal Amber Advisers (UK) LLP	121.6	0	11	10
37	Voce Capital Management LLC	119	203	23	20
38	VIEX Capital Advisors, LLC	117.08	0	31	24
39	Stilwell Value LLC	83.43	206	90	84
40	Veteri Place Corp.	67.77	207	53	46
41	Northern Right Capital Management LP	65.98	196	30	21
42	Fondren Management LP	54.69	217	22	18
43	Osmium Partners LLC	53.99	0	15	10
44	Red Mountain Capital Partners LLC	50.39	153	16	16
45	Barington Companies Investors LLC	36.63	120	51	43
46	Privet Fund Management LLC	33.15	211	27	17
47	Clover Partners LP	24.83	87	16	15
48	FrontFour Capital Group LLC	14.85	208	25	23
49	Marcato Capital Management LP	2.04	625	26	24
50	Clinton Group, Inc.	0	460	53	46

Finally, I organized the data set by issuer-year, the unit of analysis. More specifically, when a shareholder filed multiple 13D(/A) in the same year for the same issuer, I kept the earliest filing data of the year to mark the beginning of the potential control by the filer. Also, when multiple shareholders, including an activist hedge fund, filed 13D(/A) for the same issuer on the same year, I kept data on the activist hedge fund as it has the highest potential to influence

the control of the issuer company. As a result, 8,420 issuer-year observations had at least one shareholder that owned more than 5% of their shares, and 1,532 issuer-year observations had an active hedge fund as their beneficial owner.

Schedule 13D filings data show that the most active hedge fund measured by the number of 13D filing is Gamco Investors followed by Icahn Associates and ValueAct. Gamco Investors was an active shareholder for 595 observations, contributing to more than 1/3 of the 13D filed by 100 activist hedge funds. The result is consistent with the analysis by the FactSet SharkWatch database that shows Gamco as the activist with the highest number of total campaigns. Table II.3 lists 10 most active hedge funds in order of frequency. When I used SharkWatch 50 key activist list, the results were similar. While SharkWatch does not include Discovery Group or Relational Investors in its list, it includes Starboard Value that ranks fourth and ties with Stilwell Value in order of frequency. Thomson Reuters and FactSet SharkWatch share eight out of the top ten activist hedge funds in their lists.

Table Ⅱ.3. Top 10 activist hedge funds in order of frequency

Top	Names	# of Observations
1	Gamco Investors	595
2	Icahn Associates	117
3	VA Partners / ValueAct Capital	78
4	Discovery Group	57
5	Stilwell Value	45
6	Elliott Associates	37
7	Pershing Square Capital Management	37
8	Trian Fund Management	34
9	Relational Investors	30
10	Clinton Group	29

Table II.4 shows the percentage of observations that were under activist hedge funds' ownership by S&P indices, and Table II.5 shows the number of target firms under activist hedge funds' ownership by year.

Table Ⅱ.4. Percentage of observations under activist hedge funds' ownership by S&P indices

	S&P 500	**S&P 400**	**S&P 600**	**Non-S&P 1500**
% of observations under hedge fund activisms	3.9%	5.2%	6.1%	5.3%
Total # of obs.	4,115	2,006	1,876	5,033

*The table is based on the samples that have minimum 10 Glassdoor reviews per firm-year and covers observations over the whole sample period. Both Thomson Reuters and FactSet SharkWatch lists were used to code activist hedge funds.

Table Ⅱ.5. Number of target firms under hedge fund activism by year

Year	**Number of target firms under activism**	**Percentage**	**Cumulative Percentage**
2008	8	3.08	3.08
2009	6	2.31	5.38
2010	8	3.08	8.46
2011	17	6.54	15.00
2012	18	6.92	21.92
2013	29	11.15	33.08
2014	41	15.77	48.85
2015	54	20.77	69.62
2016	45	17.31	86.92
2017	34	13.08	100.00
Total	260	100.00	

* The table is based on the samples that have minimum 20 Glassdoor reviews per firm-year

Together, these trends create a dilemma: long term vs. short term. While Blackrock, Vanguard, and State Street are expected to maintain ownership of their invested firms for decades, the average holding period for activist hedge funds is around 20 months (Brav, Jiang, Partnoy, & Thomas, 2008). Because of the difference in the length of ownership, the Big Three and activist hedge funds may have opposing views on how they treat workers of the invested firms. The CEO of Blackrock emphasizes the importance of employee training and welfare for firms' long-term growth. Yet, hedge fund activists focus on the efficient use of labor to improve operational performance and shareholder value of target firms. Due to their conflicting views, Laurence Fink, a CEO of Blackrock, criticized hedge fund activisms for putting pressure on corporate decision makers to generate short-term profit at the expense of long-term value creation (Blackrock, 2018).

This dissertation explores how the recent changes in the US capital market and the following tension between short-term vs. long-term focus affect firms' labor relations. How do these changes in the capital market affect firms' attention to human capital? Also, how do employees respond to these changes?

CHAPTER III

Context – Managing Human Capital

Introduction

Human capital is the physical and mental abilities of people that can raise real income in the future (Becker, 1962). Gary Becker, a Nobel Laureate economist whose seminal book, *Human Capital*, explained that human capital investment not only includes the on-the-job training and schooling that increase knowledge and skill, but also includes investment in people's emotional health and morale, which increases motivation and intensity of work. In the context of a business organization, human capital is employees' physical and mental abilities that are used to achieve organizational goals. As such, human capital management refers to a firm's management of its employees' physical and mental abilities to achieve the company's goals.

How do researchers measure human capital? Unlike physical capital, measuring the level of firms' human capital is challenging because it is intangible. In order to measure firms' human capital, many organizational researchers use employee surveys or observe the existence of management practices and policies that are known to positively affect human capital. Some finance researchers use SG&A (selling, general, and administrative) expenses to indirectly measure organizational capital – a production factor that is embodied in the firm's key talent and of which the efficiency is firm specific (Eisfeldt & Papanikolaou, 2013) – which is comparable to human capital. There are also third-party professional organizations such as ESG/Socrates, KLD and

Great Place To Work Institute that collect information on firms' human capital and human capital management practices. Table III.1 shows the list of variables, operationalization strategy, and the data coverage that are provided by these professional organizations.

Table Ⅲ.1. Existing measures of human capital management performances

	Construct	Operationalization	Coverage	Data source
1	Human capital performance (0-10)	Social score based on 1. labor management 2. health and safety 3. human capital development 4. supply chain labor standards	2,000 companies worldwide (in 2010) 6,800 companies worldwide (2,300+ US companies) (in 2018)	MSCI ESG
2	Diversity strength (0-)	1. CEO (-2009) 2. representation 3. board of directors 4. family benefits 5. woman/minority contracting 6. employment of the disabled (-2009) 7. progressive gay/lesbian policies (1995-) 8. employment of underrepresented groups (2010-) 8. other strengths	S&P 500 and Domini 400 (1991-2000)	KLD/ Socrates
3	Diversity concern (0-)	1. workforce diversity controversies 2. non-representation (1993-) 3. board diversity 4. other concern (-2009)	+1000 largest US companies (2001-2002)	
4	Employee relations strength (0-)	1. union relations strengths 2. no layoff policy (-1993) 3. cash profit sharing 4. involvement 5. strong retirement benefits (-2009) 6. health and safety strengths (2003-) 7. supply chain policies (2002-) 8. other strengths	+3000 largest US companies (2003-present)	

5	Employee relations concern (0-)	1. union relations concerns 2. health and safety concerns 3. workforce reductions (-2009) 4. pension/benefits concerns (1992-2009) 5. supply chain concerns (1998) 6. labor management relations concerns		
6	Culture	1. pay and benefits programs 2. corporate practices 3. others	400+ companies	Great Place to Work Institute Culture Audit Survey
7	Trust	1. attitudes toward management 2. job satisfaction 3. fairness in the workplace 4. camaraderie	447,529 workers	Great Place to Work Institute Trust Index Employee Survey

While existing data that measure human capital and its management are useful and have enabled meaningful research, there are some limitations to the existing approach in measuring and collecting human capital data. First, many traditional surveys have limited sample coverage, longitudinal data, and standardized measures. It is rare to find surveys that cover more than 1,000 companies and are repeatedly conducted over years using standardized measures. Lack of large samples and their longitudinal data with standardized measures reduces generalizability of the results, and limits causal analyses of the data.

Second, even when third parties launch longitudinal surveys that cover a large sample, most data are provided after being processed based on the institutions' own analyses. In other words, raw data and specific metrics that are used to produce company ranking or scores are not available to the public. Not having access to the raw data makes it hard to verify the data sets' validity and to conduct deeper analyses.

Third, the existing approach to collecting data from surveys is costly in many ways. Conducting large-scale surveys over time not only costs substantial resources for researchers, but also requires nontrivial time and commitment from the employees who fill out the surveys over periods of time.

Finally, measuring human capital indirectly by observing the existence of human capital-related policies or calculating human capital-related expenses can lead to low construct validity. For example, some variables in KLD data are evaluated based on whether firms have strong initiatives or programs, however, these policies may not reflect the actual culture of the companies and remain symbolic.

While measuring human capital management practices and performance is challenging, studying human capital management practices and performance is important in two ways. First, it has organizational consequences. For example, employee satisfaction, one of human capital management performances, is important for a company's long-term success. An empirical analysis shows that employee satisfaction is positively correlated with a company's long-run stock returns (Edmans, 2011). Moreover, low employee satisfaction combined with low psychological well-being can lead to a higher likelihood of turnover (Wright & Bonett, 2007).

Second, there is a growing need for a standardized measure of human capital management practices and performance. Policy makers, investors, and organizational scholars lack standard measures for human capital management practices and performances. For example, in July 2017, Human Capital Management Coalition, a group of 25 institutional investors representing over $2.9 trillion in assets, submitted a rulemaking petition to the SEC calling for the adoption of standards that would require publicly listed companies to disclose information on human capital management policies, practices, and performance (HCM Coalition, 2017).

In order to address these problems in traditional approaches to measure firms' human capital management practices and performances, and in response to this call for measurement, I suggest a new approach. The new approach involves collecting big data on public websites and conducting text analysis of the big data. The big data that I use in this dissertation are firms' annual reports (Form 10-K) and employees' anonymous reviews of their employers posted on a popular review website, Glassdoor.com (www.glassdoor.com).

By conducting text analysis of each firm's 10-K documents, I measure how much attention firms pay to their various human capital management practices. In chapter 3 of this dissertation, I analyze how corporate ownership affects firms' level of attention to their human capital management practices and employee satisfaction.

Also, by using employer reviews on Glassdoor.com, I measure overall employee satisfaction. Employee satisfaction is the level of positive attitudes employees have toward their companies. While employee satisfaction can have other dimensions, such as satisfaction with coworkers and supervisors, my research focuses on employees' satisfaction with their companies. More specific methods to create these variables are explained in the method section.

Text Analysis of Annual Reports (Form 10-K)

All U.S. companies with more than $10 million in assets and a class of equity securities that is held by more than 2,000 owners are required to submit annual reports on Form 10-K to U.S. Securities and Exchange Commission (SEC). Form 10-Ks provide comprehensive information on firms' business and financial condition. Every 10-K contains the following main sections: an overview of the company's business, risk factors, selected financial data, management's discussion

and analysis of the firm's business results, and financial statements. SEC requires firms to submit 10-Ks annually so that investors are aware of the firms' fundamental information, allowing investors to make informed investment decisions.

Several strengths of using Form 10-Ks to measure human capital management practices are as follows. First, analyzing Form 10-Ks allows researchers to study a large number of companies over multiple years and across companies. SEC discloses Form 10-Ks of all publicly traded companies and large private companies from 1993. For example, 9,839 10-Ks and 2,320 amended 10-Ks were filed to the SEC in 2009, all of which are accessible through its website. Because 10-Ks have maintained a standardized format, information in each section can be compared across companies and years. In this dissertation, I use the risk factors section of 10-Ks where companies list current and potential risks that can affect the firms' business in the future.

Second, 10-Ks are long documents of raw data that companies write about their businesses. Unlike many traditional data sets that provide internally processed scores or rankings, rich text information from 10-Ks allows researchers to actively engage with the data and take creative approaches to analyze them. Because 10-Ks do not require companies to write a section about their human capital management practices, it is at each firm's discretion to decide whether, what, and how to write about its human capital when documenting 10-Ks. Thus, I assume that a firm's 10-Ks are likely to reflect the management's interpretation and view of their human capital and its management practices. In this dissertation, I conduct text analysis of 10-K risk factors sections to measure the levels of firms' attention to their human capital and its management practices.

Third, using 10-Ks incurs no additional cost for data collection for researchers and potential survey respondents. For decades, thousands of companies have been leaving their traces on the

web by publishing 10-Ks every year. One of the greatest benefits of using big data is that it allows researchers to collect quality data in an unobtrusive and cost-effective way.

Finally, 10-Ks can capture, at a reasonably accurate level, the variations across firms in their human capital management practices. Companies are expected to list all the risk factors that may affect their businesses in the risk factors section. Therefore, companies that rely more heavily on their human capital and companies that pay higher attention to their human capital will list more human capital-related risk factors than companies that rely less on their human capital and companies that pay less attention to their human capital.

I explain below how I created human capital-related measures using 10-K documents. First, I downloaded index files for all quarters from 2008 to 2018 from the SEC website[2]. For every filing that was submitted to SEC, index files list information on the filer's name, filer's CIK, form type, filing date, and web address of the filing document. Then, using form type and CIK, I read in index files for 10-Ks of companies in my sample to pandas DataFrame in Python. The first step resulted in 42,524 10-K documents in total.

Second, using the web addresses in the index files and Requests module, I fetched all texts in the 10-K documents for all company-year observations. Next, I parsed the risk factors sections from 10-Ks. As a risk factors section begins with the title "Item 1A. Risk Factors" (or its minor variations) and it is followed by "Item 1B. Unresolved staff comments" (or its minor variations), I saved all strings between the two titles. For a small number of cases where "Item 1B" is absent, I used "Item 2. Properties" (or its minor variations) to mark the end of the section. Because titles are bolded, italicized, and/or underlined, I used html tags to get at titles. It is important to note that

[2] www.sec.gov/Archives/edgar/full-index/

there is one more place in 10-K where “Item 1A. Risk Factors” and “Item 1B. Unresolved staff comments” are used as titles – in the table of contents. Therefore, I chose the longer set of strings among the two fetched sets because the shorter set from the table of contents only has a page number in the string. In some instances where titles were not distinguished by html tags, I used plain texts to parse risk factors sections. As a result of the second step, I was able to parse risk factors sections for 40,146 10-K documents in total.

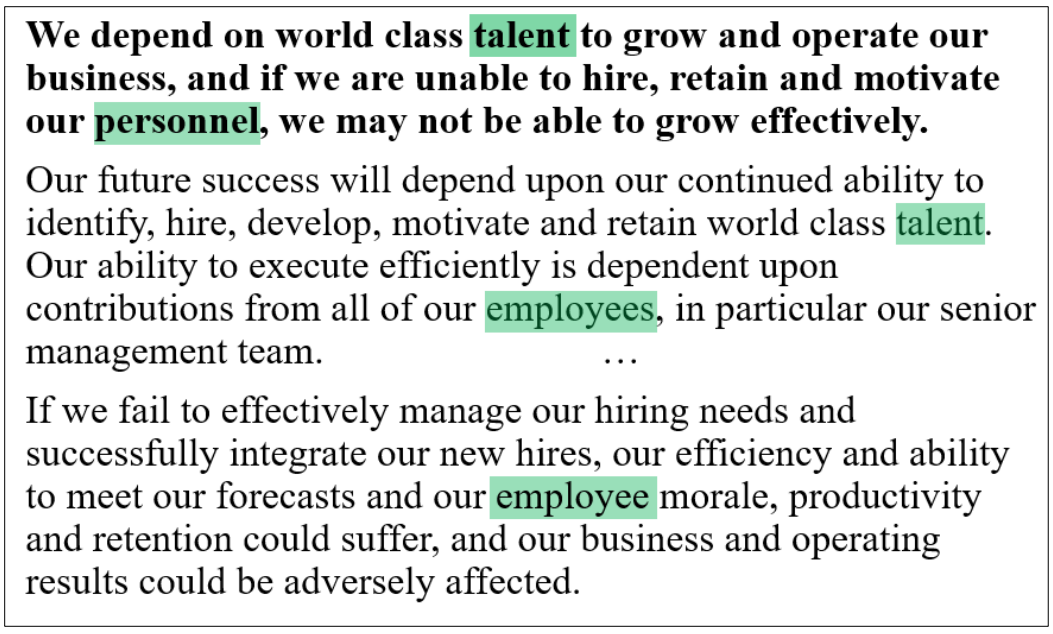
Third, I split the risk factor section into sentences using both period and semicolon as delimiters. Because many companies list different types of risk factors using semicolons, it is reasonable to include semicolon as a delimiter. Also, during preprocessing, it is important to delete the periods that are not used as punctuation marks. For example, periods can be used as decimal points (e.g. 4.5%) and as part of domain names (e.g. .com, .org) as well as used with certain abbreviations (e.g. Mr., Inc., Dr.). The median number of sentences in a risk factor section is 290 sentences.

Fourth, using texts from the entire risk factors section, I measured the total number of words related to shareholders, customers, and employees to measure firms’ attention to different stakeholder groups. Similarly, I measured the total number of words related to stock price and profit to measure firms’ attention to different firm performance indices. Dictionaries used to create these variables can be found in Table III.3.

Fifth, of all the sentences in the Risk Factor section, I extracted sentences that are related to employees. For each company-year observation, I looped every word in every sentence in the Risk Factors section, and saved all sentences that had at least one word related to employees. I carefully selected a set of employee-related keywords based on my own analysis of 10-K documents. The employee-related keywords are 'employee', 'worker', 'workforce', 'personnel',

'staff', 'labor ', ‘labors', 'talent', 'associates', 'unionized', 'team member', 'recruits', 'sales representatives', and 'independent contractor'. I chose to keep a white space in the keyword ‘labor ’ because the keyword without a whitespace captures unrelated words such as ‘laboratory’. I also chose to exclude the keyword ‘union’ because it captures irrelevant words, such as ‘European Union’ and ‘credit union’. An example of employee-related sentences can be seen in Figure III.1. As a result of the fifth step, I found 39,673 10-K documents to have at least one employee-related sentence in the Risk Factor section. The median number of words in the set of employee-related sentences is 363 words.

Figure Ⅲ.1. Example of employee-related sentences in 10-K Risk Factor section (LinkedIn)



Sixth, I measured the level of firms' attention to human capital by counting the number of words associated with knowledge, skills, and abilities (KS&A) and motivation that appear in employee-related sentences. I carefully selected the following keywords related to KS&A and practices and policies that are associated with KS&A – ' knowledge', ' skill', ' abilit', ' talent', 'competen', ' expert', ' creativ', ' train ', ' trained', ' training', ' recruit', ' hire', ' hiring', ' attract', ' retain', ' retention', and ' turnover'. In addition, I measured the level of firm's attention to employee motivation which comprises of financial and non-financial motivation. Dictionaries used to create firms' attention to employee motivation variables can be found in Table III.3.

Seventh, I measured the level of firm's view of their employees as a resource by counting the number of words associated with resource that appear in employee-related sentences. Resource-related keywords are ' invention', ' innovat', ' knowledge', ' skill', ' abilit', ' talent', ' competen', ' expert', ' creativ', ' motivat', ' morale', ' engagement', ' empower', and ' satisf'. Similarly, I measured the level of firm's view of their employees as a cost by counting the number of words associated with cost that appear in employee-related sentences. Cost-related keywords are ' cost ', ' costs ',' expense', ' expend', ' liabilit', 'strike', 'collective bargain', 'dispute', 'stoppage', 'labor disturbance', 'labor disruption', 'employee fraud', 'misconduct', 'employee theft', 'wrongful conduct', and 'malfeasance'. Example sentences that reflect resource-based and cost-based view of employees can be found in Table III.2.

Table Ⅲ.2. Examples of Risk Factors that reflect resource- and cost-based view of employees

	Resource-based view of employees	**Cost**-based view of employees
1	Our business depends on our ability to attract and retain **talent**ed employees. [Microsoft, 2016]	Some of our and our suppliers' workforces are represented by labor unions, which may lead to work **stoppage**s. [Boeing, 2014]
2	Currently in Northern California, there is increasing competition for **talent**ed individuals with the specialized **knowledge** of electric vehicles, software engineers, manufacturing engineers and other **skill**ed employees and this competition affects both our ability to retain key employees and hire new ones. [Tesla, 2014]	Over the last several years, we have significantly reduced operating **cost**s by reducing staff and employee benefits and implementing general **cost**-control measures across the Company, and we plan to continue these **cost** management efforts. [New York Times, 2013]
3	In addition, we compete with other retail businesses for many of our associates in hourly positions, and we invest significant resources in training and **motivat**ing them to maintain a high level of job **satisf**action. [Home Depot, 2012]	**Strike**s, work **stoppage**s or other forms of labor unrest at any of our major manufacturing facilities or at our or our major bottlers' plants could impair our ability to supply concentrates and syrups to our bottling partners or our bottlers' ability to supply finished beverages to customers, which would reduce our net operating revenues and could expose us to customer claims. [Coca Cola, 2011]
4	If we fail to effectively manage our hiring needs and successfully integrate our new hires, our efficiency and ability to meet our forecasts and our employee **morale**, productivity and retention could suffer, and our business and operating results could be adversely affected. [LinkedIn, 2014]	Our ability to control labor **cost**s is subject to numerous external factors, including prevailing wage rates and health and other insurance **cost**s, as well as the impact of legislation or regulations governing labor relations or healthcare benefits. [Home Depot, 2012]
5	Because payroll **cost**s are a major component of the operating **expense**s at our properties, a shortage of **skill**ed labor could also require higher wages that would increase our labor **cost**s, which could reduce our profits and the profits of our third-party owners. [Hyatt Hotels, 2015]	

Table III.3 shows the full list of dictionaries that are used to create variables from the risk factors section in 10-K. When coming up with the final dictionaries, I referred to the dictionaries used by (Vergauwen, Bollen, & Oirbans, 2007).

When running regression analysis, I controlled for the total number of sentences in the risk factors section because the longer the companies' risk factors section, the more likely the firms will mention the chosen key words.

Table III.3. Dictionaries used to create variables from 10-K risk factors section

Variables	Dictionaries	Notes	Variables
In risk factors sections			
Employees	'employee', 'worker', 'workforce', 'labor ', ‘labors', 'talent', 'associates', 'unionized', 'personnel', 'staff', 'team member', 'recruits', 'sales representatives', 'independent contractor'	Excluded 'labor' (which gets at 'laboratory') and 'union' (which gets at 'european union' and 'credit union', etc.)	Employees
Customers	' customer', ' consumer'		Customers
Shareholders	' shareholder', ' shareowner'		Shareholders
Profit	' profit', ' return on asset', ' return on earning', ' return on equity', ' return on investment', ' return on capital'		Profit
Stock price	' share price', ' stock price', ' eps', ' earnings per share'		Stock price
In employee-related sentences in risk factors sections			
1. Human Capital			
1-1. Knowledge, Skill, and Ability (KS&A)	' knowledge', ' skill', ' abilit', ' talent', ' competen', ' expert', ' creativ'	Excluded 'invest' (which is disproportionately more likely to occur in investment firms’ 10-K), 'asset' (which is often used to describe financial asset), 'resource’, 'intellectual propert', and 'patent' (which are often used in irrelevant contexts)	**KSA-broad**

a. training	' train ', ' trained', ' training'			
b. recruitment	' recruit', ' hire', ' hiring', ' attract'			
c. retention	' retain', ' retention'			
d. turnover	' turnover'			
1-2. Motivation	' motivat', ' morale', ' engagement', ' empower', ' satisf'			**Motivation -broad**
a. compensation	' compensat'		Finanacial motivation	
b. salary	' wage', ' salary'			
c. employee stock ownership	' equity', ' shares', 'stock option', 'stock ownership', 'employee stock'			
d. benefits	' benefits', ' pension', ' 401k'	Excluded 'insurance' and 'health' as they are more likely to occur in insurance and healthcare companies' 10-K		
e. culture	' culture'		Non-financial motivation	
f. diversity	' diversity', ' diverse'			
g. equity	'equal employment', 'equal opportunit', ' eeo '			
h. growth opportunity	'career advanc', 'career develop', 'professional growth opportunit'			
i. purpose	' purpose'			
j. welfare	'welfare', 'well-being', 'wellness'			
2. Senior Management				
2. Senior management	'ceo', 'executive', 'senior management', 'president', 'chief', 'management team', 'management personnel'	Excluded 'management' (as it is often used to describe the business instead of people) and 'key' (as it may refer to non-senior management employees)	Senior management	
3. Resource vs. Cost-based view of human capital				
3-1 Resource	' invention', ' innovat'			

a. Knowledge, Skill, and Ability (KS&A)	' knowledge', ' skill', ' abilit', ' talent', ' competen', ' expert', ' creativ'		**Resource-broad**
b. Motivation	' motivat', ' morale', ' engagement', ' empower', ' satisf'		
3-2 Cost	' cost ', ' costs ',' expense', ' expend', ' liabilit'	Excluded 'profit' and 'productivity' as they can be used in both resource- and cost- related contexts	**Cost-broad**
a. collective action	'strike', 'collective bargain', 'dispute', 'stoppage', 'labor disturbance', 'labor disruption'	Selected factors that cost firms profit or limit ordinary operations	
b. misconduct	'employee fraud', 'misconduct', 'employee theft', 'wrongful conduct', 'malfeasance'		

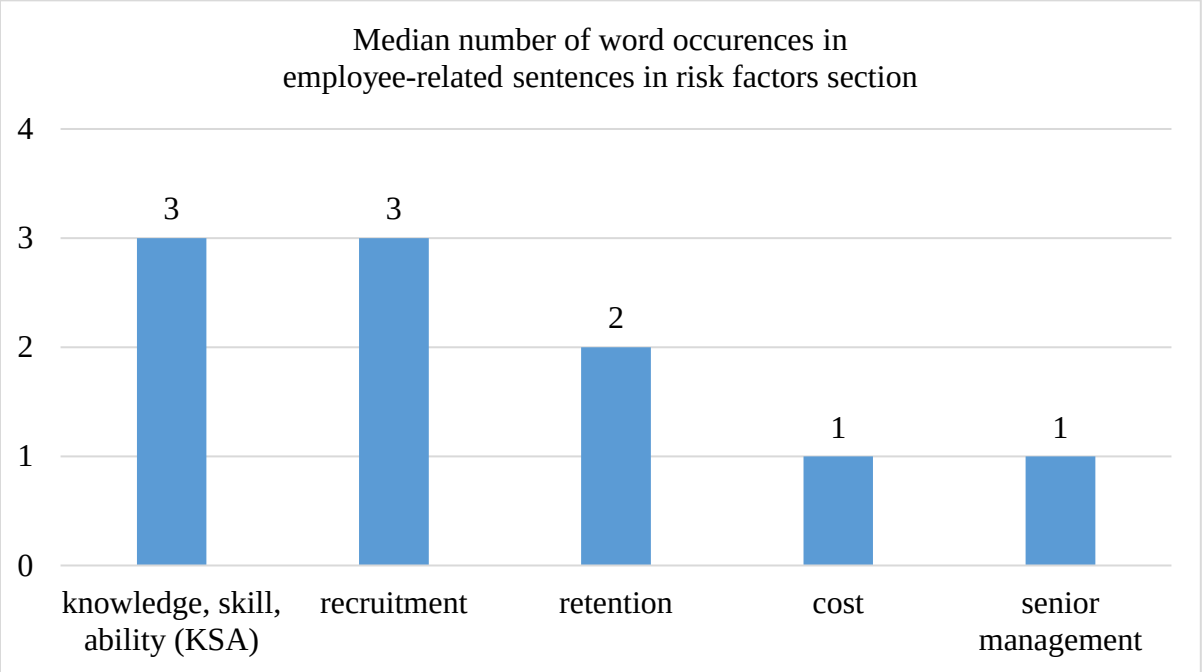
* White spaces in the dictionaries are left intentionally.

How commonly do companies list employee-related issues in their risk factors section? Based on 37,644 10-K documents, the median number of employee-related words that appeared in the risk factors section was 13 while the median number of customer-related words that appeared in the risk factors section was 19. To put it simply, when companies discuss how their customers can influence their future businesses 10 times, they discuss how their employees can influence their future businesses approximately 7 times. The result shows that employee-related issues are commonly discussed in risk factors sections and are considered as an important factor that affects companies' businesses. Figure III.2 shows the median number of word occurrences in risk factors sections for words related to customers, employees, profit, stock price, and shareholders.

Figure III.2. Median number of word occurrences in risk factors section for selected themes

Then, what employee-related issues do companies talk about in risk factors sections? Based on 36,841 10-K documents, companies are most likely to discuss the knowledge, skill, and abilities (KS&A) of their employees, recruitment and retention, cost associated with employee management, and senior management in the order of frequency. This analysis shows that companies are most interested and depend on employees' KS&A and recruitment. Figure III.3 shows the median number of word occurrences in employee-related sentences in risk factors section for several chosen themes.

Figure III.3. Median number of word occurrences in employee-related sentences in risk factors section for selected themes



Anonymous Company Reviews on Glassdoor

Glassdoor, Inc. was founded in 2007 by Tim Besse, Robert Hohman, and Rich Barton. Rich Barton, who was a CEO of Zillow Group, came up with the initial business idea for Glassdoor when he accidentally printed out and left a copy of a performance review spreadsheet with every Zillow employee's salary, title, review rating, and stock options on the common printer. When his assistant pulled the copy into his office later telling him that the copy did not look like it should be on the common printer, he thought, 'Well, why not?' He thought people could find and get jobs that are right fit for them when they have access to more information on salaries and company reviews. As a founder of Expedia and Zillow, Rich Barton knew that this idea could once again give power to the people. He pitched the idea to Robert Hohman, one of the first engineers at Expedia, and Tim Besse, another former colleague at Expedia who oversaw product management. The three people co-founded Glassdoor in 2007 and launched their anonymous company review website in June 2008. In the beginning, the co-founders had to ask their friends to leave their salary information and company reviews, but it did not take long for their business to gain traction around the globe.

Figure III.4 and Figure III.5 are examples of anonymous company reviews posted on Glassdoor. Both former and current employees can rate their companies using a 5-star review system. In addition to rating the overall satisfaction, employees rate five specific dimensions of their companies - work/life balance, culture and values, career opportunities, compensation and benefits, and senior management - also using 5-star ratings. When reviewing companies, reviewers are also required to share some of the best reasons to work (pros) and some of the downsides of working (cons) at their companies using a minimum five words. Reviewers can also rate whether

they recommend their companies to their friends, how they evaluate their companies' business outlook, and whether they approve of their CEOs.

Figure III.4. Example of anonymous company review on Glassdoor (overall satisfaction)

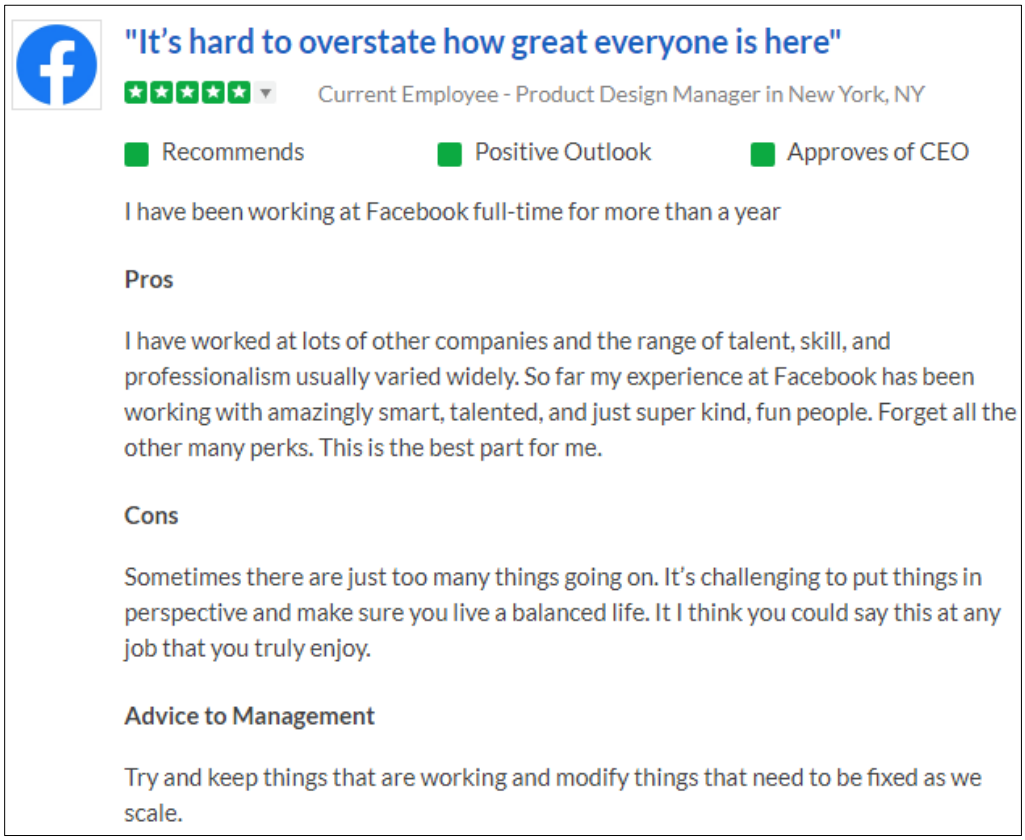
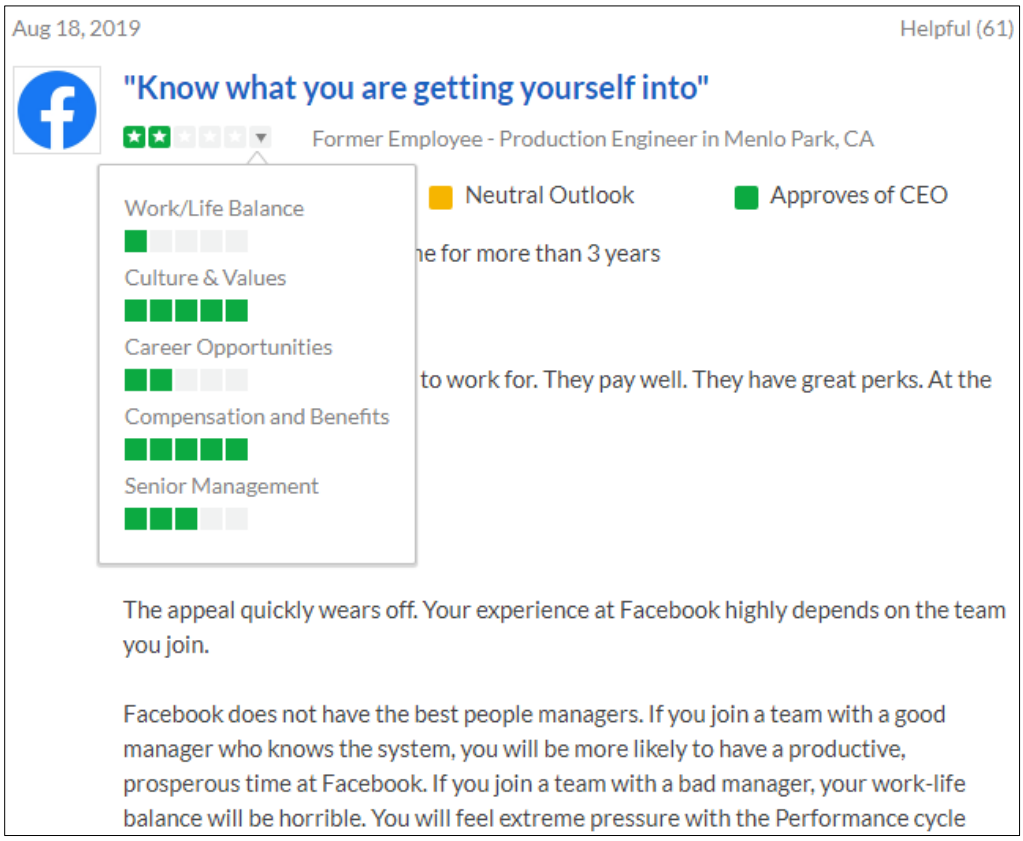


Figure III.5. Example of anonymous company review on Glassdoor (individual dimensions)



Glassdoor built in several mechanisms into their website to make sure that employees' truthful opinions are represented fairly. First, Glassdoor protects reviewers' anonymity so that reviewers feel safe to share their honest opinions. Glassdoor never displays reviewers' profile information next to their contribution, and no one can see reviewers' personal information in their user profile. Reviewers can also choose not to include their location and job title which could indirectly identify themselves.

Second, Glassdoor prevents and monitors fraudulent activities. Glassdoor prevents individuals from gaming the system by allowing each individual one review per employer per year. Glassdoor also verifies employees by requiring email verification from their active email addresses or valid SNS accounts. When users flag reviews or when its proprietary technology detects

potential fraudulent reviews, Glassdoor's Content Moderation team takes a closer look and removes the reviews when deemed appropriate. While Glassdoor does not delete reviews simply because they are highly or lowly rated, it removes reviews when it has evidence that reviewers were incentivized or coerced into leaving the contents.

Finally, Glassdoor adopted "Give to Get (GTG)" policy to reduce sampling bias. If reviewers are not given any incentives to post their reviews, employees with extremely negative or positive opinion on their companies are more likely to post reviews on Glassdoor than employees with moderate opinions. GTG policy is designed to provide incentive to employees with moderate opinion of their companies to post reviews. GTG policy only allows Glassdoor users to submit their own reviews of their companies after having viewed three pieces of content and gaining unlimited access to the site's content. Researchers found that GTG policy reduced the likelihood of extreme 1-star and 5-star reviews by 3.6% and 2.1% points respectively while raising the likelihood of 3-star and 4-star reviews by 2.6% and 2.9% points (Marinescu, Klein, Chamberlain, & Smart, 2018). As for the control group, researchers used reviews that were posted immediately before the reviewers were prompted by the GTG policy and reviews that were posted by the reviewers who have already posted a review in the past.

Data from Glassdoor is widely used among management researchers. A growing number of researchers use Glassdoor's company review data to measure firms' culture (Corritore, Goldberg, & Srivastava, 2019; Marchetti, 2018), employee satisfaction (Luo, Zhou, & Shon, 2016), work-life balance (Chandra, 2012), and CEO approval by employees (Babenko & Sen, 2014). A team of researchers also identified seven values that employees care about when evaluating employers by using Glassdoor review data (Dabirian, Kietzmann, & Diba, 2017). Similar to Fortune's Best Companies to Work For, many studies use Glassdoor's Best Places To Work, a list

of companies that scored high on employee ratings on Glassdoor (Butler, Armstrong, Ellinger, & Franke, 2016; Dineen & Allen, 2016). Moreover, when ranking America's best-run companies, The Drucker Institute uses Glassdoor data as one of the measurements for employee engagement and development. Prior research shows that Glassdoor's overall satisfaction ratings moderately correlate with traditional employee satisfaction surveys (i.e. Federal Employee Viewpoint Survey) ($r = 0.516$, $p = 0.007$), supporting the validity of the Glassdoor rating as a measure of overall employee satisfaction at the organizational level (Landers, Brusso, & Auer, 2019).

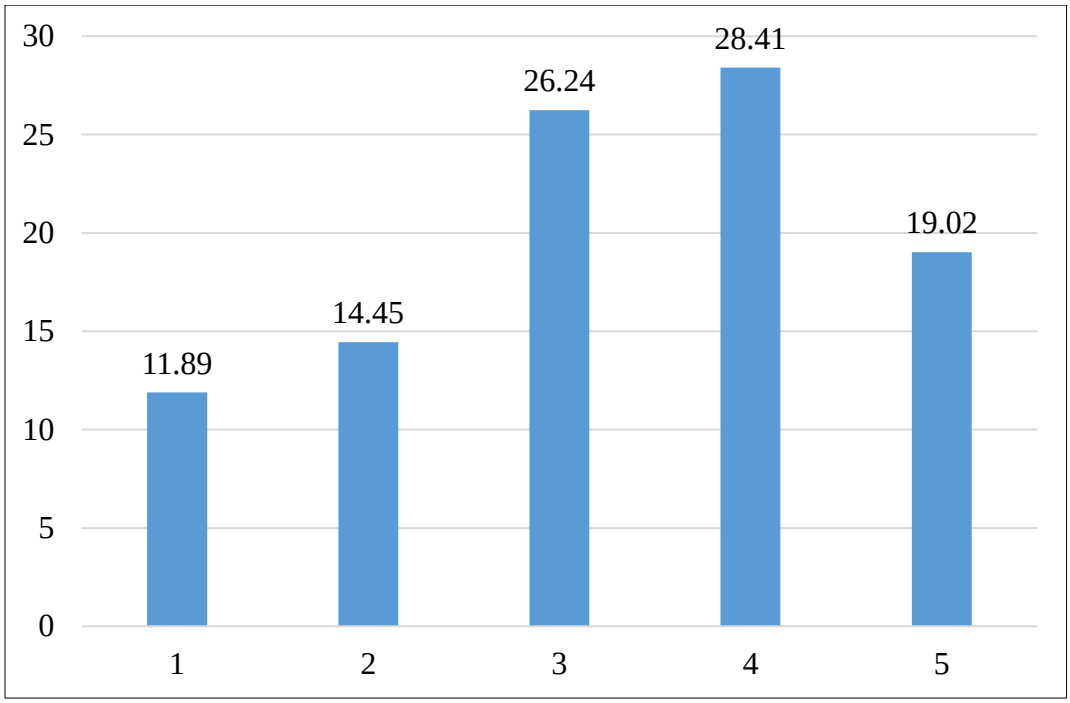
Glassdoor data shows that the total number of employer reviews newly posted on Glassdoor has been continuously increasing since 2008 when Glassdoor first launched its website. As can be seen in the Table III.4, the number of newly posted reviews in the U.S. increased from 44,293 in 2008 to 1,340,199 in 2017.

Table III.4. Number of reviews newly posted on Glassdoor by year

Year	# of reviews newly posted on Glassdoor
2008	44,293
2009	47,086
2010	67,998
2011	91,666
2012	156,990
2013	369,460
2014	674,368
2015	1,108,616
2016	1,243,500
2017	1,340,199

As shown in Figure III.6, the largest proportion of reviews consist of 4-star and 3-star ratings. 4-star ratings make up 28% of reviews, and 3-star ratings make up 26% of the total reviews. On the other hand, the total reviews consist of only 12% 1-star and 14% 2-star ratings. 5-star overall ratings make up 19% of reviews. The results are based on 1,380,734 reviews of U.S. public companies that were posted on Glassdoor from 2008 to early 2018.

Figure III.6. Percentage of each star-rating on Glassdoor



When overall ratings are aggregated and averaged by year and company, the distribution of the averaged ratings takes the form of bell-shape. Figure III.7 shows the distribution of 7,747 averaged overall ratings.

Figure III.7. Distribution of aggregated average overall ratings

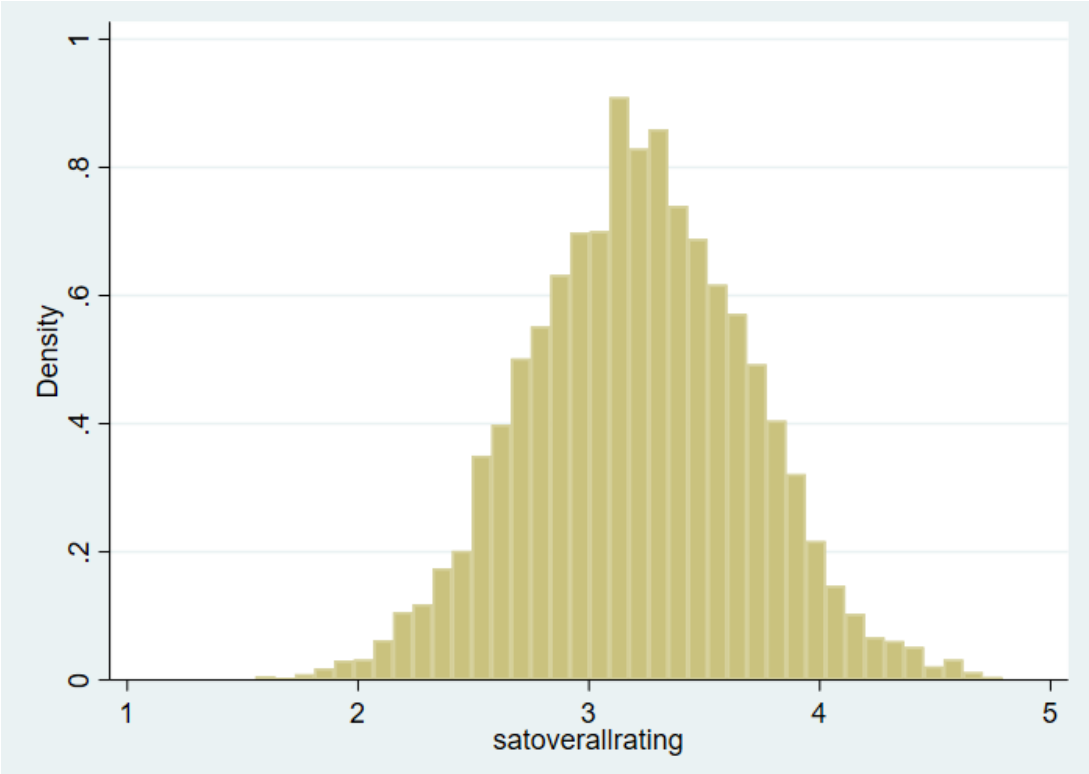
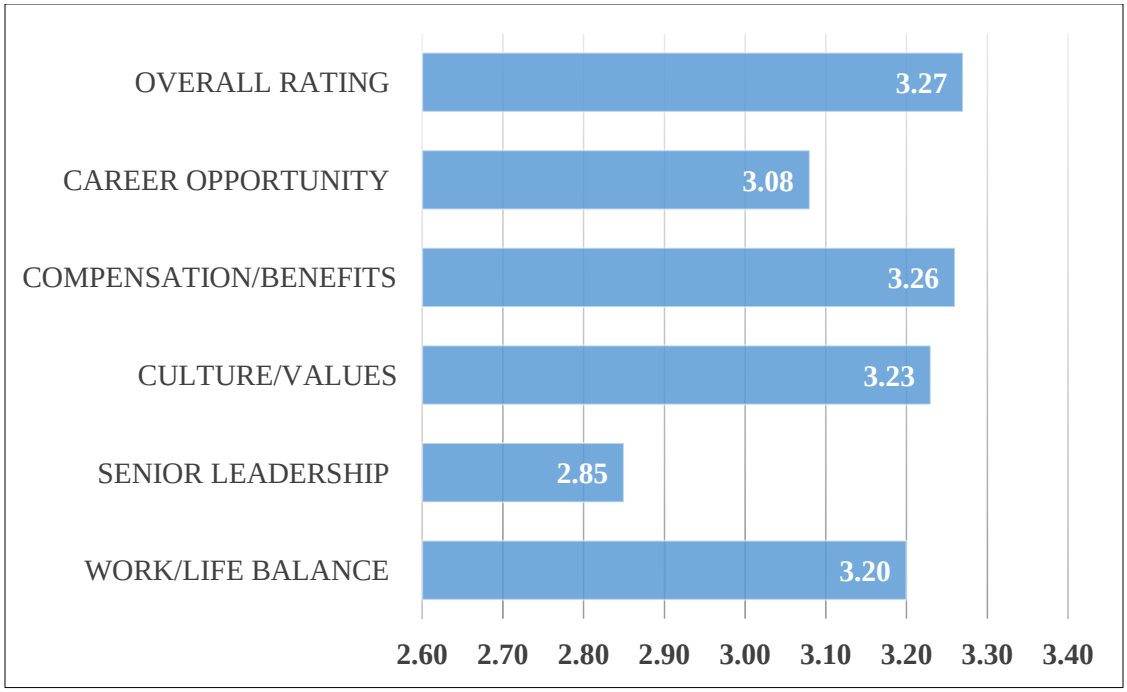


Figure III.8 shows the average of overall rating and the average of each individual dimension of companies on Glassdoor. The average overall rating is 3.27, and the average of individual dimension range from 2.85 (senior leadership) to 3.26 (compensation/benefits).

Figure III.8. Average rating of employee satisfaction



What companies are rated high in my sample? Table III.5 lists the names of 15 companies (firm-year observations) in S&P500 index with the highest overall rating. Eastman Chemical, Southwest Airlines, and Facebook ranked top 15 for multiple years during the study period.

Table Ⅲ.5. Top 15 company-year observations (in S&P 500) with the highest ratings

Top	S&P 500 companies	Overall Rating	Year
1	Equity Residential	4.79	2018
2	Eastman Chemical Co	4.62	2013
3	Illumina Inc	4.61	2018
4	Southwest Airlines Co	4.61	2008
5	Facebook Inc	4.58	2017
6	Nvidia Corp	4.57	2017
7	Intuitive Surgical Inc	4.55	2017
8	Pioneer Natural Resources Co	4.55	2016
9	Eastman Chemical Co	4.52	2014
10	Southwest Airlines Co	4.49	2018
11	Southwest Airlines Co	4.45	2009
12	Eversource Energy	4.44	2018
13	Facebook Inc	4.44	2014
14	Alphabet Inc	4.44	2017
15	Facebook Inc	4.43	2015

On the other hand, Table III.6 lists the names of 15 companies (firm-year observations) in S&P500 index with the lowest overall rating. Public Storage and Express Scripts Holding ranked bottom 15 for multiple years during the study period.

Table III.6. Bottom 15 company-year observations (in S&P 500) with the lowest ratings

Bottom	S&P 500 companies	Overall Rating	Year
1	Public Storage	1.72	2011
2	Family Dollar Stores Inc	1.94	2010
3	Public Storage	1.95	2012
4	Frontier Communications Corp	2.08	2011
5	Express Scripts Holding Co	2.12	2011
6	United States Steel Corp	2.17	2012
7	International Game Technology	2.18	2011
8	Express Scripts Holding Co	2.19	2010
9	Express Scripts Holding Co	2.21	2013
10	Kraft Heinz Co	2.21	2018
11	Paccar Inc	2.23	2010
12	Welltower Inc	2.25	2017
13	Fastenal Co	2.28	2010
14	Xilinx Inc	2.28	2009
15	Public Storage	2.28	2013

Table III.7 lists the names of 15 companies (firm-year observations) in S&P400 index with the highest overall rating. Ultimate Software Group and Silicon Laboratories ranked top 15 for multiple years during the study period. It is notable that overall employee ratings for top 15 S&P400 companies which range from 4.24 to 4.62 are lower than overall employee ratings for top 15 S&P 500 companies which range from 4.43 to 4.79.

Table III.7. Top 15 company-year observations (in S&P 400) with the highest ratings

Top	S&P 400 companies	Overall Rating	Year
1	Ultimate Software Group Inc	4.62	2017
2	Silicon Laboratories Inc	4.61	2017
3	Ultimate Software Group Inc	4.60	2016
4	Ultimate Software Group Inc	4.58	2015
5	Primerica Inc	4.53	2018
6	Abiomed Inc	4.46	2017
7	Ultimate Software Group Inc	4.43	2014
8	Amc Networks Inc	4.38	2014
9	Resmed Inc	4.37	2016
10	Viasat Inc	4.32	2017
11	Littelfuse Inc	4.29	2017
12	Oshkosh Corp	4.27	2017
13	Healthcare Services Group Inc	4.27	2018
14	Silicon Laboratories Inc	4.25	2016
15	Ultimate Software Group Inc	4.24	2018

On the other hand, Table III.8 lists the names of 15 companies (firm-year observations) in S&P400 index with the lowest overall rating. International Bancshares ranked bottom 15 for multiple years during the study period.

Table Ⅲ.8. Bottom 15 company-year observations (in S&P 400) with the lowest ratings

Bottom	S&P 400 companies	Overall Rating	Year
1	Firstmerit Corp	1.68	2014
2	Uti Worldwide Inc	1.97	2013
3	Clean Harbors Inc	2.02	2014
4	Micros Systems Inc	2.03	2009
5	Service Corp International	2.08	2011
6	International Bancshares Corp	2.09	2012
7	International Bancshares Corp	2.10	2014
8	Cdk Global Inc	2.14	2018
9	Verifone Systems Inc	2.15	2016
10	Washington Federal Inc	2.15	2015
11	Corrections Corp of America	2.16	2012
12	3d Systems Corp	2.16	2014
13	International Bancshares Corp	2.19	2013
14	Astoria Financial Corp	2.19	2013
15	Vca Inc	2.20	2014

Figure III.9 shows the average employee rating for companies in each S&P category from 2008 to 2018. Employees working for S&P500 firms show the highest average satisfaction, followed by employees working for S&P400 firms and non-S&P1500 firms. Employees working for S&P600 firms show the lowest average satisfaction.

Figure Ⅲ.9. Average employee rating of companies in each S&P category

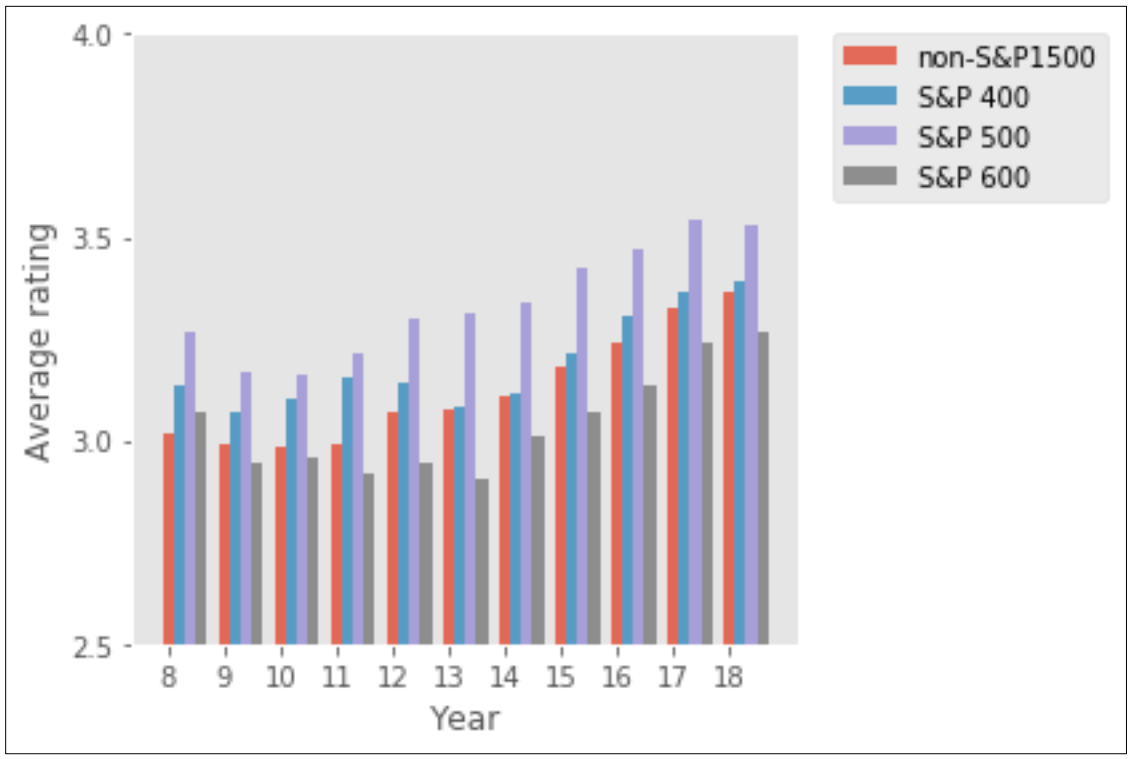


Table III.9 shows pairwise correlations among variables from Glassdoor and 10-K data. The results show that overall satisfaction and satisfaction with individual dimensions are highly and significantly correlated. The correlation between an overall satisfaction and satisfaction with senior leadership is the highest (r=0.91), while the correlation between satisfaction with compensation/benefits and work-life balance is the lowest (r=0.56). Among measures from 10-K, the number of words related to motivation (e.g. compensation, salary, benefits, etc.) is highly and significantly correlated with the number of words related to cost-based view of employees (r=0.49). Also, the number of words related to motivation is highly and significantly correlated with the number of words related to knowledge, skills, and abilities of employees (r=0.35).

Regarding correlations between variables from Glassdoor and 10-K data, it is notable that all employee satisfaction variables from Glassdoor are negatively and significantly correlated with the number of words related to profits and a cost-based view of employees from 10-K data. On the other hand, most employee satisfaction variables from Glassdoor (except for satisfaction with compensation/benefits) are positively and significantly correlated with the number of words related to a resource-based view of employees from 10-K data.

Table Ⅲ.9. Pairwise correlations

Pairwise correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) overall rating													
(2) career opportunity	**0.87***												
(3) compensation/ benefits	**0.71***	**0.68***											
(4) culture	**0.86***	**0.77***	**0.59***										
(5) senior leadership	**0.91***	**0.85***	**0.63***	**0.84***									
(6) work-life balance	**0.75***	**0.62***	**0.56***	**0.73***	**0.72***								
(7) # employee words	-0.04*	-0.01	-0.17*	-0.03*	-0.03*	-0.11*							
(8) # profit words	-0.05*	-0.05*	-0.11*	-0.03*	-0.04*	-0.09*	0.17*						
(9) # shareholder words	-0.01	-0.02	-0.03*	-0.01	-0.00	-0.02	-0.06*	0.01					
(10) # stock price words	-0.03*	-0.02*	-0.04*	-0.00	-0.02	0.04*	0.10*	-0.03*	0.01				
(11) # KS&A_broad words	-0.00	0.03*	-0.10*	0.03*	0.02*	0.00	**0.62***	0.13*	-0.04*	0.17*			
(12) # motivation_broad words	-0.04*	-0.01	-0.13*	-0.01	-0.02	-0.07*	**0.61***	0.14*	-0.03*	0.09*	**0.35***		
(13) # resource_broad words	0.04*	0.06*	-0.03*	0.05*	0.04*	0.03*	**0.49***	0.10*	-0.02*	0.10*	**0.84***	**0.33***	
(14) # cost_broad words	-0.06*	-0.03*	-0.12*	-0.07*	-0.06*	-0.16*	**0.62***	0.17*	-0.04*	-0.03*	0.23*	**0.49***	0.20*

* shows significance at the .05 level

words related to each theme (from (7) to (14)) are total number of words related to each theme divided by the total number of sentences in the risk factors section

CHAPTER IV

Theory and Hypotheses

As discussed in Chapter II and Chapter III, large index funds are increasing their ownership of American corporations and activist hedge funds are imposing greater threats to firms of various sizes and performances. What do these two trends mean for employee relations? Activist hedge funds often aim to achieve their goals in a short period of time, usually between a few months and a few years. Activist hedge funds try to control the board of their target companies and demand policy changes. Hedge fund activism can increase the value of the company in the short term, but it may be done at the expense of longer-term development and other stakeholders' interests. A target company's management can become short sighted and reduce long-term investments in areas such as research and development, brand loyalty, and employee development and welfare. Hedge fund campaigns may often include layoffs and reductions in employee benefits, which can directly harm employee welfare and workplace culture.

On the other hand, increasing ownership concentration by passive index funds can help management keep a long-term view of its company, as passive index funds hold their stocks for a very long period of time. For example, Larry Fink, a CEO of Blackrock, sent a letter to the CEOs of its firms in the beginning of 2019 to highlight the importance of investing the company's time and resources to foster the long-term value of their firms. Passive index fund managers can help their firms maintain and develop sustainable businesses that benefit their employees. In sum, I will

describe in this chapter the effect of corporate ownership by index funds and activist hedge funds on employee satisfaction through changes in firms' level of attention to their human capital.

Characteristics of shareholders and employee satisfaction

What is the relationship between shareholders, managers, and employees? The relationship between the shareholders and managers can be explained by agency theory (Fama & Jensen, 1983). Agency theory views an organization as a nexus of contracts and suggests that a separation of decision management and residual risk bearing leads to decision systems that separate management (i.e., initiation and implementation) and control (i.e., ratification and monitoring). Agency theory explains that in complex organizations, the benefits of diffused residual claims and separation of decision making from residual risk bearing are greater than the agency costs they generate. In other words, the managers of a company initiate and implement policies, while the shareholders ratify and monitor the managers. In practice, members of the board of directors, who are elected by shareholders, not only oversee managers but also form friendships with CEOs, through which they provide ongoing advice on firms' strategic issues (Westphal, 1999).

Coase (1937) helps us understand the relationship between managers and employees. Coase suggests that organizations emerge because using price mechanisms involves costs—negotiation cost and contracting cost—that organizations can reduce. An organization is likely to arise when a short-term contract is unsatisfactory due to uncertainty and difficulty of forecasting. This means that because the employees' duties cannot be specified in advance, organizations arise as an alternative system to the market. In an organization, employees are paid wages in exchange

for being under the control of their managers' authority. Mangers tell employees when to work, what work to do, and how to do it.

If we combine the agency theory, Coase's view of the nature of the firm, and the business laws upon which corporations are based, we can form a more complete understanding of the relationship between the shareholders, managers, and employees. Managers and boards of directors have the discretion to decide what policies to initiate and implement, but shareholders ratify and monitor the managers' decisions, which will have a consequential impact on their employees' lives at work. In theory, managers can initiate and implement policies that can greatly benefit employees at the shareholders' expense. This scenario is possible because American corporate law protects directors' power to sacrifice shareholder value in the pursuit of other corporate goals (Stout, 2012). For example, a business judgment rule gives directors the authority to pursue goals other than shareholder value, such as increasing employee benefits or developing customer services. On the other hand, managers can also initiate and implement policies that significantly harm employees' welfare if shareholders ratify or even exert pressure on the management to make shareholder value a priority. This possibility is consistent with one criticism of agency theory: While agency theory focuses on agent opportunism, principal opportunism can also exist and may even be more likely to occur (Perrow, 1986).

Before going into the next section about the shareholders' influence on employees through the firms' management, it is worth understanding managerial preferences. What goals do managers pursue when they are not closely monitored by shareholders, or when they have a minimal stake in the public firm? First, the empire-building model suggests that managers prefer increased influence and assets under control, as opposed to optimal allocation of resources. Under this model, managers would increase the size of their firms through mergers and acquisitions even when it

might not benefit their shareholders. Second, the quiet-life model suggests that managers prefer a peaceful life in the workplace through improved workplace relations with their workers. An empirical study supports this model by showing that antitakeover laws generated increases in workers' wages by about 1% for production workers and 4% for white-collar workers without increasing the operating efficiency of the plants (Bertrand & Mullainathan, 2003). In sum, existing theories suggest that managers who have a minimal stake in the firm and are not closely monitored by shareholders have a neutral to positive preference for improved workplace relationships with their employees.

Shareholder engagement

Activist shareholders with different interests are increasing their influence on corporate governance (Davis & Thompson, 1994). The Council of Institutional Investors outlines different methods of shareholder engagement, including engaging with portfolio companies in a private dialogue, filing shareholder proposals, nominating corporate directors, and filing a lawsuit (CII, 2012). I will first explain the activism initiated by hedge funds, and then explain the engagement by institutional investors that operate passive index funds.

1. Hedge funds and their activism against target companies

Hedge funds are investment funds that are often organized as a limited partnership or a limited liability company. They pool funds from accredited investors to invest in a variety of assets in an effort to make a positive return. Accredited investors, such as institutional investors or wealthy individuals, are those who have the minimum required level of income or assets. Hedge

funds are similar to mutual funds in that they pool investors' money; however, they are distinct from mutual funds in the following ways. First, hedge funds are not subject to some of the government regulations that apply to mutual funds and are designed to protect investors. For example, hedge funds are not required to provide disclosure to the same level as mutual funds. This lack of transparency makes it difficult for investors to verify hedge fund managers' representation of the fund's track record and, in extreme cases, makes it easier for hedge fund managers to defraud investors. Second, hedge fund managers charge a very high performance fee, usually about 20 percent of the hedge fund's profit. Such high performance fees motivate hedge fund managers to take greater risks and try diverse investment strategies to generate a larger return.

What are the characteristics of the target firms? Previous empirical research shows that hedge funds' target firms have low market value relative to book value, pay their CEOs considerably more than comparable companies, have more takeover defenses, and have higher institutional ownership and trading liquidity (Brav et al., 2008). The results of Brav et al. suggest that hedge funds target companies with high institutional holdings because activist hedge funds, which have a median ownership stake of 9.1% in their sample, rely on cooperation from management or, in its absence, support from fellow shareholders. This interpretation seems reasonable in that it is more efficient for activist hedge funds to cooperate with a few institutional block holders who support their agenda than it is to cooperate with dispersed retail investors.[3] Hedge funds also target firms with high levels of cash on hand, and demand that the company buy back its own shares, cut the CEO's compensation, and initiate dividends (Klein & Zur, 2009).

[3] The fact that activist hedge funds try to cooperate with institutional investors to pursue their agenda seems to partially explain why previous research finds mixed results on the effect of institutional ownership on a target firm's corporate governance.

What is the effect of hedge fund activism on the target company? Previous research shows that the market reacts favorably to hedge fund activism because hedge funds can reduce agency cost by acting as informed monitors of the target firms' management. Empirical research found that the filing of a Schedule 13D informing activist funds' investment in target firms leads to positive average abnormal returns of approximately 7% during the (-20, +20) announcement window (Brav et al., 2008) and 10.2% over the (-30, +30) announcement window (Klein & Zur, 2009). Additionally, these studies show that the positive returns at announcement are not reversed over time, and that hedge fund activism brings about significantly positive returns over the subsequent year. Brav et al. also shows that overall performance of the target firms increases: The target firms show improvement in book value leverage, return on assets, and operating profit margins (Brav et al., 2008). However, the positive shareholder return after hedge fund activism is not always found in other countries. In Japan, for example, where shareholder primacy is not generally accepted, market perception of the target firms was unfavorable at the time of hedge fund activism, and there were no enduring changes in the target firms' financial performance after the hedge fund activism (Buchanan, Chai, & Deakin, 2018).

2. Passive index funds and their engagement with their portfolio firms

An index fund is a mutual fund or exchange-traded fund (ETF) that tracks the components of a market index, such as the S&P 500 or Russell 2000. The first index fund was created in 1975 by John C. Bogle, the founder of The Vanguard Group, and the demand for index funds has been increasing since then. Unlike actively managed funds, whose fund managers rely on their own experience and judgement to make investment decisions, index funds rely on computer algorithms and require little human input. As a result, index funds have a powerful advantage over actively

managed funds: extremely low operating and management costs. Compared to actively managed funds, index funds can save active trading costs, annual fees, and large performance fees paid to fund managers. As the legendary investor Warren Buffett forecasted (in Berkshire Hathaway's 2005 annual report), investors increasingly fled from actively managed funds to lower-cost index funds and exchange-traded funds. Blackrock also shifted its investment strategy from active management to data-mining and technology-based management.

How did the massive shift from active investment to passive investment affect asset management companies' engagement with their portfolio firms? Before the financial crisis in 2008, even when mutual funds became the most significant corporate owners in the United States since the mid-1990s, mutual funds have been reluctant to exert direct influence over corporate governance (Davis, 2008). For example, while Fidelity was the largest shareholder in the US, its fund managers actively managed the funds and routinely liquidated its ownership, choosing to exit rather than voicing their discontent with the firms (Davis, 2008). However, since the financial crisis in 2008, investors have fled from actively managed investments to lower-cost, passively managed investments such as index funds and exchange-traded funds (Fichtner et al., 2017). As a result, as long as a company remains in the relevant index, asset management companies become long-term stockholders of the company regardless of their view of the company. Since asset management companies cannot express their disapproval by selling their shares of a specific company in an index, they choose to voice their opinions to and increase their engagement with the portfolio firms' management.

What, then, are some of the issues that index fund investors try to raise with their companies? A series of surveys of institutional investors between 2012 and 2013 by McCahery, Sautner, and Starks (2016) show that institutional investors are most likely to engage with their portfolio firms'

management when the portfolio firms have inadequate corporate governance, when management receives excessive compensation, when the firms have poor corporate strategy, or when the firms show poor financial performance relative to their peers. On the other hand, there are reasons institutional investors may not engage with their portfolio firms. Institutional investors' engagement with their portfolio firms can be hindered by multiple factors, such as a free rider problem; having too small of a stake in a firm, limited personnel, or a conflict of interest (Davis & Kim, 2007); or concerns about breaching "acting in concert" rules (McCahery, Sautner, & Starks, 2016).

Empirical findings on the effect of increased ownership by passive index funds on corporate governance are mixed. For example, Schmidt and Fahlenbrach (2017) find that an exogenous increase in passive institutional ownership caused higher agency costs in the sample period between 1992 and 2010. Specifically, an exogenous increase in passive institutional ownership increased the likelihood that the CEO would become the chairman and president, reduced the number of new independent director appointments, and lowered M&A announcement returns (Schmidt & Fahlenbrach, 2017). On the other hand, Appel, Gormley, and Keim (2016) find that passive mutual funds resulted in improved corporate governance in the sample period between 1998 and 2006. More specifically, passive mutual funds increased the percentage of independent directors, increased the likelihood that a firm would remove a shareholder rights plan, and increased the likelihood that a firm would eliminate restrictions on shareholders' ability to call special meetings (Appel, Gormley, & Keim, 2016).

Even though there is growing attention to how hedge funds and passive index funds affect shareholder value and corporate governance, we lack systematic research on their impact on

employees. In the next section, I provide hypotheses on how increased ownership of a firm by hedge funds and passive index funds can affect employee satisfaction.

Hypotheses

1. *Hedge fund activism and employee satisfaction*

Hedge fund activism can negatively affect employees in the target firm through the following two mechanisms. First, hedge fund activists launch campaigns that can increase the target firm's shareholder value, but many of them may come at the expense of employees' interests and benefits. Hedge fund activists may increase shareholder value by spinning off part of the company and by cutting the target company's operating cost through outsourcing, downsizing, and reducing employee benefit packages and training. For employees, these changes can mean losing their job, getting a lower salary, and spending more of their own money for their medical care and training, often with short notice or no notice at all. Employees and their dependents who are directly affected by these changes may suffer a high level of anxiety and stress, which lowers their satisfaction.

For example, in the fourth quarter of 2016, Third Point hedge fund acquired 0.18% of the shares of Honeywell International and pressured the management to shed its aerospace business by claiming that the spinoff would increase shareholder value in excess of $20 billion. In October 2017, after many simulations, the management team announced that it would retain its aerospace business unit but would spin off its car parts and home systems business units. During the hedge fund campaigns, employees suffered from a series of layoffs and reduced benefits. Several examples of employee discontent can be found on the anonymous review website, Glassdoor:

"Senior management seems to be short-term focused. There have been several rounds of layoffs and furloughs in the last year." "You are expected to train yourself and on your own time and money." "Employee benefits have been reduced in recent years—cut 401K matching in half, eliminated work from home option—evidences that upper management does not greatly value its workforce. Main focus now is to meet AOP [Annual Operations Plan] in the short term at all costs." As these quotations show, the policy and strategic changes demanded by hedge fund activists may be an effective way to increase the current share price for the shareholders, but they may do so by compromising other stakeholders' well-being and interests (Shleifer & Summers, 1988; Stout, 2012). Previous empirical research also suggests that labor rents are transferred to shareholders after hedge fund activism. Specifically, hedge fund activism resulted in implicit wage reduction because the employees of the target firms experienced stagnation in wages and work hours despite an 8.4% increase in labor productivity during the three-year period after the intervention (Brav, Jiang, & Kim, 2015).

Second, hedge fund campaigns may undermine work culture. Even if some employees are not directly affected by layoffs and reductions in their benefit package, they may be affected by the hostility and short-termism that the hedge fund activists bring into the workplace, sometimes via the management, which is controlled by hedge fund activists. Employees may suffer from job insecurity, instability, and low morale, all of which can cause work stress. Employees can also lose their trust in their leaders if the leaders prioritize the interests of hedge fund activists and shareholders over those of employees, which can decrease employee satisfaction. Employees may become less loyal to their companies after trust is breached by management (Shleifer & Summers, 1988).

For example, Marcato Capital Management, an activist hedge fund, acquired 5.1% of Buffalo Wild Wings (BWW) shares in July 2016 and reported to the SEC that it aimed to enhance shareholder value of the company. Richard McGuire of Marcato demanded that BWW increase its franchise ratio from 49% to 90% by selling stores to franchisees to improve return and allow faster growth. After a bitter proxy battle, Marcato won three of the four board seats it was seeking and pushed out Sally Smith, the CEO of the company, in June 2017. Five months later, in November 2017, Roark Capital, a private equity firm, announced that it would acquire BWW. During the campaign, many employees complained about instability and discontent with their leadership on the company review website Glassdoor: "Very unstable time in the company right now. Not a lot of room for growth." "Bad upper management and constant management turnover." "Management sometime takes the customer[']s side over the employee which in certain situations can be undermining." "Changes in leadership give more focus on profit then people." As these representative quotations show, hedge fund activism campaigns can harm the target company's work culture by reducing employees' sense of job security and trust in leadership. In sum, hedge fund activism can negatively affect employee satisfaction through campaigns that often reduce employees' welfare and harm the company's work culture.

Hypothesis 1-1: Corporate ownership by activist hedge funds reduces employee satisfaction in the target company.

2. Passive index funds' engagement and employee satisfaction

In contrast to hedge fund activism, an index fund's engagement with its portfolio company can positively affect its employees by helping the managers take a long-term perspective on the company's value. Index fund managers can directly tackle their companies' operational issues, or they can address other social, environmental, or governance concerns to increase the long-term value of their companies. Regarding operational issues, unlike short-term speculators, index fund managers can be patient about their firms' investments in workforce and R&D that may impose a short-term financial burden but yield a much higher value in the long run. For example, with a firm's long-term value in mind, employers can choose to raise employees' wages to attract more talented workers. Employers can also choose not to lay off their workers during a recession to maintain employee loyalty, which can lead the employees to provide better customer service. Employers can choose to invest their resources in their employees' training, which can increase employees' skill set and motivation to put forth more effort, which in turn helps the company achieve better performance in the long run. Previous research finds that ownership by dedicated owners with a long-term investment horizon decreases pay dispersion (measured as the average TMT compensation divided by the average employee compensation), which is a risky practice that is positively associated with short-term firm performance but negatively associated with long-term firm performance (Connelly, Haynes, Tihanyi, Gamache, & Devers, 2016). Institutional investors are also patient with firms' investment in R&D, which generates value in the long run. Ownership by institutional investors is positively associated with R&D investment (Hansen & Hill, 1991), and ownership by family members with a long-term investment horizon positively moderates an inverted U-shaped relationship between financial slack and R&D investment (Kim, Kim, & Lee, 2008), both of which improve the long-term performance of the firm. Also, previous research finds

that under the protection of informed institutional investors who can reduce managers' career risks, managers can reduce myopic R&D investment and support more valuable innovation (Aghion, Van Reenen, & Zingales, 2013; Bushee, 1998), which can positively affect their inventors' and researchers' motivation and job satisfaction.

Second, index fund managers can engage with their firms regarding social, environmental, or governance concerns that are not directly related to core operational issues but can ensure sustainable growth of their firms. Blackrock, Vanguard, and State Street, the three largest institutional investors in the United States, clearly acknowledge that environmental, social, and governance risks and opportunities can affect companies' long-term financial returns. Therefore, index fund managers may intervene if their portfolio company's business harms some of their stakeholders, such as customers, the environment, and the communities in which they operate, which may impede its future growth. For example, after the mass shooting tragedy at a Florida high school in February 2018, Blackrock engaged with major publicly traded civilian firearms manufacturers and retailers to address the community's concerns about gun safety (Blackrock, 2018). Discussion topics included the steps gun makers take to support the safe and responsible use of their products, the strategies and processes they employ to monitor how their products are being sold, and investment in R&D to promote the safety of the products. With retailers, Blackrock discussed topics including retailers' policies and practices for determining to whom they will sell firearms and strategies to prevent the potential misuse of the firearms they sell. In sum, Blackrock, as a long-term shareholder of gun makers and retailers, actively engaged with companies to address the community's concerns about the societal impact of their businesses, thereby driving changes to ensure the sustainable growth of their firms.

Employees who work for companies that have long-term growth strategies may have higher satisfaction than employees who work for companies that have a short-sighted business plan. When a company maintains a long-term perspective for its development, its business is more likely to be sustainable. A company's long-term prosperity can give its employees opportunities to grow and be promoted within the firm, and employees are less likely to worry about losing their jobs or having to move to other companies, which devalues their idiosyncratic skills. Also, an employer's strong reputation for future growth can increase motivation, trust in the leadership, and organizational identification. Purposeful organization research also shows that having an organizational purpose that goes beyond profit maximization increases the meaningfulness of work at the employee level (Pratt & Ashforth, 2003). In sum, I predict that a high concentration of index fund ownership positively affects employee satisfaction by helping a firm to create long-term value that is aligned with its employees' interests.

Hypothesis 1-2: Proportion of shares owned by Big3 index funds increases employee satisfaction.

Mediating role of firms' attention to their human capital

Human capital - employees' knowledge, skills, and abilities that are used to achieve the firm's goals - is an important resource for companies (Becker, 1962). Human capital is firms' strategic asset and a source of sustained competitive advantage (Coff, 1997) that relates strongly to firm performance (Crook, Todd, Combs, Woehr, & Ketchen Jr, 2011). As innovation and creativity become more critical in today's competitive business environment, companies become more dependent on key talents who possess valuable knowledge and skills.

Yet, managing human capital imposes challenges to managers due to the unique nature of human capital. Unlike physical capital such as buildings and machinery, human capital is embodied in employees, and thus puts the firms under the threat of employee turnover and moral hazard (Coff, 1997). For example, an empirical research found that the departure of skilled scientists in private firms after the firms went public led to 40% decline in innovative activity as measured by patent citations (Bernstein, 2015).

Then, what kinds of human capital management practices do research recommend for companies when managing their employees? As one of many human capital management practices that are interconnected, employee training has been the focus of many studies. Even when considered as a stand-alone policy unconnected to other human capital management practices, employee training is frequently associated with higher firm profits (Bernstein & Beeferman, 2015).

Research on high performance work systems (HPWS) suggests that a comprehensive approach is needed to achieve positive firm performance outcomes. HPWS is a group of separate but interconnected human resource management practices designed to enhance employees' skills and effort. Examples of high HPWS are as follow: extensive recruitment and selection procedures, training programs that develop firm-specific skills and knowledge, formal information sharing, attitude assessment, grievance procedures, labor-management participation programs, objective performance appraisals with developmental feedback, and compensations that recognize and reward employee merit. Research shows that HPWS has an economically and statistically significant impact on both employee outcomes (reduced employee turnover and enhanced productivity) and organizational outcomes (short- and long-term measures of financial performance) (Huselid, 1995). Researchers indicate that HPWS increases firm performance by developing employees' knowledge and skills (Takeuchi, Lepak, Wang, & Takeuchi, 2007),

enhancing employees' motivation and commitment (Messersmith, Patel, Lepak, & Gould-Williams, 2011), and strengthening relationships among employees (Gittell, Seidner, & Wimbush, 2010).

Hypotheses

Firms' attention to their human capital management practices is likely to increase employee satisfaction. Human capital management practices include recruitment and selection, training and development, compensation, career growth, job design and responsibilities, and work environment. As mangers increase their attention to each human capital management practice of their firms, managers gain more knowledge and information on how to develop employees' knowledge and skills, increase employees' motivation and commitment, and strengthen the relationships among employees. Based on this knowledge and information, managers can better create High Performance Work Systems (HPWS) that are comprised of policies and practices that are uniquely designed for the workers in the firms. Therefore, I hypothesize that firms' attention to their HR practices will increase employee satisfaction.

Hypothesis 2: Firms' attention to their human capital management practices increases employee satisfaction.

Shareholders and employees are both critical stakeholders of firms who contribute vital resources for firms' operations. Shareholders invest their financial capital while employees

contribute their human capital. In the short term, shareholders and employees compete for limited resources, such as firms' financial profit. Finance research on the effect of activist hedge funds on employee wages shows that the productivity gains from activist campaigns are distributed unequally, in favor of activist hedge funds over employees (Brav, Jiang, & Kim, 2015). Another finance research reveals that shareholders demand higher risk premia to invest in firms with high levels of organization capital — intangible capital that is embodied in the firm's key talent and is partly firm specific (Lev & Radhakrishnan, 2005) — relative to firms with more physical capital (Eisfeldt & Papanikolaou, 2013). More specifically, the study finds that firms with more organizational capital have 4.6% higher average returns than firms with less organizational capital. The researchers suggest that because the efficiency of organization capital is partly firm specific and it is embodied in the firm's key talent, both shareholders and key talents have a claim on the cash flows from organization capital. Therefore, investors demand higher risk premia to invest in firms where employees have potentially higher power to claim their shares of the cash flows.

Managerial attention is another limited resource that shareholders and employees compete for. As activist hedge funds gain corporate ownership, the managers of the target firms will increase their attention to shareholders. As activist hedge funds demand target firms' managers to primarily serve shareholders and to increase shareholder value, employees will lose their priority in the firm as a critical stakeholder group. As a result of hedge fund activism, managers are likely to decrease their attention to employees and redirect their limited attention to shareholders who impose an imminent threat to the management. Therefore, I hypothesize that activist hedge funds' ownership will reduce managers' attention to their human capital while increasing managers' attention to their shareholders.

Hypothesis 3-1: Corporate ownership by activist hedge funds reduces firms' attention to their human capital.

On the other hand, index investors are likely to increase the invested firms' attention to their human capital. Index investors are interested in firms' long-term growth as they expect to own companies' stocks for decades. Index investors emphasize the importance of human capital and their development because human capital management is vital for firms' long-term success. For example, Larry Fink, the CEO of Blackrock, highlighted the importance of investing in employee training and development for firms' sustainable growth in his annual letter to CEOs of its portfolio firms. Blackrock identified human capital management as one of their engagement priorities. Vanguard also clearly states in its voting guideline that it will "generally vote for proposals requiring the inclusion of sexual orientation, gender identity, minority status, or protected classes in a company's employment and diversity policies when the company does not already have such protections." Similarly, State Street states in its proxy voting guidelines that companies need to align corporate culture with long-term strategy. State Street recommends firms to identify indicators that reflect desired culture, such as employee turnover, retention rates, employee satisfaction survey results, and pay differences among their employees, and tie these indicators to incentives. Thus, I hypothesize that corporate ownership by large index funds increases firms' attention to their human capital.

Hypothesis 3-2: Proportion of shares owned by Big3 index funds increases firms' attention to their human capital.

Employee satisfaction and firms' financial performance

Management and finance researchers have long been interested in finding out the relationship between employee satisfaction and firm performance. While the literature is plentiful regarding how an individual's job satisfaction relates to their individual performance, fewer studies have been done on how firm-level employee satisfaction relates to firm-level performance. I specifically focus on the relationship between the average employee satisfaction with the firm and firm-level financial performance. Do happy employees increase firm performance or does high firm performance make employees happy? Are they just correlated without any direct causal relationship or are they not correlated at all?

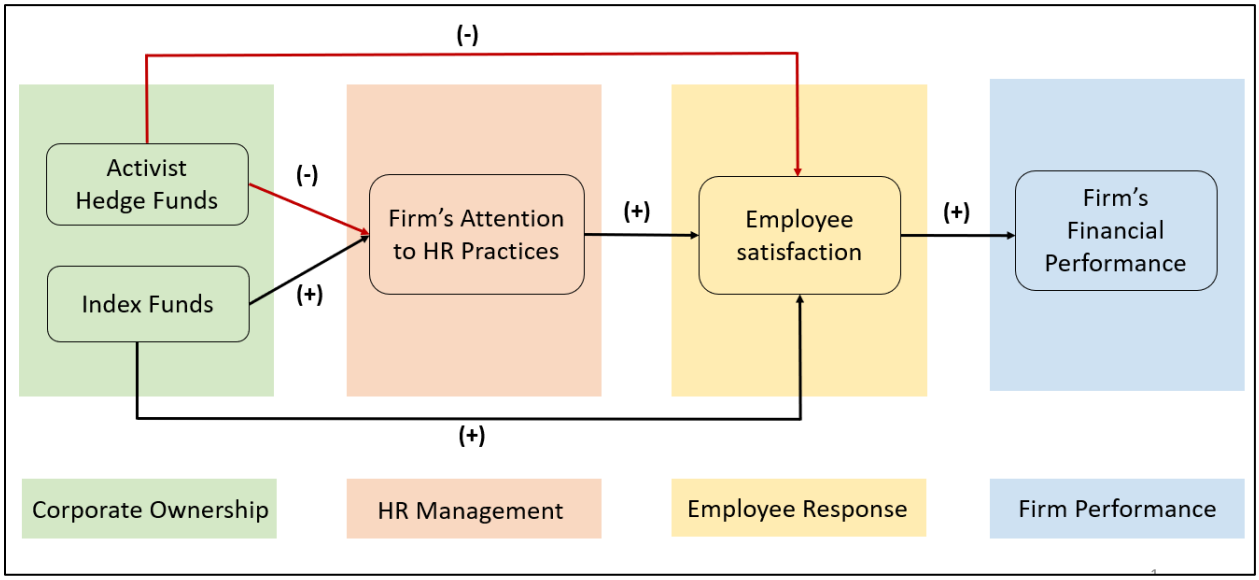
Many previous studies found a positive correlation between employee satisfaction and firm performance. For example, firms' Tobin's q, calculated as total market value divided by total asset value, is significantly correlated with overall employee satisfaction (Luo et al., 2016). Similarly, firms' Tobin's q and ROS are higher when employees perceive their top managers as trustworthy and ethical (Guiso, Sapienza, & Zingales, 2015). Several studies found a causal relationship between the two, showing that employee satisfaction increases firm performance. For example, firms that were rated by their employees to exhibit both high purpose and clarity generated higher ROA, Tobin's q, and abnormal return (Gartenberg, Prat, & Serafeim, 2019). Another study found that high levels of employee satisfaction generate more positive earnings surprises and long-run stock returns because the stock market does not fully incorporate the value of intangibles (Edmans (2011). Yet, some researchers found that the causal relationship between employee satisfaction and firm performance varies depending on the type of employee satisfaction. For example, researchers found that an overall job satisfaction and satisfaction with security are not the cause of high firm performance, but rather the consequence of high firm performance (Schneider, Hanges,

Smith, & Salvaggio, 2003). In other words, firm performance measured as ROA and EPS predicted employees' overall job satisfaction and satisfaction with security. The same study also found that the causal relationship between satisfaction with pay and firm performance is reciprocal - satisfaction with pay predicts higher ROA and EPS and vice versa.

Employee satisfaction can have a positive effect on firms' financial performance through two main mechanisms. First, employees with high satisfaction are motivated to put forth higher effort for the successful growth of their organizations. Motivated employees are more productive than their unmotivated colleagues and are more likely to engage in organizational citizenship behavior that increases the efficient functioning of their organizations. Second, firms with high employee satisfaction are more likely to recruit and retain talent and thereby sustain a high quality of human capital. If skilled employees who are not satisfied with their employers decide to exit, the firm will experience a decline in its performance. An empirical study finds that private firms experienced an exodus of skilled inventors as they went public, and as a result, firms' innovation novelty measured by patent citations declined by 40% (Bernstein, 2015). Losing their key talent also puts firms at risk of being outcompeted by their rivals who recruit their former talent. In sum, I predict that employee satisfaction increases firms' future financial performance. The summary of all the hypotheses can be found in Figure IV.1.

Hypothesis 4: Employee satisfaction will increase firms' financial performance.

Figure IV.1. Summary of hypotheses



CHAPTER V

Methods

My sample contains all publicly traded US companies from 2008 to early 2018. In order to increase the validity of employee satisfaction measure, I only use observations that have at least 10 employee reviews per firm-year. For robustness check, I use 20 employee reviews as a threshold.

Variables

Employee satisfaction

In order to develop the *employee satisfaction* variable, I use employees' 5-star overall ratings of their employers. I average all the ratings for each firm-year from 2008 to 2018 to focus on the trends. Glassdoor reviews have information about the date the review was posted and an overall 5-star rating of the company. Because former employees of the companies could also leave reviews of their companies after they left their jobs, I coded the year variable for former employees using the year when former employees left their companies.

Using online review data may have a limitation that needs to be addressed. The employee reviews on the website may not represent the sentiment of the majority of employees. It is possible that only the most vocal employees post reviews, and therefore the reviews may be biased towards the extreme ends of negativity or positivity. In other words, selection bias may exist in the data

because Glassdoor does not randomly select employees to leave their reviews on the website. In order to mitigate a possible selection bias, Glassdoor adopted "Give to Get (GTG)" policy from the inception of its service. GTG allows a user to submit her own company's review only after viewing three pieces of content and gaining unlimited access to the site's content (Glassdoor, 2018). A study shows that Glassdoor's GTG reduces both extremely negative and positive star ratings (Marinescu, Klein, Chamberlain, & Smart, 2018). More specifically, GTG reduces the likelihood of extreme 1-star and 5-star reviews by 3.6% points and 2.1% points, respectively, and it raises the likelihood of more moderate 3-star and 4-star reviews by 2.6% points and 2.9% points, respectively (Glassdoor, 2017). Previous research also found that Glassdoor overall satisfaction ratings moderately correlate with traditional employee surveys (i.e. Federal Employee Viewpoint Survey) ($r = 0.516$, $p = 0.007$), supporting the validity of the Glassdoor rating as a measure of overall employee satisfaction at the organizational level (Landers et al., 2019). For the analysis, I averaged all employee ratings for each company-year, and controlled for the total number of Glassdoor reviews for each company-year.

The Glassdoor data set includes 1,380,734 employee ratings of their employers. When ratings are aggregated to a firm-year level, the number of employee ratings by year ranges from 1 to 6,123. Because an extremely small number of employee ratings can negatively affect the validity of the measure, I eliminated observations that had less than 10 employee ratings per year. Therefore, the final data set includes 1,651 firms (7,739 firm-year observations) based on 1,127,674 employee ratings.

Hedge fund ownership

Hedge fund ownership data are collected from the original Schedule 13D and Schedule 13D/A filings by activist hedge funds. Investors are required to submit 13D filings to the SEC within 10 days after acquiring more than 5% of any class of publicly traded securities with the intent to influence the firm's management. A filer must report its level of ownership (%) and the purpose of the transaction. Since there is no regulatory definition of an activist hedge fund, I use the list of top 100 activist shareholders from the Thomson Reuters corporate governance database to code a block holder's classification.

Hedge fund ownership is a dummy variable. I code a target firm-year observation as 1 if any one of the 100 activist hedge funds filed a 13D or 13D/A in a given year, reporting its level of ownership in the target firm and the purpose of the transaction. In total, 260 firm-year observations in the final sample were coded as undergoing hedge fund activism initiated by any one of the 100 activist hedge funds between 2008 and 2017.

Because Gamco Investors, Inc. is the most active hedge fund that accounts for almost one third of the occurrences, I created two additional dummy variables for Gamco Investors, Inc. and for all other 99 activist hedge funds. The two additional dummy variables are analyzed separately from the hedge fund ownership dummy variable.

Index funds ownership

Index fund ownership data are from the Thomson Reuters institutional holdings (13F) database. Until around 2018, Thomson Reuters' 13F data had a reliability issue. For example, Blackrock's holdings were underreported from 2013 (Anderson & Brockman, 2016; Ben-David,

Franzoni, Moussawi, & Sedunov, 2016). Thomson Reuters fixed this data problem as of 2019. Also, in order to capture the yearly trend of the ownership, I averaged the ownership data for all four quarters instead of using the ownership data from the end of the fourth quarter. Institutional ownership is a continuous variable, and it is the yearly average of the sum of the ownership by the three largest index investors: Vanguard, Blackrock, and State Street.

Firms' attention to human capital management

Human capital management data came from the Risk Factors section of Form 10-K. Form 10-K is an annual report that provides comprehensive information about the company's business and financial condition. U.S. Securities and Exchange Commission (SEC) requires companies with more than $10 million in assets and 2,000 common shareholders to file Form 10-K so that investors can make informed investment decisions. One of the sections required in Form 10-K is Risk Factor section where companies list significant risks that apply to their business or to their securities, generally in order of their importance. Risk factors may apply to the whole economy, to the company's industry, or geographic region, or can be unique to the company.

Firms' attention to human capital management practices data are from the original 10-K documents filed by each firm. In order to operationalize the variable, I conducted a text analysis of the risk factors section of the 10-K filings. In the risk factor section, firms list current and anticipated risks that can affect their businesses in the future, such as increasing industry competition and state regulation. By analyzing whether and how much firms address human capital management practices in their risk factor section, I can measure the level of firms' attention to their human capital management practices compared to other risk factors. More specifically, I

extracted all the sentences in the risk factors section that are related to employees by examining whether each sentence contains at least one of the following key words: [“employee”, “worker”, “workforce”, “personnel”, “staff”, “labor ”, “labors”, “talent”, “associates”, “unionized”, “team member”, “recruits”, “sales representatives”, “independent contractor”]. The total number of employee-related words was used to create the firms’ attention to human capital variable. Then, I counted the number of times any words related to knowledge, skills, and abilities (KS&A) were mentioned in the extracted employee-related sentences for each firm-year observation. Words related to KS&A are as follow: [' knowledge', ' skill', ' abilit', ' talent', ' compenten', ' expert', ' creativ']. In addition to creating firms’ attention to KS&A, I created variables for firms’ attention to employee motivation, resource-based view of employees, and cost-based view of employees. Dictionaries can be found in Table III.3. I counted the total number of sentences in the risk factors section to control for the length of the risk factors for each firm-year observation.

Firm performance

I measure firm’s *financial performance* as Return on Asset (ROA). Control variables include size measured by the number of total employees, market value measured as the total number of outstanding shares multiplied by a share price and industry, all of which are collected from Compustat. Firms’ S&P index is collected from Siblis research and included as a control variable. Also, variance of overall employee ratings for each company-year observation is calculated and included as a control variable. Table V.1 lists all the variables, how the variables are operationalized, and data sources.

For analysis, I used a random effect panel regression model. A random effect model estimates the effects of time-invariant variables, such as S&P market index, industry, and firms' attention to human capital. All independent variables and control variables were lagged by one year.

Table Ⅴ.1. Description of variables

Variables	Operationalization	Source
Employee satisfaction	Overall rating of a company by past and current employees (5-star rating)	Glassdoor.com
Hedge fund ownership	1 = Top 100 activist hedge funds filed 13D 0 = otherwise	-13D filings -Thomson Reuters corporate governance database and FactSet SharkWatch database
Hedge fund ownership by Gamco Investors, Inc. Hedge fund activism by 99 activist hedge funds other than Gamco Investors, Inc.	1 = Gamco Investors, Inc. filed 13D 0 = otherwise 1 = Top 99 activist hedge funds other than Gamco Investors, Inc. filed 13D 0 = otherwise	-13D filings -Thomson Reuters corporate governance database and FactSet SharkWatch database
Index funds' ownership	Collective ownership % by Blackrock, Vanguard, and State Street	Thomson Reuters institutional holdings (13F) database
Firms' attention to human capital management practices	Total number of words that are related to human capital management practices in employee-related sentences in the risk factors section in each firm's 10-K	10-K filings
S&P index	Dummy variable S&P 500, S&P 400, S&P 600, Non-S&P 1500	Siblis Research
Financial performance	ROA	Compustat
Market value	Share price x total number of outstanding (log)	
Industry	Dummy variables	
Year	Dummy variable	
Size	Number of employees	
Number of employee reviews	Total number of employee reviews for each company-year	Glassdoor.com
Variance of employee ratings	Variance of employee ratings for each company-year	

CHAPTER VI

Results, Robustness Checks

In this chapter, I share the results of the analyses and robustness checks. In the next chapter, I conduct more exploratory analyses and discuss several important findings.

Table VI.1 presents the pairwise correlations among variables included in the analyses. Gamco Investors' and other activist hedge funds' ownership are negatively and significantly correlated with overall satisfaction (r= -0.07 and r= -0.02 respectively). Also, Big3 index funds' ownership is positively and significantly correlated with employees' overall satisfaction (r= 0.16).

Table VI.2 presents the results of the panel regression analyses of H1-1 and H1-2. Model 1 only includes control variables. Firms with high ROA ($\beta = 0.08$, $p < 0.01$) and market value ($\beta = 0.07$, $p < 0.01$) show high employee satisfaction. On the other hand, the higher the number of employees in the firm, the lower the employee satisfaction ($\beta = -0.34$, $p < 0.05$).

H1-1 predicts that hedge fund ownership reduces employee satisfaction in the target company. The results of Model 2 show that the effect of hedge fund ownership on employee satisfaction is not statistically significant. However, the results of Model 3 show a negative coefficient on the Gamco Investors' ownership variable, and the coefficient is statistically significant in 0.05 level ($\beta = -0.11$, $p < 0.01$). In other words, employee satisfaction is 0.11 point

lower when the firm is owned by Gamco Investors compared to when the firm is not owned by the hedge fund. On the other hand, the results of Model 4 show that the effect of corporate ownership by all the other 99 activist hedge funds (other than Gamco Investors) on employee satisfaction is not statistically significant. The results of Models 2, 3, and 4 suggest that activist hedge funds may have different campaign strategies and/or goals, which affects employee satisfaction differently. Thus, H1-1 is partially supported.

Model 5 tests H1-2 which predicts that a company's index fund ownership increases employee satisfaction. The results of Model 5 show that the ownership by the three largest index funds does not increase employee satisfaction. Therefore, H1-2 is not supported. Model 6 includes all variables, and the results stay similar.

Table VI.1. Pairwise correlations

Variables	Mean	S.D.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
(1) overall rating	3.19	0.50												
(2) Gamco	0.01	0.11	-0.07*											
(3) non-Gamco	0.03	0.17	-0.02*	-0.02*										
(4) big3 ownership (10%)	1.43	0.66	0.16*	-0.01	-0.05*									
(5) ROA	0.35	0.27	-0.04*	0.00	0.01	-0.12*								
(6) market value (log)	8.11	1.75	**0.34***	-0.07*	-0.05*	0.31*	**-0.22***							
(7) employees (million)	0.03	0.09	0.03*	-0.02*	-0.02	-0.00	0.04*	**0.32***						
(8) # employee words	0.06	0.04	-0.04*	-0.02*	-0.01	-0.07*	**0.24***	-0.17*	0.18*					
(9) # profit words	0.03	0.03	-0.05*	0.00	0.03*	0.00	0.11*	-0.05*	0.02*	0.17*				
(10) # shareholder words	0.01	0.02	-0.01	0.01	0.06*	-0.02*	-0.07*	0.00	0.02	-0.06*	0.01			
(11) # stock price words	0.01	0.01	-0.03*	-0.04*	0.01	-0.10*	0.17*	-0.19*	-0.08*	0.10*	-0.03*	0.01		
(12) # recruit words	0.01	0.01	-0.01	-0.04*	0.00	-0.11*	**0.25***	-0.15*	0.08*	**0.56***	0.10*	-0.04*	**0.20***	
(13) # benefit words	0.00	0.01	-0.04*	0.01	0.02	0.01	-0.01	0.02	0.11*	**0.32***	0.11*	-0.04*	-0.08*	0.03*

* shows significance at the .05 level

words related to each theme (from (8) to (13)) are total number of words related to each theme divided by the total number of sentences in the risk factors section

Table VI.2. Results of panel regression of employee satisfaction on hedge fund ownership and index fund ownership

(minimum 10 GD reviews)

DV: Employee satisfaction	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 4	(5) Model 5	(6) Model 6
Activist HF ownership (dummy)		-0.02				
		(0.02)				
Activist HF: Gamco (dummy)			-0.11***			-0.11***
			(0.04)			(0.04)
Activist HF: Non-Gamco (dummy)				0.02		0.02
				(0.02)		(0.02)
Big3 Index funds ownership (in 10%)					0.00	0.00
					(0.01)	(0.01)
ROA	0.08***	0.08***	0.08***	0.08***	0.08***	0.08***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Market value (logged)	0.07***	0.07***	0.07***	0.07***	0.08***	0.08***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
#of employees (in millions)	-0.34**	-0.34**	-0.34**	-0.34**	-0.34**	-0.34**
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
S&P 400	0.01	0.01	0.01	0.01	-0.00	-0.00
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
S&P 500	0.02	0.02	0.02	0.02	0.01	0.01
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
S&P 600	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Variance of GD ratings (firm-year)	-0.16***	-0.16***	-0.16***	-0.16***	-0.16***	-0.16***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
# of GD reviews (firm-year)	Included	Included	Included	Included	Included	Included
Year dummy	Included	Included	Included	Included	Included	Included
Industry dummy	Included	Included	Included	Included	Included	Included
Constant	2.61***	2.62***	2.62***	2.61***	2.60***	2.61***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)

Observations	9,516	9,516	9,516	9,516	9,346	9,346
Number of cid	1,966	1,966	1,966	1,966	1,926	1,926

Standard errors in parentheses

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

For robustness check, I analyzed observations with at least 20 Glassdoor reviews per firm-year. As shown in Table VI.3, the results are similar. Moreover, I examined which specific dimensions of employee satisfaction are negatively affected by Gamco Investors' ownership. The results in Table VI.4 show that Gamco Investors' ownership negatively affects employees' satisfaction with the firm's culture ($\beta = -0.15$, $p < 0.01$), their career opportunity ($\beta = -0.11$, $p < 0.01$), compensation/benefits ($\beta = -0.08$, $p < 0.05$), and senior leadership ($\beta = -0.01$, $p < 0.1$) in the order of significance.

Additionally, I checked whether a reverse causality exists such that firms with low employee satisfaction are more likely to be targeted by Gamco Investors. The results of Model 2 in Table VI.5 show that there is a reverse causality, such that firms with higher employee satisfaction are less likely to be targeted by Gamco Investors ($\beta = -0.01$, $p < 0.01$). Finally, as shown in Model 4 in Table VI.5, when SharkWatch data set is used to code activist hedge funds instead of Thomson Reuters (TR) data set, the results stayed similar.

Table VI.3. Results of panel regression of employee satisfaction on hedge fund ownership and index fund ownership (minimum 20 GD reviews)

DV: Employee satisfaction	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 4	(5) Model 5	(6) Model 6
Activist HF ownership (dummy)		-0.02				
		(0.02)				
Activist HF: Gamco (dummy)			-0.12**			-0.11**
			(0.05)			(0.05)
Activist HF: Non-Gamco (dummy)				0.01		0.01
				(0.02)		(0.02)
Big3 Index funds ownership (in 10%)					0.00	0.00
					(0.01)	(0.01)
ROA	0.10***	0.10***	0.10***	0.10***	0.10***	0.10***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Market value (logged)	0.07***	0.07***	0.07***	0.07***	0.07***	0.07***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
#of employees (in millions)	-0.32***	-0.32***	-0.32***	-0.32***	-0.32**	-0.32**
	(0.12)	(0.12)	(0.12)	(0.12)	(0.13)	(0.13)
S&P 400	-0.02	-0.02	-0.02	-0.02	-0.03	-0.03
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
S&P 500	0.04*	0.04*	0.04*	0.04*	0.02	0.02
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
S&P 600	-0.02	-0.02	-0.02	-0.02	-0.03	-0.03
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Variance of GD ratings (firm-year)	-0.23***	-0.23***	-0.23***	-0.23***	-0.23***	-0.23***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
# of GD reviews (firm-year)	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
Year dummy	Included	Included	Included	Included	Included	Included
Industry dummy	Included	Included	Included	Included	Included	Included
Constant	2.70***	2.70***	2.71***	2.70***	2.69***	2.70***
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)

Observations	6,776	6,776	6,776	6,776	6,652	6,652
Number of cid	1,519	1,519	1,519	1,519	1,491	1,491

Standard errors in parentheses

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

Table VI.4. Results of panel regression of individual dimension of employee satisfaction on hedge fund ownership and index fund ownership

DV: Employee satisfaction	(1) Career opportunity	(2) Compensation /Benefits	(3) Culture	(4) Senior leadership	(5) Work-life balance
Activist HF: Gamco (dummy)	-0.11***	-0.08**	-0.15***	-0.08*	-0.04
	(0.04)	(0.04)	(0.05)	(0.05)	(0.04)
Activist HF: Non-Gamco (dummy)	-0.02	0.05**	-0.02	-0.01	0.01
	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)
Big3 Index funds ownership	-0.01	-0.01	0.02	-0.00	0.01
(in 10%)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
ROA	0.09***	-0.03	0.12***	0.10***	0.03
	(0.03)	(0.03)	(0.04)	(0.03)	(0.03)
Market value (logged)	0.09***	0.08***	0.08***	0.08***	0.02***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
#of employees (in millions)	-0.22	-0.45***	-0.40**	-0.40***	-0.34**
	(0.13)	(0.14)	(0.17)	(0.15)	(0.14)
S&P 400	-0.02	0.05**	-0.01	-0.00	0.03
	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)
S&P 500	0.00	0.08***	0.01	-0.01	0.05**
	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)
S&P 600	-0.04*	-0.00	-0.06**	-0.03	-0.02
	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)
# of GD reviews (firm-year)	0.00	0.00	0.00	-0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Year dummy	Included	Included	Included	Included	Included
Industry dummy	Included	Included	Included	Included	Included
Constant	2.17***	2.61***	2.44***	2.14***	3.16***
	(0.05)	(0.05)	(0.07)	(0.06)	(0.05)
Observations	9,346	9,346	9,284	9,346	9,346
Number of cid	1,926	1,926	1,926	1,926	1,926

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table VI.5. Test of reverse causality – The results of panel regression of shareholder ownership on employee satisfaction

	(1) Activist HF ownership (TR)	(2) Gamco ownership	(3) Non-Gamco ownership (TR)	(4) Activist HF ownership (SharkWatch: includes Gamco)	(5) Big3 ownership
Employee satisfaction	-0.02***	-0.01***	-0.00	-0.01***	0.00
	(0.01)	(0.00)	(0.00)	(0.01)	(0.01)
ROA	-0.02	-0.01	-0.00	-0.01	0.04
	(0.01)	(0.01)	(0.01)	(0.01)	(0.03)
Market value (logged)	-0.01***	-0.00	-0.01***	-0.01***	0.09***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.01)
#of employees (in millions)	-0.01	-0.01	0.00	-0.00	-0.47***
	(0.05)	(0.03)	(0.04)	(0.05)	(0.14)
S&P 400	0.00	-0.00	-0.00	0.01	0.59***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
S&P 500	0.02**	-0.00	0.02**	0.03**	0.51***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
S&P 600	0.01	0.01*	-0.00	0.01	0.71***
	(0.01)	(0.00)	(0.01)	(0.01)	(0.02)
Year dummy	Included	Included	Included	Included	Included
Industry dummy	Included	Included	Included	Included	Included
Constant	0.17***	0.06***	0.09***	0.15***	-0.51***
	(0.03)	(0.02)	(0.03)	(0.03)	(0.07)
Observations	8,855	8,855	8,855	8,855	7,590
Number of cid	1,941	1,941	1,941	1,941	1,800

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

H2 predicts that firms' attention to their human capital management practices increases employee satisfaction. Table VI.6 presents the results of the panel regression analyses. The results of Model 1 show that the number of words related to the knowledge, skill, and abilities of employees and their management practices in the risk factors section does not have any effect on employee satisfaction. Similarly, the results of Model 4 show that the number of words related to employee motivation and its management practices in the risk factors section does not affect employee satisfaction.

However, when firms' attention to each of the specific human capital management practice was analyzed separately, firms' attention to employee recruitment, turnover, and benefits were found to affect employee satisfaction. The results of Model 2 and 3 shows that the number of words related to recruitment in the risk factors section (i.e. ' recruit', ' hire', ' hiring', ' attract') increases employee satisfaction ($\beta = 0.01$, $p < 0.05$), while the number of words related to turnover (i.e. ' turnover') in the risk factor section reduces employee satisfaction ($\beta = -0.03$, $p < 0.05$). Similarly, the results of Model 5 show that the number of words related to benefits (i.e. ' benefits', ' pension', ' 401k') reduces employee satisfaction ($\beta = -0.01$, $p < 0.1$). Model 6 includes all variables, and the results stay similar.

Table VI.6. Results of panel regression of employee satisfaction on firms' attention to human capital management practices (minimum 10 GD reviews)

DV: Employee satisfaction	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 4	(5) Model 5	(6) Model 6
#KSA-broad words	0.00					
	(0.00)					
#Recruit words		0.01**				0.01***
		(0.00)				(0.00)
#Turnover words			-0.03**			-0.04***
			(0.01)			(0.01)
#Motivation-broad words				-0.00		
				(0.00)		
#Benefits words					-0.01*	-0.01**
					(0.00)	(0.00)
ROA	0.09***	0.08***	0.09***	0.09***	0.09***	0.08***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Market value (logged)	0.07***	0.07***	0.07***	0.07***	0.07***	0.07***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
# of employees (in millions)	-0.35***	-0.35***	-0.35**	-0.35**	-0.34**	-0.34**
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
S&P 400	-0.00	-0.00	-0.00	-0.01	-0.00	0.00
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
S&P 500	0.03	0.03	0.03	0.03	0.03	0.03
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
S&P 600	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Variance of GD ratings (firm-year)	-0.16***	-0.16***	-0.16***	-0.16***	-0.16***	-0.16***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
# of GD reviews (firm-year)	Included	Included	Included	Included	Included	Included
Year dummy	Included	Included	Included	Included	Included	Included
Industry dummy	Included	Included	Included	Included	Included	Included

Constant	2.65***	2.64***	2.66***	2.66***	2.66***	2.64***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Observations	9,414	9,414	9,414	9,414	9,414	9,414
Number of cid	1,980	1,980	1,980	1,980	1,980	1,980

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

For robustness check, I ran panel regressions using observations with at least 20 Glassdoor reviews per firm-year. As shown in Table VI.7, the results were largely similar. However, as can be seen in the results of Model 5, the negative effect of the words related to benefits on employee satisfaction is no longer significant.

In addition, I tested for the possible reverse causality. As shown in Model 1 in VI.8, past year's employee satisfaction does not have any effect on firms' attention to recruitment in the current year. However, the results of Model 2 show that the higher the employee satisfaction, the less likely it is that the firms are concerned about employee turnover.

Finally, I tested which dimensions of employee satisfaction are affected as a result of firms' attention to employee recruitment and turnover. The results in Table VI.9 show that firms' attention to recruitment in the risk factors section does increase all four dimensions of employee satisfaction, except for compensation/benefits. Firms' attention to turnover in the risk factors section reduces all five dimensions of employee satisfaction.

In sum, the results show that employee satisfaction can be increased or decreased depending on the types of human capital management practices that their firms attend to. For example, firms' attention to employee recruitment increases employee satisfaction, while firms' attention to employee turnover reduces employee satisfaction. Therefore, hypothesis H3-1 is partially supported.

Table VI.7. Results of panel regression of employee satisfaction on firms' attention to human capital management practices (minimum 20 GD reviews)

DV: Employee satisfaction	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 4	(5) Model 5	(6) Model 6
#KSA-broad words	0.00					
	(0.00)					
#Recruit words		0.01***				0.01***
		(0.00)				(0.00)
#Turnover words			-0.03**			-0.04***
			(0.01)			(0.01)
#Motivation-broad words				-0.00		
				(0.00)		
#Benefits words					-0.00	-0.01**
					(0.00)	(0.00)
ROA	0.10***	0.10***	0.11***	0.10***	0.10***	0.08***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Market value (logged)	0.07***	0.07***	0.07***	0.07***	0.07***	0.07***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
# of employees (in millions)	-0.30**	-0.30**	-0.30**	-0.29**	-0.29**	-0.34**
	(0.12)	(0.12)	(0.12)	(0.13)	(0.12)	(0.13)
S&P 400	-0.03	-0.02	-0.03	-0.03	-0.03	0.00
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
S&P 500	0.05**	0.05**	0.04*	0.04*	0.04*	0.03
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
S&P 600	-0.03	-0.03	-0.04*	-0.04*	-0.04*	-0.02
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Variance of GD ratings (firm-year)	-0.22***	-0.22***	-0.22***	-0.22***	-0.22***	-0.16***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
# of GD reviews (firm-year)	Included	Included	Included	Included	Included	Included
Year dummy	Included	Included	Included	Included	Included	Included
Industry dummy	Included	Included	Included	Included	Included	Included

Constant	2.73***	2.71***	2.74***	2.74***	2.74***	2.64***
	(0.06)	(0.06)	(0.06)	(0.06)	(0.06)	(0.05)
Observations	6,701	6,701	6,701	6,701	6,701	9,414
Number of cid	1,521	1,521	1,521	1,521	1,521	1,980

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table VI.8. Test of reverse causality – The results of panel regression of firms' attention to human capital management practices on employee satisfaction

DV: #words in employee-related sentences in RF section (10-K)	(1) #Recruit	(2) #Turnover	(3) #Benefits
Employee satisfaction	-0.06	-0.04***	-0.07**
	(0.06)	(0.01)	(0.04)
ROA	0.37**	0.12***	-0.13
	(0.18)	(0.04)	(0.11)
Market value (logged)	-0.08**	-0.00	-0.02
	(0.04)	(0.01)	(0.02)
# of employees (in millions)	0.14	-0.29**	1.11***
	(0.75)	(0.14)	(0.42)
S&P 400	-0.42***	-0.02	-0.11
	(0.12)	(0.02)	(0.07)
S&P 500	-0.40***	-0.04*	-0.19***
	(0.12)	(0.02)	(0.07)
S&P 600	-0.24*	0.01	-0.13*
	(0.12)	(0.02)	(0.07)
# of sentences in RF section	0.00***	0.00***	0.00***
	(0.00)	(0.00)	(0.00)
Year dummy	Included	Included	Included
Industry dummy	Included	Included	Included
Constant	2.64***	0.22***	0.83***
	(0.40)	(0.08)	(0.24)
Observations	6,309	6,309	6,309
Number of cid	1,494	1,494	1,494

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table VI.9. Results of panel regression of individual dimension of employee satisfaction on firms' attention to human capital management practices

DV: Employee satisfaction	(1) Career opportunity	(2) Compensation /Benefits	(3) Culture	(4) Senior leadership	(5) Work-life balance
#Recruit words	0.01***	0.00	0.01***	0.01***	0.01**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
#Turnover words	-0.04***	-0.03***	-0.04***	-0.03**	-0.04***
	(0.01)	(0.01)	(0.02)	(0.01)	(0.01)
ROA	0.09***	-0.04	0.12***	0.10***	0.04
	(0.03)	(0.03)	(0.04)	(0.03)	(0.03)
Market value (logged)	0.09***	0.07***	0.08***	0.08***	0.02***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
#of employees (in millions)	-0.18	-0.42***	-0.45***	-0.41***	-0.38***
	(0.13)	(0.14)	(0.17)	(0.15)	(0.14)
S&P 400	-0.03	0.03*	0.02	-0.01	0.03
	(0.02)	(0.02)	(0.03)	(0.02)	(0.02)
S&P 500	0.01	0.07***	0.04	0.00	0.07***
	(0.02)	(0.02)	(0.03)	(0.03)	(0.02)
S&P 600	-0.05**	-0.02	-0.02	-0.04*	-0.02
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
# of GD reviews (firm-year)	0.00	0.00	0.00	-0.00	0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Year dummy	Included	Included	Included	Included	Included
Industry dummy	Included	Included	Included	Included	Included
Constant	2.15***	2.74***	2.39***	2.12***	3.06***
	(0.05)	(0.04)	(0.06)	(0.05)	(0.05)
Observations	9,414	9,414	9,403	9,414	9,414
Number of cid	1,980	1,980	1,980	1,980	1,980

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table VI.10 tests H3-1 and H3-2 which predict that ownership by activist hedge funds decreases firms' attention to their human capital management practices while ownership by large index funds increases firms' attention to their human capital management practices. The results of Model 1 show that ownership by activist hedge funds does not have a statistically significant effect on firms' attention to the knowledge, skill, and abilities of their employees. On the other hand, ownership by large index funds has a negative and statistically significant effect on firms' attention to the knowledge, skill, and abilities of their employees ($\beta = -0.55$, $p < 0.01$). More specifically, as large index funds' collective ownership increases 10%, for example from 5% to 15%, firms mention 0.55 fewer words related to KS&A in the risk factors section. When each of the specific human capital management practice variable related to KS&A was included in the analysis, the use of words related to recruitment was driving the effect ($\beta = -0.19$, $p < 0.01$), as shown in Model 2. More specifically, as large index funds' ownership increases 10%, firms use 0.19 fewer words related to recruitment (i.e. ' recruit', ' hire', ' hiring', ' attract') in the risk factors section. Similarly, the results in Model 4 show that ownership by large index funds reduce firms' attention to employee motivation. More specifically, as Big3 index funds ownership increases 10%, invested firms use 0.18 fewer words related to employee motivation in the risk factors section ($\beta = -0.18$, $p < 0.05$).

Table VI.10. Results of panel regression of firms' attention to each human capital management practice on activist hedge fund and big3 index fund ownership (minimum 10 GD reviews)

DV: #words in employee-related sentences in RF section (10-K)	(1) #KSA -broad	(2) #Recruit	(3) #Turn over	(4) #Motivation -broad	(5) #Benefits
Activist HF: Gamco (dummy)	-0.14	-0.04	0.01	-0.60**	-0.22**
	(0.53)	(0.18)	(0.03)	(0.29)	(0.11)
Activist HF: Non-Gamco (dummy)	0.25	0.13	0.00	-0.13	-0.04
	(0.29)	(0.09)	(0.02)	(0.16)	(0.06)
Big3 Index funds ownership (in 10%)	-0.55***	-0.19***	-0.01	-0.18**	0.01
	(0.14)	(0.05)	(0.01)	(0.08)	(0.03)
ROA	1.45***	0.65***	0.09***	0.55**	-0.01
	(0.41)	(0.14)	(0.03)	(0.22)	(0.08)
Market value (logged)	-0.12	-0.01	-0.02***	-0.07	0.02
	(0.09)	(0.03)	(0.01)	(0.05)	(0.02)
#of employees (in millions)	2.78	-0.13	-0.11	3.59***	0.81**
	(2.08)	(0.72)	(0.14)	(1.15)	(0.40)
S&P 400	-0.25	-0.17*	0.00	-0.18	-0.05
	(0.30)	(0.10)	(0.02)	(0.16)	(0.06)
S&P 500	-0.63*	-0.23**	-0.02	-0.10	-0.06
	(0.33)	(0.11)	(0.02)	(0.18)	(0.07)
S&P 600	-0.19	-0.10	0.03	0.13	-0.01
	(0.28)	(0.10)	(0.02)	(0.15)	(0.06)
# of sentences in RF section	0.02***	0.00***	0.00***	0.01***	0.00***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Year dummy	Included	Included	Included	Included	Included
Industry dummy	Included	Included	Included	Included	Included
Constant	4.62***	1.41***	0.17***	1.00**	0.05
	(0.73)	(0.25)	(0.05)	(0.40)	(0.14)
Observations	9,295	9,295	9,295	9,295	9,295
Number of cid	1,922	1,922	1,922	1,922	1,922

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Is this result driven by the possibility that index funds reduce firms' overall attention to employees? In order to understand how index funds ownership affects firms' general attention to employees, I analyzed the effect of index funds ownership on the total number of employee-related words used in the risk factors section. The results in Table VI.11 show that index fund ownership does not affect the total number of employee-related words used in the risk factors section. This finding suggests that index fund ownership specifically reduces firms' attention to employee recruitment and motivation without reducing firms' overall attention to employees. The results in Table VI.10 and VI.11 suggest that firms with higher Big3 index fund ownership are less likely to be concerned about talent recruitment and maintaining employee motivation, possibly because they are already attractive employers for current and potential employees as much as they are attractive investments for large index investors. Thus, H3-2 is not supported.

The results of Model 4 in Table VI.10 show that ownership by Gamco Investors reduce firms' attention to employee motivation ($\beta = -0.60$, $p < 0.05$). More specifically, when firms are owned by Gamco Investors, firms use 0.6 fewer words related to employee motivation in the risk factors section. Among multiple practices and policies designed to affect employee motivation, Gamco Investors reduces firms' attention to employee benefits ($\beta = -0.22$, $p < 0.05$). Specifically, firms that are under Gamco Investors' ownership mention 0.22 fewer words related to employee benefits (i.e. ' benefits', ' pension', ' 401k') in the risk factors section compared to firms that are not under Gamco Investors' ownership.

The results in Table VI.11 show that Gamco Investors' ownership reduces firms' overall attention to employees. More specifically, firms under Gamco Investors' ownership use 1.76 fewer words related to employees compared to firms that are not under Gamco Investors' ownership ($\beta = -1.76$, $p < 0.01$). The results in Table VI.10 and Table VI.11 reveal that Gamco

Investors reduce invested firms' attention to their employees, especially issues related to employee benefits. Thus, H3-1 is partially supported.

Table VI.11. Results of panel regression of firms' attention to employees on activist hedge fund and index fund ownership

DV: #words in RF section (10-K)	(1) #Employees
Activist HF: Gamco (dummy)	-1.76***
	(0.67)
Activist HF: Non-Gamco (dummy)	-0.20
	(0.36)
Big3 Index funds ownership	-0.23
(in 10%)	(0.18)
ROA	2.03***
	(0.53)
Market value (logged)	-0.25**
	(0.11)
#of employees (in millions)	5.19*
	(2.75)
S&P 400	0.55
	(0.38)
S&P 500	0.55
	(0.42)
S&P 600	1.19***
	(0.36)
# of sentences in RF section	0.04***
	(0.00)
Year dummy	Included
Industry dummy	Included
Constant	4.06***
	(0.95)
Observations	9,346
Number of cid	1,926

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

As shown in Table VI.12, further analysis shows that when firms have high activist hedge funds' ownership, managers are less likely to consider how employee-related issues can be associated with future cost. On the other hand, when firms have high Big3 index funds' ownership, managers are less likely to be concerned about managing their employees as an important resource for their firms.

Table VI.12. Results of panel regression of firms' resource-based and cost-based view of employees on activist hedge fund and index fund ownership

DV: #words in RF section (10-K)	(1) #Resource -broad	(2) #Cost -broad
Activist HF: Gamco (dummy)	-0.25	-1.29***
	(0.29)	(0.28)
Activist HF: Non-Gamco (dummy)	0.05	-0.36**
	(0.16)	(0.15)
Big3 Index funds ownership	-0.36***	-0.04
(in 10%)	(0.07)	(0.07)
ROA	0.13	0.56**
	(0.22)	(0.22)
Market value (logged)	-0.03	-0.08*
	(0.05)	(0.05)
#of employees (in millions)	3.56***	2.07*
	(1.09)	(1.14)
S&P 400	0.13	0.05
	(0.16)	(0.16)
S&P 500	-0.07	0.26
	(0.18)	(0.17)
S&P 600	0.18	0.10
	(0.15)	(0.15)
# of sentences in RF section	0.01***	0.01***
	(0.00)	(0.00)
Year dummy	Included	Included
Industry dummy	Included	Included
Constant	1.18***	2.34***
	(0.39)	(0.39)
Observations	9,295	9,295
Number of cid	1,922	1,922

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

H4 predicts that employee satisfaction increases firms' financial performance. Table VI.13 presents the results of the panel regression analyses. The results of Model 2 show that employee satisfaction does not have a significant effect on firms' financial performance measured as return on assets. Thus, hypothesis 4 is not supported.

Table VI.13. Results of panel regression of firms' financial performance on employee satisfaction

	(1)	(2)
DV: ROA	Model 1	Model 2
Employee satisfaction		-0.00
		(0.00)
Market value (logged)	-0.01***	-0.01***
	(0.00)	(0.00)
# of employees (in millions)	0.08	0.08
	(0.05)	(0.05)
S&P 400	0.00	0.00
	(0.01)	(0.01)
S&P 500	-0.01	-0.01
	(0.01)	(0.01)
S&P 600	0.00	0.00
	(0.01)	(0.01)
Year dummy	Included	Included
Industry dummy	Included	Included
Constant	0.45***	0.45***
	(0.02)	(0.02)
Observations	10,151	10,151
Number of cid	2,146	2,146

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

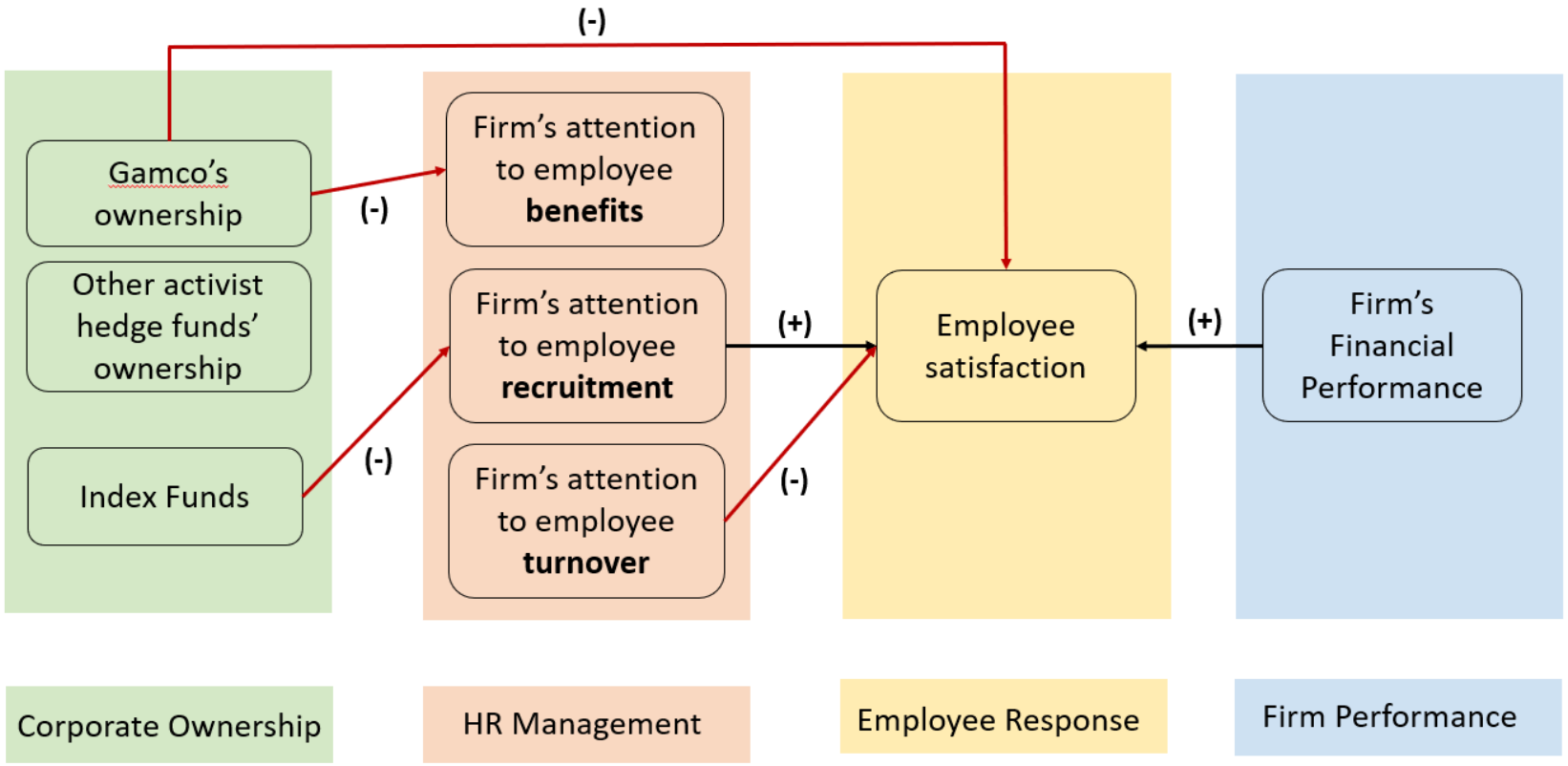
In order to analyze whether specific dimensions of employee satisfaction may have different effect on firm performance, I regressed firm performance on five dimensions of employee satisfaction. As shown in Table VI.14, firm performance is not affected by employees' satisfaction with their career opportunity, culture, senior leadership, or work-life balance. However, employees' satisfaction with their compensation/benefits does negatively and significantly affect ROA ($\beta = -0.01$, $p < 0.01$). In other words, when employees are satisfied with their compensation/benefits, firms' ROA in the following year will turn out to be lower. Similarly, when employees are dissatisfied with their compensation/benefits, firms' ROA in the following year will turn out to be higher. Figure VI.1 shows the summary of the findings.

Table VI.14. Results of panel regression of firms' financial performance on employee satisfaction with individual dimension

DV: ROA	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 4	(5) Model 5
Employees' satisfaction with					
Career opportunity	0.00				
	(0.00)				
Compensation/Benefits		-0.01***			
		(0.00)			
Culture			0.00		
			(0.00)		
Senior leadership				-0.00	
				(0.00)	
Work-life balance					0.00
					(0.00)
Market value (logged)	-0.01***	-0.01***	-0.01***	-0.01***	-0.01***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
# of employees (in millions)	0.08	0.08	0.09	0.08	0.08
	(0.05)	(0.05)	(0.06)	(0.05)	(0.05)
S&P 400	0.00	0.00	0.01	0.00	0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
S&P 500	-0.01	-0.01	-0.01	-0.01	-0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
S&P 600	0.00	0.00	0.00	0.00	0.00
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Year dummy	Included	Included	Included	Included	Included
Industry dummy	Included	Included	Included	Included	Included
Constant	0.45***	0.48***	0.42***	0.45***	0.45***
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Observations	10,151	10,151	10,002	10,151	10,151
Number of cid	2,146	2,146	2,143	2,146	2,146

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Figure VI.1. Summary of findings



CHAPTER VII

Discussion

Shareholders do not directly affect employee satisfaction. (except for Gamco Investors)

The results of my analyses show that most activist hedge funds do not affect satisfaction of the employees at the target firms. However, Gamco Investors, the most active hedge fund in terms of the number of activisms, directly and negatively affect target firms' employee satisfaction. More specifically, Gamco Investors' ownership reduces employees' satisfaction with culture, career opportunity, and compensation/benefits. In addition, firms with low employee satisfaction are more likely to be targeted by Gamco Investors, while firms with low market value are more likely to be targeted by other activist hedge funds. In sum, these findings suggest that it is not any form of activism that reduces employee satisfaction, but employee satisfaction depends on who the activist is. Hedge fund activists may have different strategies and goals, which may affect employee satisfaction differenty. More research is necessary to understand how different types of activist hedge funds and their strategies lead to various effects on employee satisfaction at the target firms.

Also, the results show that ownership by Big3 index funds does not improve employee satisfaction at the invested firms. Instead, firms' market value and ROA have a significant and positive effect on employee satisfaction. These findings suggest that big3 index funds' direct engagement with portfolio firms on human capital management issues is limited or their

engagement effort did not result in significant enough improvements to affect employees' satisfaction.

In order to understand how Big3 index funds interact with managers and how their governance teams work, I conducted several informal interviews with insiders. A former CEO of a large US company said that buy side analysts from Big3 index funds were not different from most of other analysts in terms of their short-term orientation, their interest in firms' financial performance (i.e. revenue, expenses, and earnings per share), and lack of interest in human capital management. The interviewee also pointed out that it seemed hard for the Big3 index funds to translate their long-term orientation with the pressure that they are under, and that incentives for the analysts from the Big3 index funds are not aligned with long-term focus. In addition, another expert in the investment industry said that Blackrock is also under short-term performance pressure because other pension funds would invest through Blackrock, and if they find Blackrock's performance unsatisfactory after 2-3 quarters, they will pull out their money. The interviewee also addressed the problem of lack of resources and diffused monitoring – because Blackrock and Vanguard only have 25-60 people in their corporate governance team to monitor thousands of companies, they rely on proxy advisory services, such as ISS and Glass Lewis, to fly an outlier. Moreover, the interviewee added that because the index funds' client base is huge and diverse, it is hard to know what their clients want, which prevents large index funds from actively engaging with their portfolio firms about non-financial issues. Both interviewees said that Larry Fink really cares about corporate purpose and that they think highly of him, however, they pointed out that even Blackrock is not wielding its power strongly enough to drive new changes.

Still, different shareholders affect managers to attend to different stakeholder groups and firm performance indices.

The results show that ownership by Gamco Investors reduces firms' attention to employee-related issues, especially employee benefits. These findings suggest that shareholders affect managers' perception of risks. When firms are under Gamco Investors' ownership, managers may discount employee-related risks. In other words, managers may pay less attention to the firms' dependency on their employees and treat employee-related risks as insignificant to their future businesses.

The reason why ownership by Big3 index funds reduces firms' attention to employee recruitment in the risk factors section is less clear. A possible explanation is that firms with high index fund ownership are already attractive employers for potential employees as much as they are attractive investments for index funds. As firms do not perceive talent recruitment as a risk, they are less likely to discuss talent recruitment in the risk factors section.

While my analyses so far focused on shareholders' effect on managers' attention to human capital management practices, I conducted further analyses to explore whether shareholders affect managers' level of attention to different stakeholders – shareholders, employees, and customers – and to different firm performance indices – profit and stock price. Table VII.1 shows the result of the panel regression analyses. Also, Table VII.2 shows the result of the same analysis using SharkWatch data instead of Thomson Reuters' data for coding activist hedge funds. The results of Model 3 in Table VII.1 and Table VII.2 show that ownership by activist hedge funds increases managerial attention to shareholders ($\beta = 0.45$, $p < 0.01$). These findings suggest that activist hedge funds pose an imminent threat to the firms' management,

such that managers perceive the presence of the activists and/or the anticipated changes driven by the activists as one of their risk factors.

In addition, the results of Model 1 in Table VII.1 and Table VII.2 show that ownership by Big3 index funds reduces managerial attention to stock price ($\beta = -0.18$, $p < 0.01$). This finding suggests that because index funds are long-term stockholders, index funds' ownership allows managers to be less concerned about firms' stock market performance. Although further analysis shows that managers' attention to shareholders and stock price does not affect employee satisfaction as shown in Table VII.3, future research should explore organizational consequences of managerial attention to shareholders and stock market performance. In sum, these findings show that different types of shareholders cause managers to attend to different stakeholder groups and firm performance indices.

Table VII.1. Results of panel regression of firms' attention to different stakeholder groups and different firm performance indices on activist hedge funds and big3 index funds ownership (Thomson Reuters' database)

DV: #words in RF section (10-K)	(1) #Stock price	(2) #Profit	(3) #Shareholders	(4) #Employees	(5) #Customers
Activist HF: Gamco (dummy)	-0.18	-0.03	0.50*	-1.76***	-0.49
	(0.19)	(0.34)	(0.28)	(0.67)	(1.79)
Activist HF: Non-Gamco (dummy)	0.21**	-0.13	0.69***	-0.20	-0.64
	(0.10)	(0.18)	(0.15)	(0.36)	(0.95)
Big3 Index funds ownership	-0.18***	-0.12	0.02	-0.23	-0.31
(in 10%)	(0.05)	(0.09)	(0.07)	(0.18)	(0.47)
ROA	0.21	-0.07	0.23	2.03***	7.54***
	(0.15)	(0.27)	(0.23)	(0.53)	(1.43)
Market value (logged)	-0.16***	0.00	-0.04	-0.25**	0.03
	(0.03)	(0.06)	(0.05)	(0.11)	(0.30)
#of employees (in millions)	-0.84	-0.13	1.65	5.19*	18.66**
	(0.78)	(1.50)	(1.32)	(2.75)	(7.60)
S&P 400	-0.09	0.17	-0.60***	0.55	0.34
	(0.11)	(0.20)	(0.16)	(0.38)	(1.02)
S&P 500	-0.19	-0.06	-0.90***	0.55	-0.27
	(0.12)	(0.21)	(0.18)	(0.42)	(1.13)
S&P 600	-0.08	0.33*	-0.52***	1.19***	2.53***
	(0.10)	(0.19)	(0.16)	(0.36)	(0.98)
# of sentences in RF section	0.00***	0.01***	0.00***	0.04***	0.09***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Year dummy	Included	Included	Included	Included	Included
Industry dummy	Included	Included	Included	Included	Included
Constant	2.09***	4.04***	1.57***	4.06***	-1.40
	(0.27)	(0.50)	(0.44)	(0.95)	(2.59)
Observations	9,346	9,346	9,346	9,346	9,346
Number of cid	1,926	1,926	1,926	1,926	1,926

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table VII.2. Results of panel regression of firms' attention to different stakeholder groups and different firm performance indices on activist hedge funds and big3 index funds ownership (SharkWatch database)

DV: #words in RF section (10-K)	(1) #Stock price	(2) #Profit	(3) #Shareholders	(4) #Employees	(5) #Customers
Activist HF (SharkWatch)	0.06	-0.37**	0.45***	-0.22	-0.58
	(0.08)	(0.15)	(0.12)	(0.30)	(0.81)
Big3 Index funds ownership	-0.18***	-0.12	0.02	-0.24	-0.30
(in 10%)	(0.05)	(0.09)	(0.07)	(0.18)	(0.47)
ROA	0.20	-0.09	0.22	2.04***	7.54***
	(0.15)	(0.27)	(0.23)	(0.53)	(1.43)
Market value (logged)	-0.16***	0.00	-0.05	-0.24**	0.03
	(0.03)	(0.06)	(0.05)	(0.11)	(0.30)
#of employees (in millions)	-0.82	-0.12	1.69	5.19*	18.63**
	(0.79)	(1.50)	(1.32)	(2.75)	(7.59)
S&P 400	-0.09	0.17	-0.60***	0.54	0.34
	(0.11)	(0.19)	(0.16)	(0.38)	(1.02)
S&P 500	-0.19	-0.06	-0.89***	0.55	-0.28
	(0.12)	(0.21)	(0.18)	(0.42)	(1.13)
S&P 600	-0.08	0.34*	-0.51***	1.19***	2.53***
	(0.10)	(0.19)	(0.16)	(0.36)	(0.98)
# of sentences in RF section	0.00***	0.01***	0.00***	0.04***	0.09***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Year dummy	Included	Included	Included	Included	Included
Industry dummy	Included	Included	Included	Included	Included
Constant	2.10***	4.07***	1.63***	3.97***	-1.43
	(0.27)	(0.50)	(0.44)	(0.95)	(2.59)
Observations	9,346	9,346	9,346	9,346	9,346
Number of cid	1,926	1,926	1,926	1,926	1,926

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table VII.3. Results of panel regression of employee satisfaction on firms' attention to different stakeholder groups and different firm performance indices

DV: Employee satisfaction	(1) Model 1	(2) Model 2	(3) Model 3	(4) Model 4	(5) Model 5
#Stock price	0.00				
	(0.00)				
#Profit		-0.00**			
		(0.00)			
#Shareholders			-0.00		
			(0.00)		
#Employees				0.00	
				(0.00)	
#Customers					0.00
					(0.00)
ROA	0.09***	0.09***	0.09***	0.09***	0.09***
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)
Market value (logged)	0.07***	0.07***	0.07***	0.07***	0.07***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
#of employees (in millions)	-0.35***	-0.35***	-0.35***	-0.35***	-0.35***
	(0.13)	(0.13)	(0.13)	(0.13)	(0.13)
S&P 400	-0.00	-0.01	-0.01	-0.00	-0.00
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
S&P 500	0.03	0.03	0.03	0.03	0.03
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
S&P 600	-0.03	-0.03	-0.03	-0.03	-0.03
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Variance of GD ratings (firm-year)	-0.16***	-0.16***	-0.16***	-0.16***	-0.16***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
# of GD reviews (firm-year)	Included	Included	Included	Included	Included
Year dummy	Included	Included	Included	Included	Included
Industry dummy	Included	Included	Included	Included	Included
Constant	2.66***	2.67***	2.66***	2.65***	2.66***
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)
Observations	9,477	9,477	9,477	9,477	9,477
Number of cid	1,986	1,986	1,986	1,986	1,986

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Firms' attention to employee recruitment (in risk factors section of 10-K) increases employee satisfaction.

What does it mean that managers list recruitment issues as one of the firms' risk factors? For example, LinkedIn Corporation wrote in their risk factors section "Our future success will depend upon our continued ability to identify, *hire*, develop, motivate and retain world class talent." When managers discuss potential failure of talent recruitment as one of their risk factors, it may mean that their businesses are dependent upon human capital, while at the same time they foresee difficulties in talent recruitment due to an intense competition for talent and/or a limited amount of resources to offer to new hires. In other words, these companies are likely to be dependent on human capital while they are relatively resourceless. This speculation is based on the results of the analyses that S&P500 firms and firms with large index fund ownership are less likely to mention employee recruitment as one of their risk factors. Also, further analysis shows that firms with low net income are more likely to mention employee recruitment as one of their risk factors. As a result of firms' high dependency on human capital and their relatively limited resources, managers will be motivated to attend to employees' various needs. As a result, managers will create and maintain high performance work systems that can be attractive for their current and potential employees. Further analysis shows that the number of recruitment-related words in the risk factors section increases employees' satisfaction with their career opportunity, culture, senior management, and work-life balance, but it does not increase employees' satisfaction with compensation/benefits.

An alternative explanation is that firms with high dependency on human capital may encourage their current employees to leave high ratings of their companies on Glassdoor so that the companies can look attractive for potential employees. Another alternative explanation is that

firms' disclosure of recruitment-related information on their 10-K form increases employees' commitment and motivation by shaping common understanding between employers and employees (Lin, Huang, Du, & Lin, 2012; Meyer, Becker, & Vandenberghe, 2004). More studies are needed to test these alternative mechanisms.

Firm performance increases employees' satisfaction with their firms, but it does not increase employees' satisfaction with their compensation.

The results show that overall employee satisfaction does not increase firm performance, however, high firm performance increases overall employee satisfaction. The result is in line with the previous findings by Schneider et al. (2003) that employees' overall job satisfaction is not the cause of high firm performance, but rather the consequence of high firm performance.

Further analysis shows that high firm performance specifically increases employees' satisfaction with their firms' culture, senior leadership, and career opportunities, but does not increase employees' satisfaction with their compensation/benefits or work-life balance. Also, additional analysis revealed that employees' satisfaction with compensation/benefits negatively predicts ROA. These findings suggest that most employees may not have been rewarded with higher compensation and benefits even when their firms earned a higher profit. It may even be possible that firms gain financial profit at the expense of their employees' share of compensation and benefits.

My findings regarding the relationship between employees' satisfaction with their pay and firm performance is somewhat opposite from what Schneider et al. (2003) found. Schneider et al. (2003) found that employees' satisfaction with pay predicts high ROA and vice versa.

These conflicting results may have been caused because Schneider et al. (2003) and I use different samples from different time periods. Schneider et al. (2003) used survey data from 35 large, esteemed companies from 1987 to 1995. My sample covers around 2,000 companies of various sizes from 2008 to early 2018. More studies on the relationship between firms' financial performance and employees' (satisfaction with) compensation is needed as it relates to important issues regarding fairness and distributive justice.

Limitations

Several limitations of this dissertation need to be addressed. First, employee reviews on Glassdoor may not represent the sentiment of overall employees. Only a portion of employees who are vocal would post their reviews, producing a potentially biased sample. In order to minimize the selection bias, Glassdoor implemented multiple mechanisms including their Give to Get policy, as I explained in Chapter III. Also, in order to focus on trends, I averaged employee ratings for each firm-year, only using observations with a minimum of 10 reviews (20 reviews for robustness checks). Moreover, I controlled for the number of Glassdoor reviews per firm-year, the number of total employees in the firm, and the variance of employee ratings for each firm-year observation. Another potential limitation of Glassdoor data is that companies can boost their ratings by encouraging their employees to post positive reviews. Although Glassdoor implemented algorithms to filter out incentivized or forced reviews, it may not be able to perfectly screen them out. My analysis of the Glassdoor data revealed that the average rating has increased during the study period. In order to address this problem, I controlled for year in all my analyses. Also, I used employee ratings on five individual dimensions of their companies. Fortunately, further analysis

reveals that employees' rating of five dimensions of their companies are much less or even not at all inflated during the study period. In fact, the five dimensions of the companies are more harshly rated than overall satisfaction throughout the year.

There are also limitations to using 10-K data to measure firms' level of attention to human capital. Annual reports may not accurately reflect firms' or managers' level of attention to each stakeholder or each of human capital management practice. Although the risk factors section in a 10-K form may not be the perfect data source, the results of multiple analyses showed that it could be a reasonable proxy for managerial perception of risks. As it is at each firm's discretion to decide about which risk factors to write and how much to write in the annual report, it is reasonable to assume that managers' actual level of attention to each risk is reflected in the risk factors section. Also, the fact that employee satisfaction is negatively and significantly correlated with the number of words related to profit and cost-based view of employees in the risk factors section suggests that 10-K data could be a useful data source to measure firms' level of attention.

CHAPTER VIII

Conclusion

This dissertation examined labor implications of two recent trends in the American capital market – a growing control of activist hedge funds and an increasing ownership by large index funds: Blackrock, Vanguard, and State Street. More specifically, this dissertation investigated whether and how ownership by activist hedge funds and large index funds affect employee satisfaction through their influence on managerial attention to human capital.

By studying all publicly traded firms in the US from 2008 to 2018, this dissertation found that ownership by most activist hedge funds and large index funds does not directly affect employee satisfaction. However, ownership by Gamco Investors, one of the most active hedge funds in terms of the number of activisms, negatively affected employee satisfaction. In addition, while firms with low employee satisfaction were more likely to be targeted by Gamco Investors, firms with low market value were more likely to be targeted by other activist hedge funds. These findings suggest that activist hedge funds may have different strategies and goals that have varying effects on employee satisfaction.

This dissertation also found that shareholders affect managers' attention to human capital. First of all, in terms of managers' attention to human capital-related risks, ownership by Gamco investors led managers to pay less attention to employee-related risks, and ownership by Big3 index funds led managers to pay less attention to recruitment-related risks. In addition, regarding managers' attention to each stakeholder-driven risk, ownership by activist hedge funds led

managers to pay more attention to shareholder-driven risks. Finally, regarding mangers' attention to firm performance indices, ownership by Big3 index funds led managers to pay less attention to firms' stock market performances.

Lastly, this dissertation found that employee satisfaction is not the cause of firms' financial performance, but rather the consequence of firms' financial performance measured as ROA. However, it is worth noting that high ROA increases employees' satisfaction with their firms' culture, senior leadership, and career opportunities, but does not affect employees' satisfaction with their compensation/benefits and work-life balance. Moreover, employees' satisfaction with compensation/benefits negatively predicts ROA.

This paper makes two major contributions. First, the paper contributes to corporate governance and human capital management literature by examining the labor implications of recent trends in financial capitalism. With increased ownership and control by activist hedge funds and large index funds during the past decade, the shareholders of public companies have a stronger influence than they did in the past. While existing empirical studies have focused on understanding the implications of different shareholders' ownership for shareholder value, its effect on other stakeholders of the firm, employees, for example, remains an open question. Although activist hedge funds and large index funds do not directly affect employees' satisfaction, this dissertation demonstrates that they may influence managerial attention to human capital, shareholders and stock price. In sum, this dissertation deepens our theoretical understanding of the social implications of corporate ownership.

Second, the paper makes a practical contribution to the body of knowledge surrounding shareholders' and policy makers' decision making by shedding light on the usefulness of Glassdoor review data and 10-K risk factors data that can be used across organizations.

Shareholders desire to integrate human capital risk into their investment decisions; however, the only available standardized human capital–related measure for publicly traded firms in the US is the number of employees, the only required HR element in the firms' annual report. Recently, a group of institutional investors filed a petition with the SEC calling for a human capital-related information disclosure requirement, which suggests that investors lack desired information about public firms' human capital. Shareholders can analyze the risk factors section of a 10-K form to understand whether managers are attending to human capital-related risks, and, if so, which ones. Policy makers also need more information about companies' human capital management practices and performances. While firms implement various human capital management policies to promote diversity, fair compensation, and a safe working environment, we lack standard measures to evaluate the practices and outcomes of such efforts. Policy makers can examine employees' rating of individual dimensions of their employers to understand firms' human capital management performances. Moreover, policy makers can analyze the risk factors sections of 10-K forms to understand which stakeholder groups and firm performance indices managers find important to their firms. The SEC's recent effort to mandate that public firms disclose their CEO-to-median worker's pay ratio is a meaningful step towards the transparency that our society demands. I expect my unobtrusive measures of employee satisfaction and firms' attention to their human capital to be a useful tool for investors and policy makers. Managers, employees, and researchers also stand to benefit from this work.

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